

FACTORS AFFECTING COACH LEADERSHIP BEHAVIORAL STYLES AND TEAM SUCCESS: THE MEDIATING ROLE OF COACH LEADERSHIP BEHAVIOR

HPN Perera

Department of Sports Science, Faculty of applied sciences, University of Sri Jayewardenepura, Sri Lanka
piumiri@sci.sjp.ac.lk

Abstract - The main purpose of this study is to determine if coach leadership behavior serves as a mediator between factors affecting said leader behavior and team success in sports. The research data were obtained from one hundred and sixty (n=160) athletes participated in inter university games with special reference to Western Province Sri Lankan. Team sports considered included, hockey, basketball, volleyball and Elle. Revised leadership scale for Sports questionnaire (RLSS) was used to access the coach leadership behavior and a modified questionnaire was used to access the factors affecting to it and the team success. The method used to collect data was cross sectional. SPSS version 16.0 was used for data analysis. Methods used to analyze data were General Linear model and Multiple Linear Regression. The Cronbach's alpha obtained with the present sample was 0.891. Appropriate correlations with theoretically linked constructs demonstrated criterion and concurrent validity. The results revealed coach leadership behavior as a mediator of the relationship between and factors affecting to coach leadership style and team success suggesting that factors affecting to coach leader behavior may enhance coach behavior in the task of successful performance. Mediating effect was first tested through calculating path coefficients and further conducted the Sobel's test to validate the previous results.

Keywords- Coach leadership behaviour, mediator, sports, team success

I. INTRODUCTION

A Sport is generally described as an organized, a competitive and a skillful physical activity which entails devotion and fair play. Sports contribute towards cultivation of national peace and harmony. Therefore the United Nations had recognized sports as an important phenomenon in achieving their millennium goals (UN Inter-Agency task Force on Sports for Development and Peace, 2005). International Olympic Committee had also documented that sport can help in bridging cultural and ethnic divides, create jobs and businesses, promote tolerance and non-discrimination (International olympic Committee, 2009).

Therefore there arises a necessity to study and address the issues persist with sports by any nation.

The success records in Olympic and other international sports events especially in team sports are not at all appealing with regard to Sri Lanka (Perera & Pushpakumari, 2016). There are many factors that are affecting to the success of sports. Therefore there is a essential requirement to study the factors that influence the team success in sports. Hence this study focused to assesses the impact of coach leadership behavior on team success in sports. Among the objectives of the study the core objective is to ascertain the relationship between

coach leadership behavior and team success and the sub objectives were to assess the impact of factors affecting to coach leadership behavior on coach leadership behavioral styles and to measure whether coach leadership styles mediate the relationship between factors affecting to it and team success.

II. LITERATURE REVIEW

Factors Affecting Coach Leadership Behavior (FACL) comprises of three facets (Smoll & Smith, 1989) namely, situational characteristics, leader (coach) characteristics, and team member characteristics. The factors were derived from the multidimensional model of Leadership developed by Chelladurai and Saleh in 1980.

Situational characteristics are the factors that are beyond the control of the coach and the athletes/team players. A model developed by Smoll and Smith (1984) identified factors such as level of competition, nature of the sport, and previous track records of success as situational factors that influence on coach behavior styles. Leader characteristics are the factors inherited with the coach and includes, age of the coach (Chelladurai & Carron, 1983; Smoll & Smith, 1989), gender (Rintaugu, Bailasha, & Toriola, 2011; Smoll & Smith, 1989), and the explanation of tactics and the trust he has on his own skills (Smoll & Smith, 1989; Rotter, 1966). Team member characteristics that influences on coach leadership styles includes age of the player (Smoll & Smith, 1989), gender of the player (Chelladurai & Arnott, 1985; Terry & Howe, 1984) and the nature of the sport that the players are involve in (Chelladurai & Saleh, 1980; Terry, 1984; Terry & Howe, 1984). Nationality and culture from which athletes/team players are from, also considered under the present study even though it was found that there is no significant differences in preferred coaching style due to the impact of nationality in previous studies (Terry, 1984). Sri Lanka is considered as a multicultural country and since this factor is yet not considered under Sri Lankan context, the present study used it as an influential factor for coach leadership styles.

