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Elite Student-Athletes' Perceptions of Coaches' Behavior during the 23rd World Universiade Games in Kazan, Russia

John Elvis Hagan Jnr[1,2,*], Edward Wilson Ansah[3], Dietmar Pollmann[1], Thomas Schack[1,2]

[1]"Neurocognition and Action - Biomechanics"- Research Group, Faculty of Psychology and Sport Sciences, Bielefeld University, Germany
[2]Center of Excellence "Cognitive Interaction Technology" CITEC, Germany
[3]Department of Health, Physical Education and Recreation, University of Cape Coast, Ghana

Abstract Despite the fact that behavior of coaches is critical towards optimal development and performance of athletes, there still remains a dearth of empirical evidence involving self-perceptions of competitive athletes at elite level. The purpose of the present study was to examine athletes' perceptions related patterns and gender differences specific to coaching behaviors during competition. Consequently, the Leadership Scale for Sports was administered to 201 conveniently sampled elite student-athletes during the 23rd World Universiade Games at Kazan, Russia. Results show that a considerable number of sampled athletes perceived their coaches not to have provided the needed social support and positive feedback during competition. However, majority of these athletes felt they were involved democratically across the competition period. Additionally, while male athletes perceived their coaches to have given appreciable training and instruction, were more democratic, socially supportive, and provided positive feedback, female athletes perceived their coaches to be autocratic. A greater need for social support and positive feedback are required from coaches to help athletes deal with the stressors of elite competition. Similarly, the gender differences in the athletes' perceptions suggest a more idiosyncratic approach and flexibility toward coaching at high performance level if desired outcomes are to be accomplished.

Keywords Behavior, Coaches, Student-athletes, Universiade, Perceptions

1. Introduction

Coaches' behavior is considered as a major contributory factor towards learning, improvement, and success or otherwise of the athlete as an individual and/ or as a team [1, 2]. Generally, it is accepted by sports scientists that both performance and satisfaction alike can either be enhanced or diminished by the effects of the behavior of a coach [3, 4]. The aim of many sports psychologists is to determine how the characteristics of a coach combine with the characteristics of an athlete and prevailing task to influence desired performance and satisfaction. Therefore, coaches' behavior has the potential to critically impact on sporting outcomes.

An accepted operationalization of coaches' behavior in sport is the Multidimensional Model of Leadership (MML, [5]). The MML emphasizes that actual coaching behaviors correspond to behaviors preferred by athletes and behaviors as prescribed by the task. This model proposes that the degree of congruence between these variables influences the degree of athletes' satisfaction and performance of both the athlete and team [8]. To test the theoretical model empirically, a 40-item Leadership Scale for Sport (LSS) that identified five dimensions of coaches' behavior in sport: training and instruction, democratic and autocratic behavior, social support, and positive feedback was developed [5]. Since its creation, the LSS has become the most commonly utilized scale for quantifying such perceived behaviors in sport coaches [7]. Research with the LSS has investigated the relationship between member characteristics such as age, maturity, gender, level of competition, task type, motivation, and preferred behaviors in athletes [4, 8, 9, 10]); differences between preferred and perceived coaches' behaviors [2, 11, 12]; the impact of coaches' behavior on satisfaction and performance [13, 14, 15, 16]; team dynamics such as cohesion and motivational climate [17,18]; and successful versus unsuccessful teams [4, 8, 10, 19].

With respect to perceptions, research has shown that athletes perceived coaches to emphasize training and

instruction behaviors that enhanced and improved athletic performance; and provided positive feedback that reinforced athletes by recognizing and rewarding good performance [2, 20]. From inner drive perspective, the type of feedback given by coaches in performance situations could significantly impact on athletes' intrinsic motivation. Notably, a positive feedback given in response to athletes' performances is likely to result in increased perceptions of competence and subsequently increase intrinsic motivation so that future performance outcomes can be well controlled [21, 22, 23]. These shared views on the relationship between coaches' behaviors and young athletes' perceptions of sport competence and intrinsic motivation were echoed in a similar study [24]. Results provided further evidence that the type of feedback athletes perceived their coaches to give during both practice and competitive situations have a significant impact on the athletes' perceptions of ability and inner drive. Although there were some rather specific gender and age differences, the results, in general, suggested that athletes who perceived their coaches to exhibit high frequencies of information following desirable performances and high frequencies of encouragement and information following undesirable performances scored higher on measures of perceived competencies, perceived successes and intrinsic motivation than did athletes whose coaches exhibited lower levels of these positive and information based feedback responses. Similarly, gender effect of athletes' perceptions on coaches' behavior has also been of research interest [12]. Previous researchers found that while male athletes perceived autocratic and social support coaching behaviors of their coaches, female athletes perceived and preferred democratic behavior and participatory style of coaching [5, 25, 26].

