revista tempos e espacos em educação Revista Tempos e Espaços em Educação ISSN: 2358-1425 revtee.ppged@gmail.com Universidade Federal de Sergipe Brasil

# Factor analysis of educational evaluation indicators of Iranian sports coaches

Malayeri, Kiomars Aziz; Sharif-Taherpour, Mohammad; Mohammadi, Mohammad Factor analysis of educational evaluation indicators of Iranian sports coaches Revista Tempos e Espaços em Educação, vol. 14, núm. 33, e15299, 2021 Universidade Federal de Sergipe, Brasil

Disponible en: https://www.redalyc.org/articulo.oa?id=570272348023

DOI: https://doi.org/10.20952/revtee.v14i33.15299

DOI: https://doi.org/10.20952/revtee.v14i33.15299 Revista Tempos e Espaços em Educação 2021 Revista Tempos e Espaços em Educação 2021



Esta obra está bajo una Licencia Creative Commons Atribución 4.0 Internacional.



#### Publicação Contínua

## Factor analysis of educational evaluation indicators of Iranian sports coaches

Análise fatorial de indicadores de avaliação educacional de treinadores esportivos iranianos

Análisis factorial de los indicadores de evaluación educativa de los entrenadores deportivos iraníes

Kiomars Aziz Malayeri <sup>1</sup> K\_azizmalayeri@yahoo.com Malayer University, Malayer, República Islámica del Irán

https://orcid.org/0000-0001-5729-9507

Mohammad Sharif-Taherpour <sup>1</sup> Malayer University, República Islámica del Irán

https://orcid.org/0000-0001-7944-2335

Mohammad Mohammadi <sup>1</sup>

Malayer University, República Islámica del Irán

https://orcid.org/0000-0002-4513-0189

Revista Tempos e Espaços em Educação, vol. 14, núm. 33, e15299, 2021

Universidade Federal de Sergipe, Brasil

Recepción: 17 Enero 2021 Aprobación: 20 Febrero 2021 Publicación: 27 Febrero 2021

**DOI:** https://doi.org/10.20952/revtee.v14i33.15299

Redalyc: https://www.redalyc.org/articulo.oa?id=570272348023

Abstract: The objective of this study was factor analysis of educational evaluation indicators of sports coaches in Hamadan province. The statistical population of the study was all sports coaches in all sports branches in Hamadan province in the years (2019-2018). The statistical population of this study included all sports coaches in Hamadan province according to the latest information provided by the Statistics Center of the General Directorate of Sports and Youth in 2018, it included 4,000 people. The sampling method was stratified random; the number of samples was 351 based on Morgan table. The data collection tool was a researcher-made questionnaire that interviewed 30 experienced sports coaches and using Delphi technique and after agreeing on the materials, the results of the study were extracted and classified. Its nominal and content validity were reviewed and confirmed by a group of experts. The reliability of the instrument was calculated by Cronbach's alpha method of 0.85. Data were analyzed using heuristic rotation heuristic analysis, repeated measures analysis of variance and Bonferroni post hoc test at a significance level of P <0.050. Based on the results of factor analysis, out of 75 items of performance evaluation, 17 items were removed and 58 items were included in 6 factors. Social factors (5 items), professional (8 items), personality (8 items), managerial (14 items), scientific (14 items), emotional skills (9 items) in order of prioritizing the scientific factor in the first place, management in Second place, personality in third place, professional in fourth place, emotional in fifth place and social in sixth place. It is concluded that; Sports coaches in Hamadan province in all sports need scientific and managerial training according to the training of personality traits and these three priorities are considered by the trainers for training, respectively.

Keywords: Educational evaluation, Sports coaches, Factor analysis.

Resumo: O objetivo deste estudo foi a análise fatorial de indicadores de avaliação educacional de treinadores esportivos na província de Hamadan. A população estatística do estudo foi composta por todos os treinadores esportivos em todos os ramos de esportes na província de Hamadan nos anos (2019-2018). A população estatística deste estudo incluiu todos os treinadores esportivos na província de Hamadan, de acordo



com as últimas informações fornecidas pelo Centro de Estatísticas da Direção Geral de Esportes e Juventude em 2018, incluiu 4.000 pessoas. O método de amostragem foi estratificado ao acaso; o número de amostras foi de 351 com base na tabela de Morgan. O instrumento de coleta de dados foi um questionário elaborado por pesquisadores que entrevistou 30 treinadores esportivos experientes e por meio da técnica Delphi e, após concordar com os materiais, os resultados do estudo foram extraídos e classificados. Sua validade nominal e de conteúdo foram revisadas e confirmadas por um grupo de especialistas. A confiabilidade do instrumento foi calculada pelo método alfa de Cronbach de 0,85. Os dados foram analisados por meio de análise heurística de rotação heurística, análise de variância de medidas repetidas e teste post hoc de Bonferroni a um nível de significância de P <0,050. Com base nos resultados da análise fatorial, de 75 itens de avaliação de desempenho, 17 itens foram removidos e 58 itens foram incluídos em 6 fatores. Fatores sociais (5 itens), profissionais (8 itens), personalidade (8 itens), gerenciais (14 itens), científicos (14 itens), habilidades emocionais (9 itens) para priorizar o fator científico em primeiro lugar, gestão em segundo lugar, personalidade em terceiro lugar, profissional em quarto lugar, emocional em quinto lugar e social em sexto lugar. Conclui-se que os treinadores esportivos na província de Hamadan em todos os esportes precisam de treinamento científico e gerencial de acordo com o treinamento dos traços de personalidade e essas três prioridades são consideradas pelos treinadores para o treinamento, respectivamente.

