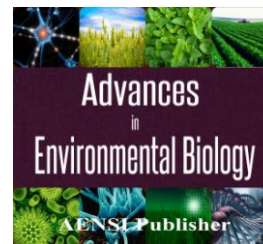




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Developing Measurement Scale: Performance Evaluation Dimensions for Sports Coaches

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ABSTRACT

The present research was aimed to explore confirmatory model and performance evaluation scale of Iranian national coaches. The research was conducted by descriptive survey method. A list of variables effective on coaches' performance was provided by a confirmatory study on exploratory study for providing performance evaluation scale of Iranian national coaches in 1st and 2nd grade federations. A questionnaire with 35 closed queries which its validity was confirmed by college professors and its reliability coefficient was 0.974 by Cronbach's Alpha ($P < 0.01$), used for collecting data. 450 elite coaches, administrators, national athletes, college professors, and national sports experts participated in the research and finally confirmatory model and performance evaluation scale of Iranian national coaches gained by analyzing 407 questionnaires. Performance evaluation scale of Iranian national coaches consisted of five factors. Relationships between factors, factorial loads among factors, and structural equation model were obtained in the confirmatory model. The construct extracting from exploratory factor analysis, path among factors, and goodness of fit for the model validity were confirmed. In the present model, technical abilities, leadership skills, and specific skills were emerged as three independent factors influencing coaches' communicative skills and operational power. Communicative skills equation consisted of leadership skills, specific skills, and technical skills which the specific skills coefficient was negative. Communicative skills were the only factor playing role in coaches' operational skills equation. The results from structural equation modeling showed specific skills negative role indicating coaches' weak performance in this scope and it is required to consider educational courses for staffing them. The presented scale can be used for evaluating Iranian national coaches' performance. Therefore, it must be paid attention to factorial loads for each variable and relationships role among factors in the model. Communicative skills role is particularly important as the gravity center of model. Administrators should promote retraining courses relating to leadership and specific skills for improving coaches' skills. Negative role of Specific skills should be also considered for selecting coaches due to evidences of coaches' weakness in the model.

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INTRODUCTION

Performance evaluation is a process by which managers and supervisors observe personnel's behavior to give diagnostic feedback about their strengths and weaknesses. In a more efficient education culture, evaluation is defined as a research and exploration process or judgment and arbitration about extent and value of something by assessing and measuring [13]. Martens [21] enumerated planning as one the coaching pillars and managing skills. He believed that coach's planning skill is not only significant in management scope but also its evaluation results would be effective for planning future, budgeting, and playing role of organizing. Shafiei [28] believed that one of the most important criterion elements for evaluating and selecting coaches is usage of the accurate and decisive decision making methods in difficulties. Hill and Pluschke [15] stated by presenting evaluation criterions for high school coaches that evaluating coaches is an important responsibility of schools principals. Nasiri [23] in a research entitled modeling coaches' evaluation in Iranian national Handball teams found that coaches' good behavior and respect in meeting athletes, coaches, team managers, judges, event organizers, opponent players and coaches during training and competition were the first grade of importance and attention

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for evaluating national Handball coaches, and he also believed that developing discipline during trainings and competitions and evaluation players" and team's works were important and effective elements for evaluating national Handball coaches. According to Martens, if a coach could not communicate, his/her organizing ability and being observed had not worth much [21]. The results from Dabaghian [9] indicated coach's communicative skills were subset of emotional and humanity skills and he believed that effective communication was more helpful than know a technique for coaches. Nasiri [23] stated that coach's psychological mastery on athletes during training or competition and art of condemning players during severe stress caused by tough trainings, annoying pressures and stress during competitions, and fear of losing or opponent in crucial times were considered as the most important coach trait.

Regarding Astin [1], Carrol and Schneier [5], Fleishman and Quaintance [10], Salvendy and Seymour [27] job performance included, in addition to behavior product, Relevant Task Goals and Non Task Goals which helped to describe performance scope. Relevant Task Goals were the behaviors relating to individual's job scope or his/her job behavior quality directly [5]. Non Task Goals were the behaviors relating to coach's job scope and it related to his/her peripheral tasks [1]. As it was stated by Murphy and Cleveland [22], it has been long time of valuation difficulties for performance evaluation and lots of researches have been conducted on improving, revising, and getting affordable measurement techniques. However, developing effective methods for measuring performance is also contingent to criterions of Cote, et al. [6] who developed a theoretical coaching model based on Gymnastic elite coaches' works (Figure 1). This model shows mental relations governing elite coaches' performance which helped them to organize coaching knowledge and then to direct coaches' behavior during contest, team organization, and training [6]. According to Bloom, et al. [3], Fournier and Dubois [11], Gilbert and Trudel [12] mental model of coaching was based on coach's personality traits, athlete's personality traits, and the contest in which coaching is being done. Before publishing that, coaching model was used as a framework for several qualitative researches on coaches and athletes [3; 11; 12].