Therefore, an attempt to unravel how elite athletes perceive their coaches' behavior in competitive situations could inform future desired behavioral tendencies that may elicit productive behaviors from these athletes. These competitive interactions would be very vital at the international level where stakes are so high in terms of goal attainments that may lead to performance satisfaction. Thus, it is reasonable to suggest that prolonged periods of technical preparations and interacting influence of task characteristics, situational demands and goal expectancies set by coaches may have a direct impact on athletes' perceptions and subsequent behaviors during competition [6].

The purpose of the present study was to further advance earlier arguments on coach-athlete relationship classified along three dimensions on the Leadership Scale for Sport (LSS): one direct task factor (i.e., training and instruction behavior), two decision style factors (i.e., autocratic and democratic behaviors), and two motivational factors (i.e. positive feedback and social support) in two significant ways. First, the study participants of the current investigation were elite level university athletes and the standard of the World Universiade could help test athletes participating at that higher level of excellence, a competition that assembles high performance athletes across the world. This competition is reminiscent of an Olympic or World championship. Additionally, the study examined gender differences of athletes in their perceptions of specific coaching behaviors during the competition. While athletes' perceptions are important to themselves, their reactions to those perceived coaching behaviors would have equal if not greater impact on the coaching environment. Therefore, it was necessary to investigate coaches' behavior as perceived by their athletes. Given that previous research has shown that athletes perceive their coaches to exhibit adequate training and instruction behaviors, and utilize more of autocratic decision making style, it is anticipated that athletes' studied would expect their coaches to display these behaviors to a greater extent. Furthermore, positive feedback and social support are important in maintaining motivational levels of athletes [5]. As a result, athletes in this study would expect their coaches to adopt these two motivational factors in an attempt to ensure that their needs and aspirations are met [27]. This is because both positive feedback and social support could be considered as positive motivation strategies that coaches usually employ for their athletes [28].

2. Materials and Methods

2.1. Participants' Selection

This cross-sectional study design conveniently sampled 201 student-athletes comprising 120 males and 81 females, with age ranged from 18-28 years; mean = 22.5 years who competed in the 23rd World Universiade Games at Kazan, Russia. The athletes represented different countries across Africa, Europe, and America in different sport disciplines such as athletics (n=63), volleyball (n=36), football (n=54), judo (n=20), and basketball (28). Subjects were recruited through their leaders of delegation or via team coaches at the games village. Although, independent and interdependent sport teams may differ in their structure and function, all the teams trained and competed together with the objective of amassing the highest number of medals for their respective team (contingent) as a collective unit.

2.2. Instrumentation

The LSS is a 40-item inventory that assesses five dimensions of behavior: training and instruction (13 items), positive feedback (5 items), social support (8 items), democratic behavior (9 items), and autocratic behavior (5 items). The stem, 'My coach' preceded each item. The first dimension, training and instruction, assesses leader

behavior that has the objective of improving athletic performance. An example of item is 'My coach sees to it that every team member is working to his/her capacity'. The second dimension, positive feedback, assesses behavior that reinforces the athlete by recognizing and rewarding good performance. An item example is 'My coach tells a team member when he/she does a particularly good job'. The third dimension, social support, assesses behavior that is characterized by a concern for the welfare of team members, having a positive group atmosphere, and having good interpersonal relations with team members. An example is 'My coach looks out for the personal welfare of the athletes'. The fourth dimension, democratic behavior, assesses behavior allowing team member participation in decisions that relate to the team's goals, practice methods, and game tactics and strategies. An example of item is 'My coach gets group approval on important matters before going ahead'. The final dimension, autocratic behavior, measures behavior that involves the coach's independence in decision making. An item example is 'My coach works relatively independent of the athletes'. Responses are provided on a five-point scale anchored at the extremes by 'never' (1) and 'always' (5). Thus, higher scores reflect stronger athletes' perceptions of coaches' behavior.

The Leadership Scale for Sports (LSS) instrument has been validated severally with high and acceptable psychometric properties [1, 29]. In support of previous studies, our data also produced high Cronbach reliability coefficients; training and instruction=.94, democratic behavior=.74, autocratic behavior=.84, social support=.83, and positive feedback=.85 [5, 30, 31, 32, 33, 34, 35].