Palavras-chave: Avaliação educacional, Treinadores esportivos, Análise factorial.

Resumen: El propósito de este estudio fue el análisis factorial de los indicadores de evaluación educativa de los entrenadores deportivos en la provincia de Hamadan. La población estadística del estudio fueron todos los entrenadores deportivos en todas las ramas deportivas en la provincia de Hamadan en los años (2019-2018). La población estadística de este estudio incluyó a todos los entrenadores deportivos de la provincia de Hamadan según la última información proporcionada por el Centro de Estadísticas de la Dirección General de Deportes y Juventud en 2018, incluyó a 4.000 personas. El método de muestreo fue estratificado al azar; el número de muestras fue 351 según la tabla de Morgan. La herramienta de recolección de datos fue un cuestionario elaborado por investigadores que entrevistó a 30 entrenadores deportivos con experiencia y utilizando la técnica Delphi y luego de acordar los materiales, se extrajeron y clasificaron los resultados del estudio. Su validez nominal y de contenido fue revisada y confirmada por un grupo de expertos. La fiabilidad del instrumento se calculó mediante el método alfa de Cronbach Alpha de 0,85. Los datos se analizaron mediante análisis heurístico de rotación heurística, análisis de varianza de medidas repetidas y prueba post hoc de Bonferroni a un nivel de significación de P <0,050. Según los resultados del análisis factorial, de 75 elementos de la evaluación del desempeño, se eliminaron 17 elementos y se incluyeron 58 elementos en 6 factores. Factores sociales (5 ítems), profesionales (8 ítems), personalidad (8 ítems), gerenciales (14 ítems), científicos (14 ítems), habilidades emocionales (9 ítems) en orden de priorizar el factor científico en primer lugar, gestión en segundo lugar, personalidad en tercer lugar, profesional en cuarto lugar, emocional en quinto lugar y social en sexto lugar. Se concluye que; Los entrenadores deportivos en la provincia de Hamadan en todos los deportes necesitan entrenamiento científico y gerencial de acuerdo con el entrenamiento de los rasgos de personalidad y estas tres prioridades son consideradas por los entrenadores para el entrenamiento, respectivamente.

Palabras clave: Evaluación educative, Entrenadores desportivos, Análisis factorial.

#### **INTRODUCTION**

Coaches are one of the most important factors in the success and failure of sports teams (Talebpour Et Al., 2007 And Shafiee Et Al., 2007) for this reason, selecting the best coaches is very important and requires criteria and characteristics that can be used to select the most suitable people to



lead the team. (Bline Et Al., 2000; And Graham, 1993); Performance appraisal in various parts of the sports industry is one of the important issues that have attracted the attention of many researchers today. One of the most important human resources that play a prominent role in the success of sports organizations is the coaches of sports teams. Their smallest decision affects the performance of the whole team and the club (Nasiri Et Al., 2009). The profession of coaching is one of the most stressful and sensitive professions. Organizing exercises, communicating with athletes, participating in sports competitions, communicating with managers and various media, maintaining specialized information and acquiring various psychological and managerial skills are among the skills that have made the duties of coaches very difficult (Baxterum Et Al., 2013).

Therefore, sports coaches who lead the team in such situations must have unique characteristics and features. On the other hand, they need to understand how others think and evaluate him about his behaviors, decisions, and communication patterns. As a result, the instructor can measure their feedback with the results of their personal evaluation and prepare a suitable self-optimization program to improve their performance (United States Taekwondo Grandmasters Society, 2009). In one study, Kavosano (2008) identified the dimensions of coaching in the four dimensions of motivation, strategy, technique, and characterization, and Santos (2010) compared competencies related to annual programming, competencies related to identifying training and coaching positions, and coaching. In a study, Kavosano (2008) identified the dimensions of coaching in the four dimensions of motivation, strategy, technique, and characterization, and Santos (2010) related competencies related to annual planning, competencies related to identifying training and coaching positions, and coaching.