Maclean, et al. [17] developed a methodological model aimed to respond what scale must be used for evaluating an individual in a specific job (Figure 2). This theoretical model presented a process (three stages method including job evaluation, job description, and domain of performance) of independent evaluation scale development in which performance evaluation methods were included. Domain of performance has two factors including behavioral product and behavioral process. Based on this model, behavioral product factors divided into two categories including task related process and maintenance-related behaviors in organization. Both internal and external environmental factors were considered. Subsequently, each three elements of 1) behavioral product factors, 2) factors of task related behavioral process, and 3) factors of maintenance-related behaviors were divided into two categories which led to presenting a two dimensions theoretical model for evaluating people by coaching performance various dimensions [17; 18; 19].

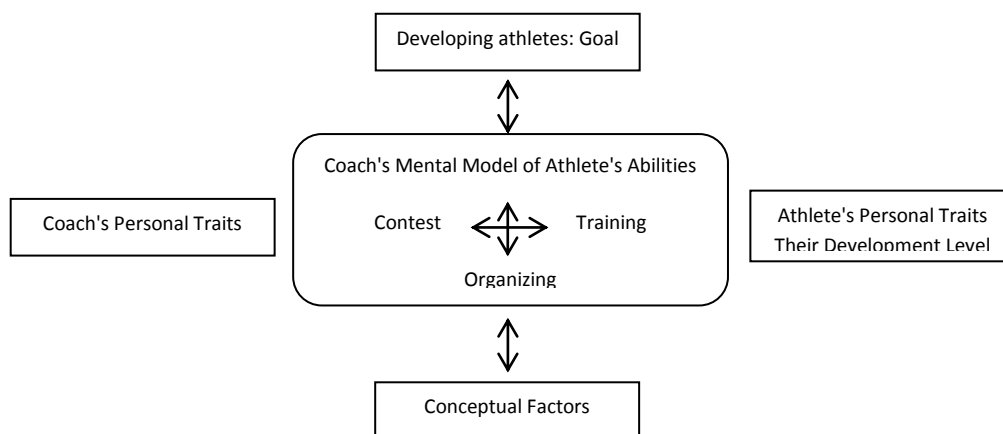


Fig. 1: Coaching Model by Cote, et al.

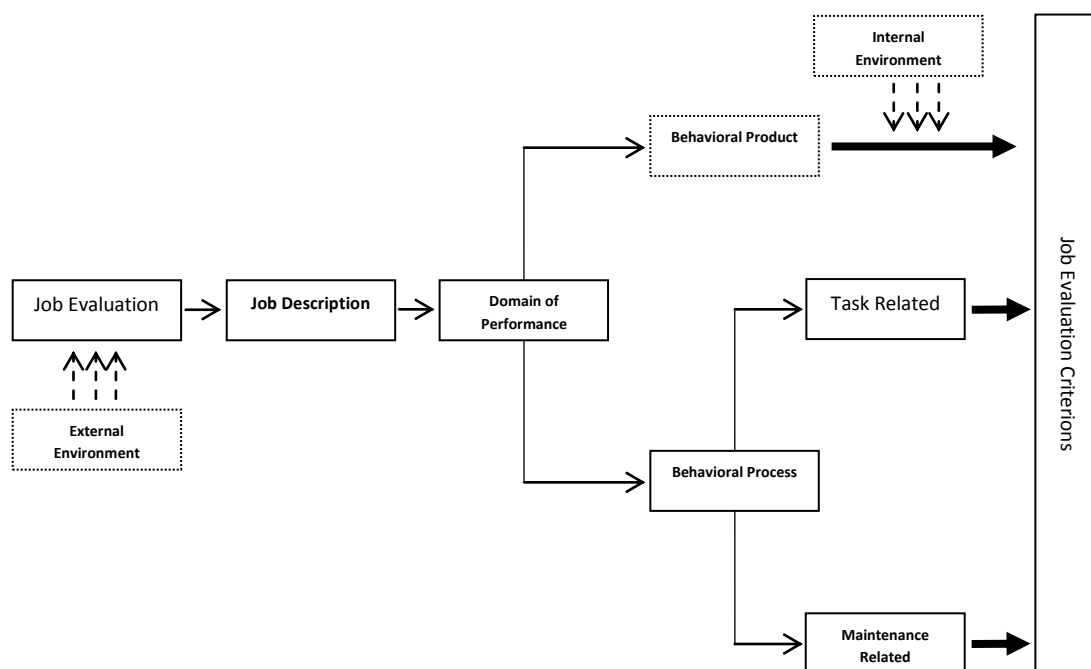


Fig. 2: Theoretical Model of Coaches' Performance Dimensions by Maclean, et al.