The Coach Leadership Styles (CLS) specified in Leadership Scale for Sports (LSS) includes five styles specifically training and instruction behavior, democratic

behavior, autocratic behavior, social support and positive feedback behavior (Chelladurai & Saleh, 1980). If a coach possesses training and instruction behavior, he would help athletes to acquire their extreme physical potential by provision of required training and technical support (Chelladurai, 2007). Autocratic style indicates that the coach keeps authority in decision making with him and stresses athletes when dealing with them and in contrast democratic style reflects the fact that the coach practices participative decision making process where athletes also considered as a part of it (Chelladurai, 2007). A coach who possesses social support behavior would involve in satisfying the interpersonal needs of the athletes/players. Verbal and visual compliments and reinforcements make by coach depicts his positive feedback behavior (Chelladurai, 2007). Situational consideration behavior specified in Revised Leadership Scale for Sports (RLSS) by Zhang, Jensen and Mann (1997), elaborated as Coaching behaviors aimed at considering situational factors such as time, game, environmental factors, individual, skill level, gender, and health condition (Zhang, Jensen, & Mann, 1997).

There are different methods of accessing team success. Team success was operationally defined as the total winning percentage of a team for which games played in their regular competitive agenda. A percentage score will be calculated by dividing the number of points obtained by the maximum number of possible points (Carron, Bray, & Eys, 2002; Perera & Pushpakumari, 2016). A research conducted to examine the relationship between coach leadership, the athlete relationship, team success, and the positive development experiences of adolescent soccer players measured team success by the total number of competition points accumulated during a season (Vella, Oades, & Crowe, 2012).

The conceptual framework developed to the study is as follows.

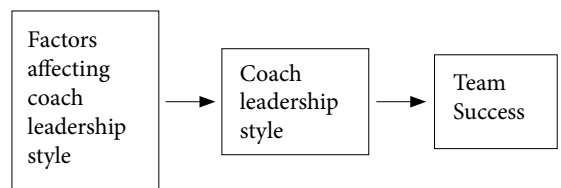


Fig. 1. Conceptual Framework of the study

III. METHODOLOGY AND DATA ANALYSIS

Participants completed The Revised Leadership Scale for Sports (RLSS) (Zhang, Jensen, & Mann, 1997) and a self-developed questionnaire under the supervision of the researcher in order to obtain relevant information for the study. The population of the study was 160 team players from the teams representing Basketball, Volleyball, Field Hockey, and Elle, and the sample derived was also 160. The reliability of the questionnaire was assessed by calculating Cronbach's Alpha. The Cronbach's alpha obtained with the present sample was 0.891.

Correlations matrix for each coach leadership behavior style were developed and the values lied between 0.3 and 0.8. Cohen uses a benchmark of minimum correlation value of 0.3 (Cohen, J, 1988), for convergent validity. The correlation coefficients reported in this study vary from 0.3 to 0.8 and hence considered to have discriminant validity also. The data collected were also subjected to Kaiser-Meyer-Olkin (KMO) and Bartlett test analyses to test the scale's structure validity, yielding to the results of KMO for training and instruction behavior 0.919, Democratic behavior 0.756, Social support behavior 0.751, positive feedback behavior 0.748, and situational consideration behavior 0.745. The Average Variance Extracted (AVE) was calculated to ascertain construct validity, and all the values were more than 0.5. This elaborates that at least as much explained compared to unexplained.

Methods used to analyze data were General Linear model (GL) and Multiple Linear Regression (MLR). MLR was conducted to analyze the relationship between factors affecting leader behavior styles and coach leadership behavior and coach leadership behavior styles and team success. Sobel's test was used to analyze the mediating effect of Coach Leadership behavior styles which depicts in Fig.2. Additionally, the results of direct and indirect effect of path coefficients also used to further prove the mediating effect.

A total of 160 subjects participated in the study. The descriptive statistics are as follows.