In Iran, some researchers have also focused on the job skills and competencies of coaches. Human resources is one of the most important factors in achieving the goals of organizations, efficient and effective manpower is one of the factors to improve the level of sports in any country. Prioritizing the characteristics of coach training in all areas of education, including sports, is essential. Sports coaches as one of the effective factors in providing the required services in the field of sports and health should have the knowledge, skills and attitudes appropriate to their role and these features should be considered in their training programs before and during service (Bakhshandeh Et Al., 2013). Sport is a process, educational and training that aims to improve performance and human development through physical activity. Therefore, achieving such a valuable goal is possible only through the development of systematic and purposeful programs. Every organization needs trained and specialized people, who are one of the most effective factors in the development of any country, to fulfill its mission. If the employees of the organization do not have the necessary and appropriate knowledge, information, skills, it will cause problems for the organization (Fardanesh, 2011). Training is the most effective tool and the strongest process available to transfer



knowledge and skills to human resources and strengthen them to perform tasks. Due to the daily changes and developments and the progress of science and technology, technology as well as the multiplicity of jobs and professions and to avoid wasting resources, staff training is of particular importance and its implementation requires careful planning and study based on the training needs of employees (Rouhani Et Al., 2013).

In prioritizing education, given that today's organizations are in a changing and competitive environment and human capital is one of the most valuable and valuable assets in such organizations, training as a competitive weapon is the only way to develop human capital. Providing effective training in such organizations requires new thinking, models, approaches, and new tools and mechanisms (Froud And Roger, 2013). Little research has been done to prioritize the educational characteristics of sports coaches in the country. The sum of these researches inside and outside the country can be divided into three general categories of researches related to the relationship between coaching styles or leadership of coaches and some performance and behavioral indicators of athletes. Shafiee (2007) in a study conducted to provide a model for selecting coaches for national swimming, diving and water polo teams, Provided a pattern that Accordingly, attention to emotionalhuman skills in the highest rank and skills leading to personality traits, technical skills, social characteristics, managerial skills, coaching experience, personal characteristics and coaching sports skills were in the next ranks, respectively.

The USA Basketball Federation (2012) presented the characteristics of coaching skills, basketball knowledge, personality, discipline, sense of responsibility, and other conditions that may be determined by American basketball to select a coach. The criteria for selecting hockey coaches in the South Delta team (2008) are; Interpersonal skills, problem-solving skills, teaching ability, coaching and playing experience, coaching certification, previous performance history, hockey knowledge and interest and passion were the criteria of hockey knowledge. Kohandel (2002) conducted a study on the criteria for selecting coaches of national teams in several team sports and examined their social, sporting, personality, perceptual, professional, personal characteristics, managerial skills, human emotionality, and work history. Kohandel (2000) in a study entitled "Criteria for selecting national team coaches from group sports" has described the ranking of coaching criteria from the perspective of athletes and coaches of several group sports. Tabrizi (2002)

In prioritizing the evaluation criteria of wrestling coaches from the point of view of coaches and athletes, the perceptual personality traits were obtained as the most important evaluation criteria, Social characteristics, human emotional skills, managerial skills and specialized scientific characteristics Sports characteristics Work history and personal characteristics respectively. Memari et al. (2013) in a study on the study of the training program, evaluation and promotion of trainers in selected countries and providing suggestions, stated that; Along with the rapid growth of the professional perspective, the current approach of the world



sports organization to training and promoting coaches is developing. Verhagen et al. (2010) evaluated the knowledge of Michigan Sports League coaches about first aid and sports injuries and concluded that; coaches do not have enough knowledge in this field, in this study, coaches scored about 65% of the 100 possible points. Foroud and Roger (2013) in their research entitled Coaching Competence of Coaches in relation to the perceived progress of athletes in championship sports stated that: Are higher levels of perceived coaching competencies that focus on relationship issues associated with greater satisfaction among elite and champion athletes with their progress in the sport?

In this regard, prioritizing educational features is the first step in implementing training programs, improving and improving human resources. Its findings are used to set goals, design programs, implement and evaluate training programs. These processes create a continuous cycle that always begins with educational prioritization (Surjallal, 2009). Regarding the importance of this issue in the field of sports, Grant (2006) stated that; The hierarchy of priority of these needs should be in accordance with the principles of motor development and learning, the principles of formulating activities appropriate to the goals and program of sports education, as well as the characteristics and physical, cognitive and emotional-social development needs of athletes.

The importance of the role of coaches in the training and success of athletes, the need to recognize their status and abilities and their subsequent development is essential, Develop the ability of coaches without the use of a monitoring system and where the evaluation of any work without knowing all its aspects, reduces its effectiveness; First, one should get acquainted with coaching, its concepts and dimensions so that it can be better evaluated (Hamidi Et Al., 2011). In this study, the researcher seeks to identify the most important criteria and indicators for evaluating the performance of sports coaches and by prioritizing the most important factors for evaluating the performance of coaches, provide the necessary feedback for coaches and even managers and determine their educational needs.