Cote, et al. (1999) developed Coach Behavior scale-sport (CBS-S) by utilizing above cases and based on qualitative researches and other studies on coaches' behaviors. The distinctive specificity of this scale was effort to provide comprehensive evaluation of coaches' performance which was bold in training, contest situation, and organizational acts (e.g. goal setting, personal reports). The CBS-S determined 7 dimensions for coaches' performance. Athletes rank their own coaches by 7 point Likert type scale from 1 (never) to 7 (always). The scale 7 factors included as follows: Physical Training and Planning (PTP) including 7 elements on coaches' participation in athletes' physical training and planning for training and competition; Goal Setting (GS) including 6 elements for evaluating coaches' participation in identification, development, and practice toward athletes' goals; Mental Preparation (MP) including 5 elements focused on the way in which coach helps athlete in training pressure, staying focused, and self-confidence; Technical Skills (TS) including 8 elements on coach's feedback, show and signing; Negative Personal Rapport (NPR) including 8 elements exploring usage of negative techniques like fearing and shouting by coach; Personal Rapport (PR) including 6 elements for evaluating communicative skill, coach's accessibility and perception; Competition Strategies (CS) including 7 elements focusing on coach-athlete interaction in competition [7].

According to Campbell, et al. [4] each performance measurement must be related to the organization goals. Cunningham and Dixon [8] found that performance evaluation model could be summarized to 6 factors including elite sport product, scientific product, ethical behavior, financial accountability, coach's grade and technical ranking, and athletes' satisfactory [5]. Goundi [14] pointed to coach' assessment form in a paper. The form named assessment, self- assessment, and continued learning. Lloyd [16] developed a model for evaluation coaches and young athletes. In this model, evaluation criterion was completed in two sections of contest and training by five points Likert type scale from 1 (weak) to 5 (excellence). Maetozo [20], director of health and physical education in Lock Haven State-Pennsylvania, in paper entitled the professional preparation of coaches for Olympic sports stated required abilities for succession in Olympics. He noted that human positive relationships, in Olympics framework, could help developing international relations. Sabock [26] clarified that the most important characteristics for a head coach included determining and planning team goals, being able to identify players' elites, having knowledge on the sports, understanding and recognizing players, being able to organize team, having plan for anything, being able to evaluate team's work. Pastore and Meacci [24] considered coaches' backgrounds and experiences in evaluating collegiate coaches. They paid attention to coaches' failures and winnings and they found coaches' planning and evaluating skills important. Barber and Ecrich [2] in a research entitled methods and criteria for evaluating intercollegiate coaches, explored applied methods for evaluating NCAA coaches (1st, 2nd, and 3rd categories) by elite sport administrators in Basketball championships. Redmond [25] developed a plan for evaluating young coaches and athletes in which ability factors for creating entertainment, recreation, and fun during training and creating competitive climate emphasizing fair play, using effective leadership methods for directing the team, existing positive pattern for

athletes, communicating positively with athletes regarding expectancies and goals, persuasive feedback, encouraging athletes in order to team responsibility, supporting institution, gym, and team, coach's presence in team during season were seriously considered important [25].

As national team coaches are strictly responsible before, during, and after competition, determining evaluation and performance criterions during coaching work stages will meet some barriers and difficulties and will be complicated for administrators. Moreover, as one of the key tasks of sports federations is to select competence coaches for national teams and thereafter performance evaluation should be accomplished properly, conducting the present research for exploring performance evaluation criterions of Iranian national teams coaches was necessary, and by surveying opinion of coaches, administrators, national teams players, faculty members, sports experts, and reviewing literature, the researchers aimed to response the query of what is confirmatory model and performance evaluation scale for national coaches?

MATERIALS AND METHODS

The present research was accomplished by descriptive-survey method. The main goal was developing confirmatory model and performance evaluation scale for national coaches and presenting some decisions on this model. By reviewing theoretical resources and related literature, a list consisted of the most important variables relating to performance evaluation criterions of national coaches was provided and a questionnaire was prepared by collecting expertise ideas of sports professors, coaches, and managers. The questionnaire was primarily distributed among research samples and then final provided questionnaire by analyzing factorial loads based on exploratory factor analysis for each variable was distributed among statistical samples. Finally, the collected data was analyzed by statistical methods.

Measures:

By reviewing research literature and going through the faculty experts' opinions, a questionnaire consisting of 35 closed queries was provided and its content validity confirmed by 5 faculty professors. Additionally, the questionnaire was completed by a community same as the research community which its reliability was 0.974 measured by Cronbach Alpha coefficient and this reliability coefficient was confirmed after analyzing final data ($P < 0.01$). Finally, an exploratory factor analysis was used for categorizing queries.

Statistical Methods:

Data analysis was conducted by SPSS 18th for determining validity and reliability of research instrument. Exploratory factor analysis was used for classifying significantly the research variables into small factors. This technique was utilized for classifying the questionnaire queries based on determining the defined rational constructions for this questionnaire were extracted from queries collection in culture relating to the research statistical community or not. Additionally, a factor analysis model was conducted to measure confirmatory factorial loads of each variable for all queries in order to ensure the extent of each variable presence in the questionnaire. So, variables convergence in each factor and also factors segregations were analyzed and confirmed. The questionnaire construct validity could be confirmed if these constructions existed. According to Tinsley and Brown [29], Principal Axis Factoring (PAF) was used for extracting factors (constructs) and Rotation Method (Varimax) Oblimin (with zero Delta and Kaiser Normalization) was used for items rotation in the present analysis. Kazer Meier Olkin (KMO) and Bartlett's test were used for exploring model adequacy. In that case, scores higher than 0.7 indicated goodness situation of factor analysis model for data and if P-Value in Bartlett's test was less than 0.05 ($P < 0.05$), the mentioned subject would be confirmed. Scores less than 0.5 for KMO indicated not suited factor analysis for data and scores higher than 0.5 indicated were confirmed extents. Communalities index was used for determining the model predictability based on extracted factors for each item [29]. So, any of items were not situated for omitting and they stayed in items list for explaining model factors in the present research. Moreover, confirmatory factor model path was analysis and drawn by LISREL software. Therefore, number of factors and explaining variables of each factor were confirmed in exploratory factor analysis of performance evaluation criterions for national coaches, and performance measurement scale and its path analysis model were developed for national coaches.

Results:

Based on the collected data, the research participants were classified in five groups of coaches, administrators, national team players, faculty professors, and experts. The results showed that about 58 percent of participants consisted of coaches and players and about 76 percent of participants were coaches, players, and administrators who were more engaged in coaches' evaluation (Table 1).

Table 1: Descriptive results of the research participants

Groups of Participants	Frequency	Percentage	Cumulative percentage
Coaches	128	31.4	31.4
Administrators	74	18.2	49.6
Players	110	27	76.7
Faculty Professors	21	5.2	81.8
Experts	74	18.2	100
Total	407	100	

The results from confirmatory factor analysis of performance evaluation scale for national coaches:

As the importance on recognizing performance evaluation scale for national coaches was discussed, factors and items constituting each factor, factorial loads and their role playing extent, organization, and effectiveness were recognized in confirmatory model of performance evaluation criterions for national coaches and the theoretical model of performance evaluation criterions for national coaches was confirmed by confirmatory factor analysis. Based on the present results, the model was affected by five independent factors consisting technical abilities, operational abilities, specific skills, leadership skills, and communicative skills for coaches. The results on Table 2 demonstrated the model items and explaining variables in order of factorial load absolute value for each one. Nonstandard coefficients in each relation indicate a factor absolute relation with its question (item). As all relations on the Table 2 had **T** extent higher than 2.58 (the table **T**), the items were significant ($P < 0.01$). Additionally, the **R**² explains predictability of question variable by the related factor. So, regarding the present results, five factors construct developed by exploratory factor analysis was confirmed and construct validity of this instrument with those five factors was approved for the research statistical community.

Table 2: Nonstandard coefficients between factors in confirmatory factor analysis of five factors model for evaluating coaches

Item	F ₁ (Technical Ability)	F ₂ (Operational Ability)	F ₃ (Specific Skills)	F ₄ (Leadership Skills)	F ₅ (Communicative Skills)	Error	R ²
1. planning properly for before season, during season, and after the competition season		0.90				0.45 (0.036) 12.67	0.64
2. planning properly for before contest, during contest, and after the contest		0.90 (0.050) 17.89				0.49 (0.039) 12.82	0.62
3. proving special plans for national team contests in national, regional, continental, and world levels		0.86 (0.052) 0.86				0.59 (0.045) 13.13	0.56
4. predicting and organizing selection and procurement camps		0.73 (0.050) 14.51				0.66 (0.049) 14.51	0.45
5. developing a specified plan for employing new resources (players, coaches, practitioners, ...)		0.90 (0.050) 17.81				0.50 (0.039) 12.84	0.61
6. taking effective coaching decisions during the contest		0.89 (0.050) 17.36				0.55 (0.042) 12.97	0.59
7. team and individual goals setting and clarifying them to the athletes and authorities clearly		0.84 (0.048) 17.66				0.46 (0.036) 12.89	0.61
8. following principles and philosophy of the federation and related stakeholder organizations		0.79 (0.053) 14.99				0.70 (0.052) 13.47	0.47
9. encouraging athletes to achieving higher levels of success		0.77 (0.052) 14.91				0.68 (0.051) 13.48	0.47
10. having strong tolerance in all situations specifically tough conditions				0.79 (0.052) 15.10		0.71 (0.055) 12.82	0.47
11. behaving justly without any discrimination to athletes	0.97 (0.053) 18.41					0.63 (0.047) 13.57	0.60
12. creating satisfactory and happy climate in the training times	0.83 (0.045) 18.31					0.47 (0.035) 13.58	0.59
13. meeting politely and justly to referees.				0.93 (0.049)		0.48 (0.043)	0.64