2.3. Procedures

We sought ethical clearance from the University Cape Coast Institutional Review Board (IRB). In addition, we sought approval from the leaders of the various delegations from different countries that were at the 23rd World Universiade Games, Kazan, Russia. Through an established rapport with the various teams' captains, study participants completed the LSS inventory after being given standard instructions to rate how they perceive their coaches during the period of the competition across all the behavior dimensions on the inventory. Quarto-sized envelopes and pencils were provided to the various delegations through the captains after performers were assured of their anonymity, confidentiality and that their participation was solely voluntary by which they could stop answering the survey at any point in time during the process. Further, the students signed a written informed consent form that described the purpose of the study and the extent of participant's involvement, before they attempted the survey. The completed instruments were collected a day before the closing ceremony at their hostels. Data was collected over a 10 day period, from the 7th-16th July, 2013 at subjects own convenience.

2.4. Data Analyses

Frequency counts and percentage analyses were used to calculate participants' demographic information such as gender and also determine types of training and instruction, the extent to which coaches provided social support and positive feedback to their athletes at the competition. Independent sample t-test was used to determine gender differences as perceived by the athletes about their coaches' behaviors. To further validate the scale, factor analysis was carried out. As social and behavioral scientists, we determined the statistical significance of our results based on .05 Cronbach's alpha. This was a criterion upon which we rejected presumed hypotheses, where p-value was less than the alpha value.

3. Results

Factor analysis and Cronbach's alpha reliability were run. Five factors were identified as per the original scale. Additionally, the composite data was transformed into three-point interval (seldom, occasionally and often) for the frequency analysis. This was done since very few of study participants responded to the options ''never and always''. Moreover, the numerical distance between the options never and seldom as well as between often and always is one, and in real sense they may carry very similar interpretations. Frequency data revealed that athletes at the 23rd World Universiade Games perceived their coaches to have provided much needed training and instruction. Thus, of each item forming the training and instruction construct, over 60% (n = 121) of the athletes responded their coaches either often and/or always provide training and instruction (see Table 1). The results indicated that about 50% (n = 107) of the athletes reported their coaches did not provide social support during competition. Again about 55% (n = 110) of the athletes did not receive positive feedback from their coaches during the championship. Meanwhile, as much as 59% (n = 119) of the student-athletes reported that their coaches engaged them democratically, whereas 43% (n = 86) described their coaches as autocratic leaders.

Table 1. Frequency Data on Athletes' Perceptions of Coaches' Behavior across the Dimensions

Item	Seldom f (%)	Occasionally f (%)	Often f (%)
My Coach;			
Training and Instruction			
Sees to it that every athlete is working to his/her capacity	20 (10.0)	20 (10.0)	161 (80.0)
Explains to each athlete the techniques and tactics of the sports	41 (20.4)	30 (14.9)	130 (64.7)
Pays special attention to correcting athlete's mistakes	40 (20.0)	21 (10.4)	140 (69.7)
Makes sure that his/her part in the team is understood			
by all the athletes	20 (10.0)	31 (15.4)	150 (74.7)
Instructs every athlete individually in the skills of the sport	41 (20.4)	40 (19.9)	120 (59.7)
Figures ahead on what should be done	10 (5.0)	20 (10.0)	171 (85.1)
Explains to every athlete what he/she should and should not do	20 (10.0)	40 (19.9)	141 (70.1)
Expects every athlete to carry out his/her assignment			
to the last detail	20 (10.0)	20 (10.0)	161 (80.1)
Points out each athlete's strengths and weaknesses	41 (20.4)	30 (14.9)	130 (64.7)
Gives specific instructions to each athlete as to what			
he/she should in every situation	20 (10.0)	60 (29.9)	121 (60.2)
Sees to it that the efforts are coordinated	10 (5.0)	60 (29.9)	131 (65.2)
Explains how each athlete's contribution fits into the			
total picture	30 (14.9)	61 (30.3)	110 (54.7)
Specifies in detail what is expected of each athlete	20 (10.0)	61 (30.3)	120 (59.7)
Democratic Behavior			
Ask for the opinion of the athletes on strategies			
for specific competitions	69 (34.5)	40 (20.0)	92 (45.8)
Get group approval on important matters before going ahead	69 (34.5)	41 (20.5)	91 (45.2)
Let his athletes share in decision making	39 (19.5)	60 (30.0)	102 (50.7)
Encourage athletes to make suggestions for ways			
of conducting practices	59 (29.4)	92 (45.8)	50 (24.8)
Let the group set its own goals	50 (24.9)	40 (19.9)	111 (52.8)
Let the athletes try their own way even if they make			
mistakes	151 (75.1)	50 (24.9)	—
Ask for the opinion of the athletes on important coaching matters	131 (65.2)	40 (19.9.0)	30 (14..9)
Let athletes work at their own speed	100 (49.8)	50 (24.9)	51 (25.4)
Let the athletes decide on the plays to be used in a game	120 (59.7)	81 (40.3)	—