#### **METHODOLOGY**

This research was descriptive; the statistical population was all sports coaches in Hamadan province. The statistical population of this study included all sports coaches in Hamadan province, which according to the latest information provided by the Statistics Center of the General Directorate of Sports and Youth in 2017, included 4000 people. The sampling method is random-stratified. So that samples were selected from all regions of cities and towns of Hamadan province, the samples were randomly selected and their number was selected based on Morgan table, 351 people. The information required for this study was collected by reviewing scientific sources and collecting information through a researcher-made questionnaire about the educational characteristics of sports coaches. In this regard, after studying the research literature on



the educational needs of sports coaches and also studying the results of previous research, 30 experienced sports coaches were interviewed. Using Delphi technique and after agreeing on the desired materials, the results of the study were extracted and classified. Based on that, a questionnaire for prioritizing the educational characteristics of sports coaches was prepared and its content validity was examined by experts in the field of sports and education and its reliability was evaluated by Cronbach's alpha test. The content validity of the researcher-made questionnaire was examined using the theory of 12 professors of sports management. Also, after estimating the content validity in order to estimate the reliability of the questionnaire by conducting a pilot study in three cities of Hamadan province on 60 people in the study population, the reliability of the questionnaire was determined to be 0.85 by Cronbach's alpha method. We collected information related to the hypotheses under investigation, we then classified, analyzed and interpreted the information. The collected data were analyzed by SPSS software.

#### **RESULTS**

In this study, exploratory factor analysis was used to determine and identify important factors in evaluating the educational performance of sports coaches. For this reason, before performing the factor analysis, to ensure that the number of samples from the Kaiser-Mir-Ecklin criterion is sufficient (KMO 0.952) and to determine the correlation between the variables, use the Bartlett test (0.001). The results showed that the use of factor analysis is appropriate and the constructed factors have the necessary validity and the number of samples is also sufficient for factor analysis. Using exploratory factor analysis, eight items were removed due to factor loading less than 0.35 and the remaining 58 items were identified in six social factors (5 items) Professional (8 items), Personality (8 items), Managerial (14 items), Scientific (14 items), Emotional skills (9 items) according to the research background and the factor loading of most questions.

### Table 1 Bartlett and KMO test.

KMO and Bartlett's Test

KMO test .952

Chi-squared test 1.333E4

Bartlett's Test Degrees of freedom 2346

Significant level .000



Table 2
Description of priority of social items.

Priority	Items	Factor load
1	Communication with athletes	0.770
2	Timing to attend practice	0.742
3	Social acceptability	0.708
4	Partner with local and regional teams	0.673
5	Having working relationships with coaches of clubs and teams	0.666

The data in table 2 show that among the five criteria for evaluating the performance of the social factor, the level of communication with athletes is more important than other variables in this factor. In addition, the amount of participation and cooperation with local teams and the amount of working relationships with coaches of clubs and teams are the least important in this factor.

 Table 3

 Description of the priority of professional factor items.

			T
	Priority	Items	Factor load
	1	Physical fitness in performing sports skills	0.699
	2	Ability to train	0.684
	3	Knowledge of problem solving skills	0.684
	4	Psychological and motor skills	0.656
	5	The appropriateness of the level and type of coaching degree in order to train athletes $\frac{1}{2}$	0.621
	6	Win national and international championship titles	0.620
	7	Belief in the scientific nature of sports activities	0.593
	8	Attend sports centers and programs	0.589

The information in table 3 shows that among the eight indicators of professional agent performance evaluation, the level of physical fitness in the performance of sports skills is the most important compared to other variables in this factor and the amount of attendance at sports centers and programs is the least important in this factor.



Table 4
Description of priority of personality factor items.

Priority	Items	Factor load
1	Discipline in the implementation of sports programs	0.744
2	responsibility	0.717
3	Coaching knowledge	0.715
4	Knowledge of interpersonal skills	0.695
5	Observance of ethical principles	0.690
6	Interest in athletes	0.690
7	Clever behavior	0.684
8	Respect the rules and regulations and ethical issues in sports	0.680
9	Personal skills such as listening, competitiveness and empathy	0.673
10	Sobriety and patience	0.652
11	The spirit of criticism	0.556

The data in table 4 show that among the eleven items of personality factor evaluation, the degree of discipline in the implementation of sports programs is more important than other variables in this factor. At the same time, the level of criticism is the least important in this factor.

Table 5
Description of the priority of technical factor items.

Priority	Items	Factor load
1	Ability to analyze the game	0.695
2	High ability to lead the team during matches	0.641
3	Ability to train and train athletes	0.584
4	Establish team discipline	0.496
5	Use strategies and tactics appropriate to each game	0.490
6	Belief in the application of science and knowledge in football $% \left\{ 1,2,\ldots,n\right\}$	0.478
7	Maintaining team cohesion and integrity	0.446
8	Targeting for each athlete and the entire team	0.441

The data in table 5 show that among the eight items for evaluating the performance of the technical factor, the ability to analyze the game is the most important compared to other variables in this factor. At the same time, targeting for each athlete and the whole team is the least important in this factor.



Table 6
Description the priority of managerial and leadership factor items.