administrators, coaches, and opponent players				18.78		11.21	
14. reminding players their responsibilities in following team disciplines and work principles				0.93 (0.047) 19.95		0.37 (0.036) 10.22	0.70
15. organizing meetings and communicating to administrators, athletes, and the staff of national team organization effectively					0.90	0.56 (0.044) 12.60	0.59
16. organizing meetings with the league club coaches to consult about athletes					0.76 (0.057) 13.45	0.79 (0.059) 13.45	0.42
17. communicating properly with mass media					0.70 (0.057) 12.39	0.86 (0.063) 13.62	0.36
18. utilizing common perceivable language and non-verbal communication for all athletes		0.77 (0.050) 15.45				0.61 (0.046) 13.39	0.49
19. following justice and regulations in selecting athletes without any attention to the social and media pressures	0.99 (0.054) 18.46					0.66 (0.048) 13.56	0.60
20. condemning and de-stressing of team in specific occasions	0.93 (0.048) 19.09					0.51 (0.038) 13.47	0.63
21. responsibility for what he/she saying	0.97 (0.048) 20.18					0.45 (0.034) 13.29	0.68
22. background of winnings and failures during coaching up the national teams	0.67 (0.047) 14.23					0.65 (0.047) 13.93	0.41
23. utilizing effective tactics and strategies in each contest	0.93 (0.048) 19.36					0.48 (0.036) 13.41	0.64
24. educating techniques effectively during trainings	0.80 (0.048) 16.75					0.80 (0.048) 16.75	0.52
25. utilizing scientific foundations and concepts in developing athletes and champions and affairs promotion	0.97 (0.048) 20.38					0.45 (0.034) 13.39	0.68
26. the extent of practicing foreign language, specially English, in the abroad championships			0.97 (0.057) 12.46			0.74 (0.059) 17.17	0.56
27. being adherent to the national and international rules for the related sport			0.85 (0.051) 16.83			0.61 (0.048) 12.57	0.55
28. applying teaching aids and internet			0.99 (0.053) 18.86			0.55 (0.047) 11.73	0.64
29. studying specialized texts of coaching and developing self coaching knowledge			1.10 (0.049) 22.57			0.29 (0.035) 8.40	0.81
30. evaluating athletes and developing their individual and team abilities levels	0.95 (0.046) 20.70					0.45 (0.034) 13.29	0.70
31. supervising and assessing athletes' competencies and techniques and promoting their individual and team abilities levels	0.95 (0.045) 21.33					0.34 (0.026) 13.03	0.73
32. opponent recognition and evaluating opponent's practices and performances during training and contests	0.93 (0.050) 18.68					0.55 (0.041) 13.53	0.61
33. recording individual and team performance of athletes during training and contests	1.03 (0.051) 20.36					0.49 (0.037) 13.21	0.68

timely							
34. assessing athletes' training and competition climate	0.91 (0.050) 18.40					0.57 (0.042) 13.57	0.60
35. supporting and being present in the trainings and competitions on time	0.76 (0.052) 14.51					0.79 (0.057) 13.89	0.42

Conceptual model of substructure for path analysis model:

The researchers were primarily required to design a conceptual model based on the their opinions and research literature relating to the extracted factors relations by exploratory analysis for developing path analysis model of coaches' evaluation criterions after revision by the used software. So, the conceptual relations on the Table 3 were considered by researchers.

Table 3: Introducing proposed effective and influential variables in developing the conceptual model

	Technical Ability	Operational Ability	Specific Skills	Leadership Skills	Communicative Skills
Technical Ability		★			★
Operational Ability	★				★
Specific Skills		★			★
Leadership Skills					★
Communicative Skills		★		★	

The relationships between factors were revised based on the results from factor analysis (Table 4).

Table 4: Introducing proposed effective and influential variables in developing the conceptual model

	Technical Ability	Operational Ability	Specific Skills	Leadership Skills	Communicative Skills
Technical Ability		★			
Operational Ability					
Specific Skills		★			
Leadership Skills		★			
Communicative Skills		★			

Structural equations of path analysis model:

Structural equations which are substructure for path analysis model among factors were extracted and reported on the Table 5. As it has been shown in Table 5, relationships between technical ability and leadership skills with communicative skills criterion were significant and relationship between specific skills and communicative skills was not significant ($P < 0.05$). Moreover, explanation extent of communicative skills criterion by above criterions was 90 percent based on R^2 index. The results also indicated that relationship between communicative skills and operational ability was significant ($P < 0.05$) and explanation extent of operational ability criterion by communicative skills criterion was 86 percent based on R^2 index.

Table 5: Structural Equations

First Equation: structural equation for communicative skills in coaches' evaluation				
Communicative skills = 0.28 leadership skills - 0.093 specific skills + 0.77 technical skills				
(0.099) 7.82	(0.061) -1.53	(0.093) 2.97	$R^2 = 0.90$	Error variance = 0.096 (0.0293) 4.11
Second Equation: structural equation for operational skills in coaches' evaluation				
operational skills = 0.93 communicative skills				
(0.058) 16.04	$R^2 = 0.86$			Error variance = 0.14 (0.026) 5.44

Path diagram of confirmatory factor analysis for five factors model of coaches' evaluation (standard coefficients):

Standard coefficients of confirmatory factor analysis have been demonstrated on Figure 3. In this figure, higher standard coefficients indicated stronger relations among questions and factors. Three factors coaches' technical skills, specific skills, and leadership skills were emerged as independent factors in the model. These factors, as mediate factors, affected communicative skills. Finally, those three factors affected coaches' operational ability (the model response factor) through communicative skills (the mediate factor) based on the obtained path analysis model.