Table 1 Continued

Autocratic Behavior	Seldom f (%)	Occasionally f (%)	Often f (%)
Work relatively independent of the athletes	69 (34.2)	50 (24.9)	82 (40.8)
Not explain his action	111 (55.2)	49 (24.4)	41 (20.4)
Refuse to compromise a point	110 (54.7)	41 (20.4)	50 (24.9)
Keep to himself	131 (65.2)	29 (14.4)	41 (20.4)
Speak in a manner not to be questioned	111 (55.2)	50 (24.9)	40 (19.9)
Social Support			
Help the athletes with their personal problems	80 (39.8)	20 (9.6)	101 (50.2)
Help members of the group settle their conflicts	55 (27.4)	36 (17.9)	110 (54.7)
Look out for the personal welfare of the athletes	50 (24.9)	30 (14.9)	121 (60.2)
Do personal favors to the athletes	79 (39.3)	20 (9.6)	102 (50.7)
Express affection he feels for his athletes	59 (29.4)	51 (25.4)	91 (45.3)
Encourage the athlete to confide in him/her	70 (34.8)	20 (9.6)	111 (55.2)
Encourage close and informal relations with athletes	60 (29.9)	29 (14.4)	112 (55.7)
Invite athletes to his home	110 (54.7)	41 (20.4)	50 (24.9)
Positive Feedback			
Compliment an athlete for his performance in front of others	50 (24.9)	81 (40.3)	70 (34.8)
Tell an athlete when he does a particularly good job	41 (20.4)	10 (5.0)	150 (74.6)
See that an athlete is rewarded for a good performance	20 (9.6)	40 (19.9)	141 (70.1)
Express appreciation when an athlete performs well	10 (5.0)	31 (15.4)	160 (79.6)
Give credit when credit is due	10 (5.0)	30 (14.9)	161 (80.1)

Table 2. Gender differences on Perceived Coaching Behavior across the Dimensions

Dimensions		*M*	*SD*	*t*	*df*	*p-value*
	Male	53.00	8.92			
Training and Instruction				4.942	145.814	.000*
	Female	45.68	11.14			
	Male	24.25	6.01			
Democratic Behavior				4.845	199.001	.005*
	Female	21.95	4.98			
	Male	11.58	4.11			
Autocratic Behavior				-2.489	132.78	.014*
	Female	13.44	5.82			
	Male	28.92	5.88			
Social Support				9.882	199.001	.000*
	Female	20.14	6.6			
	Male	19.75	3.15			
Positive Feedback				2.987	199.001	.003*
	Female	18.25	3.96			

Significance = .05*, M = Mean; SD = Standard Deviation; t = t-statistics; df = degree of freedom

Gender differences on how athletes perceived their coaches' behaviors were examined. Before this analysis, normality was evaluated using Shapiro-Wilk' test while Levene' Test of equality of variance was checked. Initial normality checks failed but when the data was transformed, we met that assumption for each set of analysis. We also used the appropriate t-test statistics where the data violated the equality of variance test, either equal variance or not assumed. T-test analyses showed that the athletes were significantly different in the way they perceived their coaches' behavior. Male athletes significantly perceived their coaches to often provide training and instruction, t (145.814) = 5.942, p = .000, F = 16.676, were more democratic, t (199) = 4.845, p = .014, F = .091, more socially supportive, t (199) = 9.882, p = .001, F = 3.183, and provided more positive feedback, t (199) = 2.987, p = .003, F = .022 than their female counterparts. However, the female athletes significantly perceived their coaches to be more autocratic than the males t (132.780) = -2.489, p = .014, F = 31.48 (see Table 2).