According to Table 2, most of the participants were male (56.88%) and females were 43.12%. Age of team players ranged from 20 to 28 years. The age was categorized into three groups as 20-22 years (23.12%), 23-25 (67.5%),

Table 2. Descriptive Statistics

Variable	Frequency	Percentage
Gender		
Male	91	56.88%
Female	69	43.12%
Age		
20-22	37	23.12%
23-25	108	67.5%
26-28	15	9.38%
Living Area		
Urban	45	28.12%
Suburb	54	33.75%
Rural	61	38.13%

Source : Survey data 2017

and 26-28 years (9.38%). The living areas were categories into three groups (Table 2). As Table 2 illustrates, more participants are from rural area (38.13%).

The impact of factors affecting coach leadership styles (FACLB) on coach leadership behavior (CLB) was also analyzed.

Table 3. The Relationship Between Faclb and Clb

FACLB	Mean comparison
Situational Factors	3.30
Characteristics of the Coach	3.58
Team member Characteristics	3.63

Source : Survey Data 2017

According to the mean figures depicts in Table 3, it can be concluded that the above mentioned characteristics make impact on coach leadership behavior.

The impact of CLB on team success was also analyzed. According to Table 3, only training and instruction

behavior is the significant predictor of team success which is measured through winning percentage.

The overall effect of coach leadership behavior on team success was also analyzed and found that CLB is a significant predictor of team success (p=0.000).

Table 3. The Relationship Between Coach Leadership Styles and Success

Mode 1	Unstandardized Coefficients		Std. Coeff	t	Sig.
	B	Std. Error	Beta		
Cons.	-.030	.231		-.129	.897
TIB	.268	.028	.707	9.53	.000
DB	-.042	.031	-.102	-1.36	.174
AB	-.021	.027	-.054	-0.787	.433
SSB	.000	.028	-.001	-.013	.990
PFB	-.031	.052	-.049	-0.587	.558
SCB	-.022	.058	-.031	-0.377	.707
CLB	.270	.060	.336	4.48	.000

DV: Team Success

The model used to analyze the mediation effect using path coefficient and Sobel's test depicts in Figure 2. The Sobel test is a statistical method of testing the significance of a mediation effect. The test is based on the work of Michael E. Sobel, (Sobel, 1982).

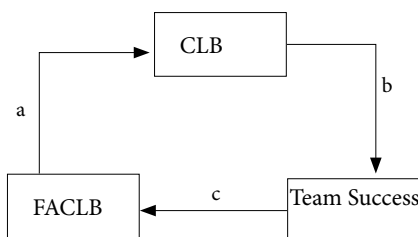


Fig. 2. Mediation model

According to Fig.2, the independent variable (IV) is Factors Affecting Coach leadership Behavior (FACLB), the mediating variable (MV) is Coach Leadership

Behavior (CLB) and the dependent variable (DV) is Team Success. In Fig.2, “a” denotes the effect of FACLB on CLB, “b” denotes the effect of CLB and team success and similarly “c” represents the effect of FACLB on Team Success.

Mediation effect was first tested through generating path coefficients. The summary results of path coefficients estimates are as follows.

Table 1. Coefficient for Mediating Effect

Testing Paths	B	SE(B)	95% CI	B	Sr2
Path c -DV= winning/Team success					
R2=0.113 , F(1,160)=0.179, p=0.673					
IV =FACLB	0.049	0.115	-0.179, 0.276	0.036	3.6%
Path a; DV=Coach leadership style					
R2= 0.038 , F(1,160)=6.16, p=0.014					
IV =FACLB	-0.418	0.169	-0.751, -0.085	-0.194	-19.4%
Path b and c; DV; winning/Team success					
R2= 0.144 , F(1,160)=11.263, p=0.000					
IV =FACLB	0.168	0.110	-0.049 -0.385	0.125	12.2%
IV=CLB	0.320	0.068	0.186 -0.453	0.388	37.8%
Total				-0.07527	

Source: Survey Data 2017

According to Table1, the p value resulting for FACLB, CLB and team success is 0.000 (p<0.05) and therefore found that CLB mediates FACLB to team success relationship. FACLB to CLB is not significant since p-value= 0.673 which is more than 0.05 and hence not significant. Therefore it can be concluded that CLB is a total mediator between FACLB and team success.