Table 6: The results from Path diagram of confirmatory factor analysis for five factors model of coaches' evaluation (standard coefficients)

Items		Factors	Factorial loads	Error	Variance
Item 11	←←←	F 1	0.78	0.40	0.60
Item 12	←←←	F 1	0.77	0.40	0.60
Item 19	←←←	F 1	0.78	0.40	0.60
Item 20	←←←	F 1	0.79	0.37	0.63
Item 21	←←←	F 1	0.82	0.32	0.68
Item 22	←←←	F 1	0.63	0.60	0.40
Item 23	←←←	F 1	0.79	0.37	0.63
Item 24	←←←	F 1	0.71	0.50	0.50
Item 25	←←←	F 1	0.83	0.32	0.68
Item 30	←←←	F 1	0.83	0.30	0.70
Item 31	←←←	F 1	0.85	0.27	0.73
Item 32	←←←	F 1	0.78	0.39	0.61
Item 33	←←←	F 1	0.82	0.33	0.67
Item 34	←←←	F 1	0.76	0.42	0.58
Item 35	←←←	F 1	0.65	0.58	0.42
Item 1	←←←	F 2	0.77	0.40	0.60
Item 2	←←←	F 2	0.76	0.43	0.57
Item 3	←←←	F 2	0.74	0.45	0.55
Item 4	←←←	F 2	0.67	0.56	0.44
Item 5	←←←	F 2	0.79	0.38	0.62
Item 6	←←←	F 2	0.78	0.40	0.60
Item 7	←←←	F 2	0.79	0.38	0.62
Item 8	←←←	F 2	0.69	0.52	0.48
Item 9	←←←	F 2	0.69	0.53	0.47
Item 18	←←←	F 2	0.71	0.49	0.51
Item 26	←←←	F 3	0.75	0.44	0.56
Item 27	←←←	F 3	0.74	0.46	0.54
Item 28	←←←	F 3	0.80	0.36	0.64
Item 29	←←←	F 3	0.90	0.19	0.81
Item 10	←←←	F 4	0.69	0.53	0.47
Item 13	←←←	F 4	0.80	0.36	0.64
Item 14	←←←	F 4	0.84	0.30	0.70
Item 15	←←←	F 5	0.77	0.41	0.59
Item 16	←←←	F 5	0.65	0.58	0.42
Item 17	←←←	F 5	0.61	0.63	0.37

*Discussion:**Discussion on confirmatory model for performance evaluation criterions of national coaches:*

The five factors emerged on the model were confirmed for valuating national teams coaches. The first factor, regarding its explaining variables, was named coaches' technical ability and it could affect (about 0.78) the fifth factor which was named coaches' communicative skills, regarding its explaining variables. It means that by increasing 1 unit in coaches' technical ability, it will be expected to increase 0.78 unit in coaches' communicative skills. In other words, coaches will be able to develop their communicative skills about 0.78 unit by 1 unit more in technical ability which is required to work on explaining variables of technical ability one by one.

It sounded that the reason for contribution of coaches' external communication three factors explaining communicative skills is related to the national sport society demand to realize coaches' communication with other coaches, gyms and leagues administrators, and media. It has been an issue which introduce by press and media indicating occasional inappropriate interactions between national coaches and other administrators and coaches. In this part, participants were clarified that coaches' high level of technical ability has substantial effect on their communicative skills including communication with media. So, if administrators can utilize national coaches who own great technical ability, appropriate communications will be achievable. Managers know about importance coaches' communication with institutes for teams' victories. Therefore, it is proposed to staffing coaches with upper technical competency. Regarding the effect coefficient of these factors on each other, it is proposed to administrators to organize educational courses on communicative skills to develop coaches' capability in mentioned item and this matter is one which is utilized by authorities in all around the world and coach's participation in courses on the way of interacting with press and communicating skills have been seriously considered by managers. It will lead to coaches' technical ability development and investments in these areas can improve coaches' communicative skills automatically. Likewise, the achievable result is that coaches owned high level of technical ability can communicate with administrators, coaches, and media properly.

Fourth factor named coaches' leadership skills according its explaining variables and it could affect fifth factor (communicative skills) about 0.27. It indicated that increasing 1 unit in coaches' leadership skills, it will be expected to increase 0.27 unit in coaches' communicative skills. In other words, coaches will be able to develop their communicative skills about 0.27 unit by 1 unit more in leadership skills which is required to work

on explaining variables of leadership skills including to meet politely and justly to referees, administrators, coaches, and opponent players, to remind players their responsibilities in following team disciplines and work principles, and to have strong tolerance in all situations specifically tough conditions specially when the pressures come from public thoughts and critics. The results on this perspective indicated the need for development of national coaches' leadership skills. It is required for coaches to be a leader inherently and their related skills have been developed strongly since coaches' cooperation and participation in the skills development are very important to managers. The literature also referred to leadership ability in various conditions as the most important characteristic of both prosperous manager and coach.