4. Discussion

The general objective for this study was to examine the extent to coach leadership behaviors are perceived by elite university student-athletes during the 23rd Universiade at Kazan, Russia. The findings from the research are important in order to further appreciate the athletes' perceptions of their coaches' behavior during competitive engagements. The study provides useful information for coaches in order regulate and harmonize their own behavior to potentially adapt their coaching roles toward athletes' at the highest level.

The findings indicate that majority of selected elite athletes (over 60%) perceived their coaches to have exhibited high levels of direct task-related behaviors by giving adequate training and instruction through the adoption of a more democratic decision making style. Generally, athletes who perceive their coaches to emphasize frequent training and instruction and show consistent democratic behavior demonstrate enhanced feelings of autonomy and more perceived competence which subsequently leads to high intrinsic motivation. Therefore, conscious efforts should always be made by coaches to develop specific characteristics and requirements that foster workable interactions in a particular way that would deepen athletes' confidence, trust, and respect. Further, the elite status of this sample might have also influenced athletes' perception of their coaches' decision making style since according to the path-goal theory, individuals with a high perception of their own ability would be less receptive to a highly directive leader behavior to a more democratic approach [36, 37]. An assumed characteristic that might have been evident in these athletes in the current study because the purported actions of their coaches perhaps encouraged greater participation in team decisions concerning goals, practice methods, tactics, and strategies. By including athletes in decision making on team task goals, coaches invariably create a greater feeling of agreement and commitment on those performance and task goals. Greater player involvement in the coaching process has been proven to enhance team cohesiveness and subsequently on performance [17, 38].

However, approximately 50 and 55 percent of the sampled athletes perceived their coaches not to have given adequate social support and positive feedback during the competition. Meaning, a considerable number of selected

athletes were deprived of the needed social support and not given positive feedback by their coaches at the Universiade. These findings perhaps suggest that some vital functions of coaches that ought to be provided these athletes for improving performance through the emphasis and facilitation of task related instructions of their skills, techniques, and tactics of sport were lacking. Additionally, it also means that clarification of relationship among members, structuring and coordinating members' activities at that high performance level were perhaps compromised [5, 39, 40].

A sizeable number of selected athletes perceived low social support from their coaches, a finding that is worrisome. Previous studies have reported that perceived social support is positively related to performance satisfaction [15, 41] and that athletes in successful teams perceive more social support than athletes in unsuccessful teams [8, 42]. Therefore, it is not surprising to find in those studies that during periods of prolonged failure, athletes wanted more social support from their coaches. The perceived inadequate social support found in the current study may be due to natural consequences of the difficulties and stressful situations that usually characterize elite competitions. In order to handle these stressors and pressures from elite sport, social support is very critical since coaches are usually turned to for help by athletes who feel secured, protected and confident [40]. Even though perceive social support increases with maturity, the present sample, although elite might not be very matured enough, a characteristic that is gained from prolonged experience at high level competitions [43]. Generally, playing at this level is very stressful and challenging, especially for less experienced athletes who may require a greater need for more social support. When athletes perceive they are loved, valued and appreciated by significant others (e.g., coaches, other staff), their individual experiences within competitive setting may promote their physical, psychological welfare, well-being, and general team climate. Similarly, when athletes are cared for without any attached contingencies (i.e., basing any support on athletes' performance level), they are likely to feel more valued, appreciated and attached to other members of the group (team) at any given time.

The less positive feedback behavior as perceived in this study is also not encouraging. It been well established that positive feedback embodies expressions of appreciation such as complementing athletes on their contribution and performance. This behavior has several positive gains. Specifically, positive feedback relates to the acknowledgement of effort and that performance may enhance self and collective efficacy, increase effort and intrinsic motivation, reduce social loafing, and prevent role ambiguity [5, 17, 44, 45]. For example, specific positive feedback such as "Good play," "Excellent work," and "Keep working," are phrases that acknowledge athletes' high effort that can stimulate improved performance over time due to a gradual learning process. Athletes are likely to perceive that they themselves can control subsequent performance outcomes, hence develop an internal locus of control. Conversely, when athletes perceive that their coaches give less positive feedback, they are more likely to perceive their immediate environment as ego-threatening and may feel pressurized to outshine their counterparts. Primarily, the perceived inadequacy of these personal attributes may potentially hinder athletes' long term career path in terms of their perceived competencies, successes, and intrinsic motivation and as well be detrimental in their quest to seek performance improvements and personal satisfaction [21, 22, 23, 24].