Priority	Items	Factor load
1	Monitor and control the team	0.695
2	Lead and lead team training sessions	0.692
3	Participatory decision making	0.670
4	Targeting for each athlete	0.664
5	Influence on athletes	0.663
6	Determination and consistency in decision making	0.660
7	Ability to plan and design maps	0.658
8	Monitoring the improvement of athletes' performance compared to previous programs	0.657
9	Have a plan to attract new athletes	0.655
10	Organizing resources and activities	0.649
11	Leading athletes' sports programs	0.647
12	Having a scheduled work schedule	0.642
13	Monitoring compliance with laws and regulations	0.617
14	Use statistics and information in planning	0.578

The information in table 6 shows that among the fourteen items evaluating the performance of the management and leadership agent, the amount of supervision and control over the team is the most important in this factor compared to other variables. At the same time, the use of statistics and information in planning is the least important in this factor.

Table 7
Description of the priority of scientific factor items.

Priority	Items	Factor load
1	Identify the strengths and weaknesses of exercise programs	0.676
2	Knowledge in athlete performance analysis	0.669
3	Knowledge of using teaching aids	0.664
4	Knowledge of learning theories and their use in education	0.661
5	Ability to make correct decisions in different situations	0.659
6	Familiarity with planning in all sports seasons	0.655
7	Ability to plan and design maps	0.654
8	Ability to train and train athletes	0.648
9	Ability to identify and select athletes	0.647
10	Ability to analyze sports matches	0.637
11	Ability to evaluate the characteristics of athletes	0.635
12	Participate in sports courses	0.622
13	Use advanced sports techniques, tactics and theories	0.621
14	Understand sports rules, policies and guidelines	0.619



The data in table 7 show that among the fourteen items evaluating the performance of the scientific factor, the extent of identifying the strengths and weaknesses of sports programs is more important than other variables in this factor. At the same time, the level of understanding of sports laws, policies and regulations is the least important in this factor.

Table 8
Prioritization of factors for evaluating the educational performance of educators.

Priority factors	Factors evaluating the educational performance of educators $% \left( \mathbf{r}\right) =\left( \mathbf{r}\right) $	The standard Importar imagendeviation mean
1	Scientific	11.468 Importar imagen 57.04
2	Managerial	Importar imagen 19.431 53.49
3	Personality	41.79Importar imagen 8.632
4	Professional	33.75Importar imagen 6.840
5	Emotional	31.18Importar imagen 6.652
6	Social	16.87Importar imagen 3.694

The information in table 8, in general, prioritizing the factors evaluating the educational performance of sports coaches in table 8 showed that the most important factors in evaluating the educational performance of sports coaches are scientific, managerial, personality, professional, emotional and social factors, respectively.

#### **DISCUSSION**

The results of exploratory factor analysis showed that; Indicators of educational evaluation of sports coaches in Hamadan province can be classified into six factors. As Rouhani et al. (2013) identified 5 factors of performance evaluation, and Dehghan Ghahfarkhi (2010) Talebpour and Ismaili (2007) 9 factors of performance appraisal; Tabrizi (2002), Shafiee (2007), Kohandel et al. (2002), Khosravi (2011), and Barber and Akrich (1998) eight performance evaluation factors; McLean and Chaladora (1995), McLean and Zakrajsk (1998), Nasiri et al. (2009) Five factors of performance evaluation identified four important factors in evaluating the performance of trainers. Other results from the study showed that; the scientific factor of sports coaches in Hamadan province is in the first priority, the results of this part of the research are in line with some of the results of previous researches such as: Nelson, Kushin and Petrak (2012), Asvin (2010), Verhagen et al. (2010), Redmond (2000), Shafiee (2007), Tabrizi (2002) And Kohandel (2000). Since the workforce came and specialized in sports in each country is one of the effective factors in improving the level of sports Coaches, trainers and executive leaders of athletes at all levels (beginner to elite), play a very important and influential role in the development of sports.

According to other results of the research showed that; the educational characteristics of sports coaches in Hamadan province have a significant difference according to the level of education, background and degree



of coaching. One of the main pillars of sports training as well as team leadership and guidance and they play a very important role in the education, training and development of athletes. Therefore, the efforts of coaches are successful when they have the necessary sports knowledge. It should be noted that the coaching education system is highly dependent on the culture, politics and traditions of a nation (Regulations Of The Physical Education Organization, 2004). Therefore, lack of focus on promoting the scientific-professional training needs of sports coaches not only causes personal opinions in the results of training work Rather, over the years, insufficient attention to educational standards and disregard for advanced systems of training, evaluation and promotion of sports coaches, has made the issuance of coaching orders a matter of personal taste and raises the issue of monitoring the performance of coaches in a way that does not necessarily follow strict rules (Memari Et Al., 2013). In the country, research has been conducted in connection with the training of coaches in various sports. Including; Memar et al. (2013) regarding the study of training program, evaluation and promotion of sports coaches in selected countries and provided suggestions, Hamidi et al. (2011) in an article commissioned by the Ministry of Sports and Youth, developed criteria for evaluating the performance of coaches in the country and introduced the relevant measurement scale.