Third factor named coaches' specific skills according its explaining variables and it could affect fifth factor (communicative skills) about -0.09. It means that by increasing 1 unit in coaches' specific skills, it will be expected to decrease 0.09 unit in coaches' communicative skills. In other words, coaches will fall their communicative skills down about 0.09 unit by 1 unit more in their specific skills. Although this coefficient was rather diminutive, it indicated that coaches could not interact successfully with media, coaches, and sports administrators by their current communicative skills which include practicing foreign language, applying internet, and studying specialized texts of coaching. From managing point of view, administrators are required to plan and organize long and short term educational courses for developing those kinds of coaches' skills. Achieved results by this perspective are considerable and national sports coaches need to develop their specific skills, for instance, English proficiency which is so vital for the mentioned aim. On the other hand, coaches have to expand their knowledge in order to have effective relationships with colleagues and sports authorities. However, the coaches' communication is not limited to the internal but includes international levels.

Fifth factor named coaches' communicative skills according its explaining variables and it could affect second factor (operational skills) about 0.93. It means that by increasing 1 unit in coaches' communicative skills, it will be expected to increase 0.93 unit in coaches' operational skills. In other words, coaches can promote their operational and executive skills about 0.93 unit by 1 unit more in their communicative skills. Coaches in operational and executive section which relates to reforming all potential knowledge and skills to actual, can emerge and demonstrate their potential skills. Coaches' executive skills include all plans relating to planning for competition season, training camps, goal setting, and effective decision making. These factors high effectiveness on coaches' outputs (their operational skills) indicate significance of coaches' influential communications.

The considerable point is that the developed model has five factors in which the key factor is communicative skills. This key factor could affect about 0.93 on coaches' operational and executive skills by storing factorial loads of specific skills, technical ability, and leadership skills.

Shafiei [28] to develop coaches' selection criterions referred to several variables in which most of the present variables were visible. Shafiei in his classification referred to factors including emotional-human skills, personality traits skills, technical skills, social characteristic, administrative skills, coaching background, personal characters, and sports skills [28]. Emerged factors in the present paper were slightly overlapped with Shafiei's findings; there was only one difference between these papers results indicating that Shafiei found eight factors, however, the present results reported five factors. Additionally, Nasiri [23] stated technical features, sports background, personality and ethical characters, human and social characters, and personal traits for coaches [23]. The present results were obviously consistent with the results from Nasiri. Moreover, based on the factors number, both papers found five factors for evaluating sports coaches. The similarity reason might be for the same used methodology, although Nasiri's statistical sample size was not enough to conduct confirmatory factor analysis. It can be said that the present paper and its sample size not only conducted exploratory factor analysis but also confirmed Nasiri's model according to the factors number. Extracted factors in the present research were consistent and overlapped with Sabock' results. But, Sabock [26] referred to important variables and did not classified factors. So, among variables introducing by Sabock we can point technical characters, planning capability, coaches' discipline and leadership which were consistent with the present results. Moreover, Pastore and Meacci [24] considered coaches' records and experiences for evaluating them. Pastore and Meacci also considered coaches' failure and winning records, and planning and evaluating skills [24]. So, the present results were consistent with Pastor and Meacci's findings. But, that study just developed a linear model and did not use more complicated analysis methods. Barber and Eckrich [2] evaluated collegiate coaches and reported some factors, for instance, technical skills, planning capability, coaches' backgrounds and victory in planning, coaches' public relations and administrative skills, coaches' organizational skills, and their scientific levels, which were closely similar to the present model, however, Barber and Eckrich did not refer to the significance of each factor and the relations among them. Goundi [14] by evaluating elite coaches reported variables including direction and leadership skills, coaches' technical skills for developing strategies and planning, coaches' commitment for organizational values, and coaches' communicative skills in enterprise. As it just clarified, leadership, technical, and communicative criterions of coaches were consistent with the results from Goundi's paper. Likewise, the evaluation criterions by Redmond [25] were classified in factors including coaches' technical experience, leadership and communicative skills, and also knowledge factors and lecturers, although he did not classified the factors. Lloyd [16] classified coaches' skills in other way. In this way coaches'

skills were divided into competition and training scopes and proposed evaluation variables included tactics, coach' knowledge, leadership and communicative skills. As clarified, it is realized that the mentioned variables are consistent with the present results.

Additionally, classifying these researches variables can lead to the present factors although the present classification was conducted by math and statistic science and researchers did not manipulate the factors classification, however, researchers' opinions were used for naming factors based on research literature. Martens [21], Hill and Pluschke [15], Maetzo [20] and many others in their conclusions referred to variables which included almost in the same category.

In a research focusing on effective factors on sports coaches' evaluation in a Canadian university which was conducted by Maclean [17], a three-stage model was introduced. He proposed that first, person' job must be evaluated, defined, and described and performance evaluation area must be determined in three terms. In Maclean's model, performance evaluation area included two factors of behavior product and behavior process in which behavior process divided into two sections including task-related and person' survival in organization. Maclean proposed that person' performance evaluation in the job could be feasible by following the mentioned terms. In that study, emerged factors in the model were somewhere overlapped with the present results. Coaches' technical skills, failure and winning background during coaching in national team were similar to behavior product in both individual and team levels. Moreover, operational skills and their explaining variables were slightly closed to task-related factor of behavior process, and behavior relating to person' survival in organization was similar to specific, communicative, and operational skills.