Subsequently, Sobel's test (Sobel, 1982) was conducted. Values were substituted to the following Sobel's formula.

$$z\text{-value} = a \cdot b / \text{SQRT}(b^2 \cdot s_a^2 + a^2 \cdot s_b^2).$$

The value derived by Sobel's Model was -1.12538014. The ab product is judged to be statistically significant if 'z' is greater than +1.96 or less than -1.96. Because $z = -1.125$, with $p = 0.000$, two-tailed, the ab product that represents the effect of ACLB on team success mediated by CLB can be judged statistically significant.

IV. DISCUSSION

The primary intention of the study was to examine the relationship between factors affecting coach behavior and coach leadership styles. The previous studies prove that the factors dealt with coach (leader characteristics) for instance coach's age level relate with coach behavior (Riemer & Toon, 2001; Rintaugu, Bailasha, & Toriola, 2011) are consistent with the present study. According to the preset study, age level of the coach is affected to the coach leadership styles but less likely in case of autocratic behavior which is partially consistent with the previous studies (Rintaugu, Bailasha, & Toriola, 2011; Terry & Howe, 1984). Furthermore it is found that there is a moderating impact of said variables on coach leadership behavior which is consistent with the previous studies conducted in Sri Lanka with a sample size of 291 athletes (Perera & Pushpakumari, 2015; Perera & Pushpakumari, 2015).

The findings of this research on relationship between coach leadership behavior and team success revealed that CLB is a significant predictor of team success and further found that training and instruction behavior of coach as the most influential factor affecting team success. The results of the study on coach training and instruction style are in agreement with the findings of Rintaugu and Bailasha (2011), Alemu & Babu (2012), Vahdani et al (2012) and partially agree with Terry (1984) on preferences made by them on training behavior. But the results are not consistent with the research findings made by Bahrami et al (2011). The results of the study partially agreed with the findings of Perera & Pushpakumari (2016), in relation to Sri Lanka Context.

The results of this study provide strong support for the proposed model in which coach leadership behavior mediates the relationship between factors affecting coach

leadership behavior and team success. The main intention of the study is to evaluate the validity of the mediation model developed by Smith and Smoll in 1989

V. CONCLUSION

This study, at the inception, examined the relationship between factors affecting coach behavior and coach leadership styles and found that these factors make an impact on coach leadership behavior. The impact of CLB on team success was also analyzed and the results concluded that training and instruction behavior is the significant predictor of team success which is measured through winning percentage. The overall effect of CLB on team success was also analyzed and found that CLB is a significant predictor of team success. Furthermore the results obtained relating to above mentioned relationships found consistent with previous studies.

REFERENCES

- Alemu, A., & Babu, M. (2012). The relationship between coaches' leadership style, Team cohesion and Team success : The case of premier league soccer clubs in Ethiopia. *International Journal of Social Science & Interdisciplinary Research*, 1(11), 1-13.
- Bahrami, S., Zardoshtian, S., & Jourkesh, M. (2011). The effect of leadership on the motivation and satisfaction of Iranian women premier basketball league. *Annals of Biological Research*, 2(4), 321-9.
- Carron, A., Bray, S., & Eys, m. (2002). Team cohesion and team success in sport. *Journal of Sports Sciences*, 20, 119-26.
- Chelladurai, P. (2007). Leadership in Sports. In G. Tenebaum, & R. Eklund, *Handbook Of Sport Psychology*. New Jersey: John Wiley & Sons.
- Chelladurai, P., & Arnott, M. (1985). Decision Styles in Coaching: Preferences of Basketball Players. *Research Quarterly for Exercise and Sport*, 56(1), 1985.
- Chelladurai, P., & Carron, A. (1983). Athletic Maturity and Preferred Leadership. *Journal of Sport Psychology*, 5(4), 371-80.
- Chelladurai, P., & Saleh, S. (1980). Dimensions of Leader Behavior in Sports: Development of a Leadership Scale. *Journal of Sport Psychology*, 2, 34-45.
- Chelladurai, P., & Saleh, S. (1980). Dimensions of leader behavior in sports: development of a leadership scale. *Journal of Sport Psychology*, 2, 34-45.
- Cohen.J. (1988). *J. Cohen, Statistical Power Analysis for the Behavioral Sciences*, Erlbaum., NJ, USA, 2nd edition, 1988. (2nd ed.). Hillsdale, NJ, USA: Lawrence Erlbaum Associates, Inc., Publishers.