Therefore, considering the importance and breadth of the discussion of coach training and considering the growing success of leading sports countries, the needs of specialized-scientific training of sports coaches are of great importance (Memari, 2013). Instructors, on the other hand, need to increase their studies and their scientific ability to be able to communicate well with other colleagues and improve their executive and operational skills. So that raising and upgrading the scientific capacity of the province's sports coaches can have a great impact on the scientific-specialized educational needs of the province's sports coaches. The second factor in evaluating the performance of sports coaches is the managerial factor, because coaching management skills are a process that is used to steer sports programs toward set goals. The term for this process; Planning, organizing, leading and supervising, which together accomplish a coach's sporting goals. (Parsaian And Arabs, 2014). The British Columbia Coaches Organization (2007) also refers to the skills that are essential for a coach which are divided into three categories A.

Technical skills B- Human skills C- Perceptual skills, In recent years, part of the studies in the field of coaching has been dedicated to examining the competencies and criteria for selecting coaches in various sports. In the research of Kohandel et al. (2002), Tabrizi (2002), Talebpour and Ismaili (2007), Dehghan Ghahfarkhi (2010) and Khosravi (2011) Technical-educational factors, team manager, individual and background and experience of the main factors of performance evaluation Instructors were identified, in general, the technical and educational factor of coaches has been prioritized as important factors in performance evaluation. This shows that; Game and match analysis, high ability to lead the team during matches, use of strategies and tactics appropriate to each



game, ability to train and train athletes, maintain team cohesion and integrity, design and implementation of appropriate training programs have a great impact on improving coaching performance, therefore, knowing all the skills and techniques appropriate to the desired sport, recognizing the types of game systems, choosing different strategies in different sports fields and competitions are essential for the success of the coach. (US Taekwondo Grandmasters Association 2009), Management and leadership characteristics use the ability to direct sports programs to achieve set goals. This process refers to planning, organizing leadership, and overseeing (Dehghan Ghahfarkhi, 2011).

In general, the study and comparison of the variables explaining the team management and individual management shows. Variables such as: having a plan to attract the required athletes, making the right decision when faced with a crisis, the ability of athletes or teams over the season, having a winning spirit, planning for training competitions and athletes' readiness, show that; the performance of coaches (Rouhani Et Al. 2013) is one of the important decisions in coaching. Coach management skills are the process used to steer sports programs toward set goals. The term refers to the process of planning, organizing, leading, and supervising that together accomplishes a coach's sporting goals (Parsaiyan And Arabi, 2014). The result of this research shows that; Sports coaches in Hamadan province need to develop some of their leadership skills. In the present study, the educational factor of personality is in the third priority. The results of this part of the research are in line with some of the results of previous researches such as: British Columbia Coaches Association (2007), Rouhani et al. (2013), Shafiee (2007), Tabrizi (2002) and Kohandel (2000). Therefore, the results of this study are in line with the findings of Nasiri et al. (2009) and Goodarzi (2007) on mutual respect and polite behavior.

Sports coaches are able to increase their personality skills, which include: working on each of its determinants that is, the variables of observing order in training sessions and matches, treating players and colleagues with politeness and respect, as well as having high patience in difficult conditions of the team, especially during difficult matches. Improve their personality traits with the right training; Shafiee (2007) has mentioned several variables in compiling the criteria for selecting coaches which in its categories also refers to the skill of personality traits. Nasiri in 2008 also mentions personality and moral characteristics among his research findings. This can be significant in two ways. On the one hand, coaches pay more attention to the fact that in fact these abilities can affect the final output of their coaching work, i.e. their operational and executive capacity. The American Taekwondo Masters Association also selected criteria for selecting the top coach in 2009, including compliance with Taekwondo ethical standards at an advanced level of coaching, respect for technical staff, opposing players, and teaching the philosophy of fair play.

Therefore, according to the correct training of coaches in this field, which emphasizes more on the aspect of ethics training in sports and



discipline of the coaching profession, the training planners of sports coaches in the province should pay more attention to this issue. By examining and collecting the feedback of sports coaches in the province, we can understand the importance of this issue in assessing the training needs of coaches. It is worthwhile to consider these issues in training and promoting coaches at different levels of coaching. In other words, the sports coaches of the province can improve their operational and executive skills by improving their personality skills and passing special training courses, which is very important.

According to the results of this research, the professional factor is in the fourth priority, the results of this part of the research are in line with some of the results of previous researches such as: Orlowski et al. (2016), Ringoteriot et al. (2014), Rinogit et al. (2014), Froud and Roger (2013), The Canadian Coaching Training, Evaluation and Promotion System (2012), Santos (2010), Kavosato and Et al. (2008), British Columbia Coaches Association (2007), Architecture et al. (2013), Ramezani Nezad et al. (2013), Tabrizi (2002) and Kohandel (2000). Hence, skills that require a person to understand and master a sports activity, especially activities that include methods and processes, practices and techniques, are called technical skills and the coach's technical skills include coaching and mastering the techniques and techniques of his sport (Ismaili And Talibpour 2007). The coach's ability to recognize how different coaching functions are related to each other and how a change in one aspect of coaching can affect other aspects is called perceptual skills (Hamidi Et Al., 2011). The Basketball Federation of the United States of America (2012) introduced the criteria for selecting the head coach of the national team as work experience, coaching ability, and basketball knowledge. Shafiei et al. (2007) examined the criteria for selecting national team coaches, swimming, diving and water polo from the perspective of 809 national team coaches, with a look at the selected province and showed that technical skills and work experience are a priority.