On the other hand, the present five-factor model consisted of almost variables proposed by Cote, et al. [6] in CBS-S model. CBS-S consisted of 47 variables belong to 7 main factors which were consistent with the present five-factor.

The present model also coordinated with six-factor model by Cunningham and Dixon (2003). In the six-factor model by Cunningham and Dixon (2003), factors including team championship output, team scientific output, ethical behavior, coach's accountability, coach's technical grade and level, athletes' satisfactory were presented for evaluating coaches which were consistent with the present five-factor model so that by classifying those variables the present research factors could be emerged. However, the current results gained higher validation rather than theoretical models by exploratory and confirmatory factor analysis for classifying factors.

Conclusion:

Practical suggestions on national coaches' evaluation:

Five factors played role in evaluation model for national team coaches. In this model, three factors (F1, F3, F4) including technical ability, specific skills, and leadership skills and explaining variables for each of mentioned factors were considered as independent variables which affected coaches' communicative skills (F5) and these four factor affected finally coaches' operational and executive skills (F2). In other words, communicative skills factor and its explaining variables were recognized as model moderator factor, and operational skills factor was recognized as response factor in the model. Likewise, the most important factors and effective variables in coaches' evaluation were recognized by determining factorial loads for each variable and total effect of each factors on other model factors, and some suggestions for administrators were developed on them and also the extent of these factorial loads must be considered by them (Tables 2 and 3).

Based on the evaluation model for national team coaches, three factors (F1, F3, F4) including technical ability, specific skills, and leadership skills were emerged as exogenous variables. Exogenous means that these three factors and their explaining variables can affect other factors (communicative skills and operational ability) and their explaining variables. This statement is considerable by two points. In one side, coaches pay more attention to technical ability, specific skills, and leadership skills because they believe that these factors have effect on final output of their operational and executive ability. The memorable point is that coaches' leadership skills is a moderator factor for transferring abilities to the model output (coach's ability for performing and operating). In other words, coaches utilize their technical ability, specific skills, and leadership skills for promoting communicative and leadership skills and they emerge those in operational skills. On the other side, the attractive point for managers is that they must consider three factors including technical ability, specific skills, and leadership skills for evaluating coaches which can affect independently coaches' efficiency in the practice/action field. Moreover, coaches who are weak in any of these factors and their explaining variables, their communicative and leadership skills and finally operational abilities will be directly affected in the practice/action field. Additionally, coaches' strength points in any of these factors and their explaining variables will lead to direct effect on coaches' operational ability.

There were also some practical suggestions in structural equation section for evaluating coaches.

As it can be realized by surveying the first equation on coaches' communicative skills in evaluation scale, coaches' communicative skills equation had three factors. The practice of that equation in designing coaches' evaluation model was that communicative skills can be increased about 28 percent by keeping specific and technical skills constant and increasing coaches' leadership skills about 1 percent. In addition, coaches'

communicative skills can be increased about 77 percent by keeping other two factors constant and increasing technical skills about 1 percent. So, as coaches' specific skills had not been grown enough, this factor had negative effect about 0.093 for communicating properly with others. In other words, three factors including technical, specific, and leadership skills played role for developing coaches' communicative skills. Specific skills including the extent of practicing foreign language and applying teaching aids and internet not only did not help effectively to the mentioned matter but also intervened negatively for coaches' communication, and it is worthy and required to be considered by managers in order to educating, evaluating, and developing coaches.

As it can be realized by surveying the second equation on coaches' operational skills in evaluation scale, coaches' operational skills equation had one factor. The practice of that equation in designing coaches' evaluation model was that operational skills can be increased about 93 percent by increasing coaches' communicative skills about 1 percent. In simpler terms, coaches can develop their operational and executive skills to 93 percent by promoting communicative skills and passing related educational courses which is crucial from administrative point of view.

Coaches' performance can be evaluated based on Table 2. Obviously, the present scale has made it feasible to divide coaches' performance evaluation criterions according to the factorial loads and also it determines coaches' strengths and weaknesses in each area. Likewise, administrators can value factors and variables and making decision for comparing couple of coaches with each other by multiplying factorial loads by scores which evaluator(s) determine for a coach.

Therefore, it can be concluded that the developed model for evaluating coaches could gain all required goodness fit indexes well. To discuss about variables one by one, all could be consistent and coordinated with the research literature and the developed model aligned with the researchers' models since ten years ago and factorial loads for each variables were in high levels and also rational relationships between variables in each factors were visible. Moreover, casual relations among factors were strongly adapted with the status quo of national team's management which leads to the conclusion indicating the present evaluation model is acceptable and proposed to sports corporate managers and it has efficient capability for practicing and applying, in addition, the model can be utilized by administrators for evaluating elite national sports coaches.

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