- International Olympic Committee. (2009). *International Olympic Committee (IOC)*. Retrieved February 10, 2018, from IOC web site: <https://www.olympic.org/about-ioc-institution>
- Perera, H., & Pushpakumari, M. (2016). The relationship between Coach Leadership Behavior and Team Success In sports of State universities In Western, Province Sri Lanka. *iNCOTeM*, 1, pp. 47-51. Colombo: Department of Management of Technology, University of Moratuwa, Katubedda.
- Perera, H., & Pushpakumari, M. (2015). An empirical study of Situational, Leader and Team member characteristics on coach leadership behavior styles Exhibited by the coaches of state universities in Western Province. *International conference on Multidisciplinary Approaches-2015 (ICMA)* (p. 158). Colombo: Faculty of Graduate studies, University Of Sri Jayewardenepura.
- Perera, H., & Pushpakumari, M. (2015). the perception of Athletes on the Factors Affecting to Coach Leadership Behavior styles: An empirical study on leadership styles Exhibited by the Coaches of State Universities in Western Province- Sri Lanka. *International Journal of Multidisciplinary Studies (IJMS)*, 2(2), 83-91.
- Riemer, H., & Toon, K. (2001). Leadership, Satisfaction in Tennis: Examination of Congruence, Gender & Ability. *Res Q Exercise Sports*, 72, 243-56.
- Rintaugu, E., Bailasha, N., & Toriola, A. (2011). Psycho-social attributes of elite African women volleyball players: Sport psychology. *African Journal for Physical, Health Education, Recreation and Dance*, 17(3), 535-546., 17(3), 535-46.
- Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80(1), 1-28.
- Smoll, F., & Smith, R. (1989). Leadership behaviors in sport: A theoretical model and research paradigm. *Journal of Applied Social Psychology*, 19, 1522-51.
- Smoll, F., & Smith, R. (1989). Leadership Behaviors in Sport: A Theoretical Model and Research Paradigm. *Journal of Applied Social Psychology*, 19(18), 1522-51.
- Sobel, M. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt, *Sociological Methodology* (pp. 290-312). Washington DC: American Sociological Association.
- Terry, P. (1984, December 09). The coaching preferences of elite athletes competing at Universiade '83. *Can J Appl Sport Sci*, 9(4), 201-8.
- Terry, P., & Howe, B. (1984). Coaching preferences of athletes. *Can J Appl Sport Sci*, 9(4), 188-93.
- UN Inter-Agency task Force on Sports for Development and Peace. (2005). Sports as a Tool for Development and Peace: *Towards Achieving the United Nations Millennium Development Goals*. UN.
- Vahdani, M., Sheikhyousefi, R., Moharramzadeh, M., Ojaghi, A., & Salehian, M. (2012). Relationship between Coach's Leadership Styles and Group Cohesion in the teams participating in the 10th Sport Olympiad of male Students. *European Journal of Experimental Biology*, 2(4), 1012-17.
- Vella, S., Oades, T., & Crowe, T. (2012). The relationship between coach leadership, the coach-athlete relationship, team success, and the positive developmental experiences of adolescent soccer players. *Physical Education and Sport Pedagogy*, 18, 549-61.
- Zhang, J., Jensen, B., & Mann, B. (1997). Modification and Revision of the Leadership Scale for Sports. *Journal of Sports Behavior*, 20, 105-22.