Due to gender-based inconsistencies in previous research (e.g., [25]), comparisons between athletes' perception scores were examined on the five behavior dimensions. The current findings revealed that male athletes significantly perceived their coaches provided training and instruction more often, were more democratic, more socially supportive, and often gave positive feedback than their female counterparts. However, females significantly perceived their coaches to be more autocratic. The strongest evidence obtained for gender difference on the perceived coaches' behavior was with the tendency for women perceiving a more democratic or participative style of management by their coaches as against an autocratic or directive style. Our interpretation of this gender difference on coaches' perceived democratic behavior versus autocratic tendencies is speculative. We argued that females and males recruited for such high standard competitions may not be equivalent in personality and behavioral tendencies, even though they may satisfy the same selection criteria. In particular, we note that women's social skills might enable them to perform their specific roles differently than men. Therefore, an interpersonal behavior that is skillfully done (e.g., in terms of understanding others' feelings and intentions) should facilitate a managerial style that is more democratic and participatory of their coaches than being authoritative if coaches really want to bring the best out of their females trainees. Making decisions in a collaborative style requires not only the soliciting of suggestions from one's peers and subordinates, but also the preservation of good relationships with them when evaluating and perhaps injecting their ideas. The give-and-take of collaborative decision making introduces interpersonal complexity not likely encountered by coaches who behave in an autocratic or directive manner. This interpretation is supported by research from other fields with evidence that teachers who lacked social skills as an indexed of their relative inability to decode nonverbal cues, had more autocratic attitudes and were generally perceived as more dogmatic in exercising their roles [46]. The results in this study suggest that elite student-athletes' perceptions of coaches' behavior may vary as a function of gender and thus require further scientific enquiry on other factors that may interact to

influence perceived coaches' behavior.

Although the results of this study gives some vital information concerning coaches' behavior as perceived by elite student-athletes, some limitations cannot be ruled out. First, the sample of athletes in this study was limited to a fraction of the population of athletes competing at the Universiade and from a few selected sport disciplines. Thus, the entire sample for study does not necessarily constitute an adequate cross-section of the entire population of athletes during the competition. Therefore, generalizability is restricted to this selected sample. Hence, results, findings and conclusions from this study should be noted with some caution.

The present study was carried out from a cross-national context. As such, there could be the possibility of intermingling of cultures across these different national boundaries of athletes on their perceptions from their respective cultural contexts. A viewpoint of "divergence" due to culture is shared by "cultural influence" hypothesis [4]. However, it is becoming more prevalent that foreigners are hired to coach indigenous teams and/ or foreign athletes are recruited to play for local teams. This interplay of differing cultures across different nationalities presents an interesting and intriguing avenue for investigation. Future research may try to verify whether athletes' perceived coaches' behavior would differ by virtue of their nationality and whether coaches from diverse cultures may vary their behavior when coaching athletes from different cultures [4, 47].

Other concern is the possible impact of moderating variables such as task type, age and years of experience on perceived outcomes (e.g., [34]). In fact, it has been shown that task variability and/ or task dependence affect differentially perceptions of coaches' behavior [9, 13, 31, 48], and athlete satisfaction [13]. Therefore, it is important to examine whether such differential effects of task dimensions would prevail in a cross-national context. The small and uneven number of subjects in the various sports studied did not permit such analysis in the present study. Future research may address all these important issues.

5. Conclusions

Athletes perceive different types of coaches' behavior and possibly develop preferences within their team culture. These perceived behaviors undoubtedly contribute toward personal satisfaction and team success. In the current study, coaches were perceived to have exhibited appreciable training and instruction and democratic behaviors. However, perceived inadequate social support and positive feedback behaviors were ascribed to the coaches by their athletes. Perceived gender effect for autocratic behavior was also noted for females. We conclude that elite student-athletes' psychological and motivational needs are as important as physical needs in order to achieve positive results. Our study demonstrated that physical needs of the athletes were to a large extent met by their coaches. Conversely, athletes' perceived psychological needs received little attention from their coaches, a finding that may potentially harm sport performance. Coaches ought to offer the needed social support as well as provide positive feedback that could stimulate athletes in their quest to enhance athletic performance as well as work relatively independent of athletes' gender during the coaching process. Collectively, coaches who display more encouragement, use more positive reinforcements, dialogue, more socially supportive, and give task relevant instructions, stimulate their athletes better under high achievement settings. Future replication of this study or similar studies along these lines with a larger sample could further our theoretical understanding and foster future coaching applications.

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