In fact, the technical strength of the coach is an accepted indicator for those involved and professionals in this sport. It also seems that this practice is a good platform for the growth and promotion of athletes' professional level. Therefore, considering that the coaching degree shows the level of competence of each coach. Therefore, it is better for the relevant sports delegations in the province to hold open training classes according to the degree of coaching degree and the coaching experience of the province's sports coaches. According to the technical ability and the level of physical and practical fitness, the coaches should train the athletes of the province in different sports and since scientific, practical and physical fitness abilities can have an independent impact on the efficiency of the province's sports coaches in the sports field, this can be met to a large extent in the field of professional training needs. According to the research results, the emotional factor is in the fifth priority, the results of this part of the research are in line with some of the results of previous researches such as: Kavosato et al. (2008), British Columbia Coaches Association (2007), Meyer (2006), Ajloni et al. (2010), Redmond (2000),



Shafiee (2007), Tabrizi (2002) and Kohandel (2000). Strengthening emotional and human characteristics and skills in sports coaches is a necessity due to the human nature of their activities.

Emotional-human skills can be divided into motivational, emotional and human skills. Motivation; It can be described as an inner force that drives a person to a goal, Having a humanistic attitude towards the athlete is considered as one of the effective factors in the success of coaches (Santos, 2010) and the use of humanistic behavior to achieve coaching goals has been endorsed in many cases and the instructor with the knowledge and familiarity of these methods can choose the best method in different situations created (Hamidi And Memari, 2014). The Asian Confederation (2003) is the result of future football matches in the hands of coaches familiar with the behavioral sciences and psychology. Foroud and Roger (2013) in his research entitled Coaching Competence of Coaches in relation to Perceived Progress stated that; Perceived coaching skills are effective in coaching career development.

The findings of this study show that; having self-confidence, selffertility and using sports knowledge and psychological principles are important types in the form of emotional behaviors of the coach and according to the research results; the social factor is in the sixth priority. The results of this part of the research are in line with some of the results of previous researches such as: Baxterum et al. (2013) is the British Columbia Coaches Association (2007), Shafiee (2007), Vahdat (2007), Tabrizi (2002) and Kohandel (2000). Ramezani Nejad et al. (2013) in their research introduced human and social skills and the relationship between coach and athlete as criteria for evaluating the performance of coaches. Therefore, team management and knowledge, public relations and team performance can be considered almost similar to the manager's duties in recognizing the organization's employees. Of course, unlike senior and senior managers of the organization, coaches are considered operational managers who must have specialized competencies in (worktechnical behaviors) to be able to train and grow athletes and empower them.

This type of empowerment is formed through supervision and rich face-to-face communication with athletes. Such a method requires high technical expertise and ability; therefore, it is true that in the present study, this factor is in the sixth priority, these findings show that; The province's sports coaches are well aware of job competencies or job fit practice and know that in the world of professional sports, coaches should develop and improve their social characteristics, which also emphasizes the importance of social behavior and technical performance of coaches. In their research, Kohandel et al. (2002) pointed out the importance of social characteristics.

#### **CONCLUSION**

According to the results having verbal and face-to-face communication with athletes and communication and interaction and participation with



local and regional teams and knowledge of working with coaches of clubs and sports teams is an important and effective issue in the field of coaching training needs. Peterson and Timgs (2010) identified communication as an important issue in coaching related to professional and social mission. Therefore, it is highly recommended that it be important for the province's sports coaches, because the behavior of the coach directly affects the behavior of the athlete, and perhaps these two groups (coaches and athletes) in the face-to-face and continuous contact with each other, better and more understand the interactive effects of their behaviors on each other, from the results of this project, it is possible to receive scientific and practical training of sports coaches and to invest in the promotion of this field will automatically affect the communication skills of coaches. Since in prioritizing the educational indicators of sports coaches, the scientific factor is in the first priority, the managerial factor is in the second priority and the personality factor is in the third priority, it shows that; Sports coaches of Hamadan province in all sports need scientific and managerial training according to the training of personality traits and these three priorities are considered by the trainers for training, respectively, because the gap created by the training of trainers in general is managerial-leadership, even educational. By holding training courses, the scientific and personality abilities of sports coaches in Hamadan province can be greatly improved.

#### Acknowledgments

The authors thanks all those who helped them in this research.

#### **REFERENCES**

- Ajlouni, M. M., Athamneh, S. M. H., & Jaradat, A. A. (2010). "Methods of evaluation: traning techniques". International research journal of finance and economics, (36), 56-65.
- Araujo, A., & Silva, I. P. (2020). Maker culture and educational robotics in physics teaching: developing an automated traffic light in high school. Journal of Research and Knowledge Spreading, 1(1), e11654.
- Asian Football Confederation. Afc. (2003). A License Coaching, Available on: http://www.afc.com/.
- Bäckström, M., Tinnsten, M., Koptyug, A., Rännar, L.E., Carlsson, P., Danvind, J., & Wiklund. H. (2013). Sports technology education at Mid Sweden University. 6th Asia-Pacific Congress on Sports Technology (APCST), 214-219.
- Bakhshandeh, H., Ahmadi, Ha., & Hamidi, M. (2013). Evaluating the effectiveness of refereeing and coaching courses from the students' point of view based on the Kirk Patrick model. Sports Management, 5(4), 161-165.
- Barber, H., & Eckrich, J. (1998). "Methods and criteria employed in the evaluation of intercollegiate coaches". Journal of Sport Management, 12, 301-322.



- Blaine, G. R., & Gray, N. (2018). "Evaluation dimensions for full time head coaches at NCAA institutions". Journal of personnel evaluation in education, 14, (1): 47-65.
- Brito, R. dos S., Prado, J. R., & Nunes, C. P. (2017). As condições de trabalho docente e o pós-estado de bem-estar social. Revista Tempos e Espaços em Educação, 10(23), 165-174.
- Canadian University Athletic Coaches. (2009). Coach Evaluation [Internet]. Available from: http://www.gtsoccer.org/forms/ GTCSC\_Coach Evaluation print.pdf. Journal of Sport Management. 70, 78-90.
- Coaches Association of British Columbia. (2007). Available on: httpp://www.coachesbc.ca/. Coaches' Communication Competence". Journal of Sport Behavior, 91(2), 45-66.
- Frode, M., & Roger, A. (2013). Coaches' Coaching Competence in Relation to Athletes' Perceived Progress in Elite Sport. Journal of Education and Learning, 2(1), 240-252.
- Graham, G. (1993). A system matching game requirement with participant ability. Dei Giachi Sport, 8, 90-112.
- Grant, M.A. (2006). Coaching for Enhance: Comparing cognitive and Behavioral Approaches to Coaching, paper presented at the 3International Spearman Seminar" Extending Intelligence: Enhancement and new constructs Sydney.
- Hamidi, M. (2014). "The relationship between organizational structure, effectiveness and organizational commitment in the headquarters of sports organizations in the country." Doctoral dissertation in the field of physical education and sports sciences with a focus on management and planning in physical education, University of Tehran, 80-71.
- Hamidi, M., & Mehmari, J. (2014). Explaining the exploratory model of selection criteria for national coaches. Sports Management Studies, 24, 58-31.
- Hamidi, M., Ma'ami, J., & Hamidi, M. (2012). Dimensions of performance evaluation of national coaches-providing a measurement scale. Sports Management and Motor Science Research, 2, 49-68.
- Ismaili, M., & Talibpour, M. (2007). A review of prioritization and evaluation of coaching dimensions in sports teams of the country's universities". Quarterly Journal of Research in Sports Sciences, 16, 106-92.
- Kavussanu, M. (2008). Coaching Efficacy and Coaching Effectiveness: Examining Their Predictors and Comparing Coaches and Athletes Reports. The Sport Psychologist, 22, 383-404.
- Khosravi Eghdam, D. (2011). "Comparison of coaches' performance indicators from the perspective of experts, athletes and sports coaches in Rasht". Master Thesis, Payame Noor University.
- Kohandel, M., Amirtash, A. M., & Mozaffari, S. A. (2002). "Determining and prioritizing the criteria for selecting national team coaches in several group sports." Olympic Magazine, 21, 17-28.
- Leshnin, S. (2011). Educational Strategies and Techniques, translated by Hashem Fardanesh, Samat Publications, Second Edition, Tehran.
- Maclean, J., & Zakrajseck, D. (1996). "Factors Considered Important for Evaluating Canadian University Athletic Coaches". Journal of sport management, 10, 446-462.



- Maclean, J.C., & Chelladurai, P. (1995). "Dimensions of Coaching Performance Development of a Scale". Journal of sport management, 9, 194-207.
- Mayers, N. (2006). "Athletes Evaluation of Their Head Coaches' Coaching Competency". Research Quarterly for Exercise and Sport, 77(10), 100-111.
- Memary, J., Hamidi, M., & Tahere, S. (2013). Study the training program, evaluation and promotion of sports coaches in selected countries and provide suggestions. Applied Research in Sports Management, 2(2), 112-99.
- Myers, N.D., Feltz, D.L., Maier, K.S., Wolf, E.W., & Reackase, M.D. (2006). "Athletes' Evaluation of Their Head Coaches Coaching Competency". Research Quarterly for Exercise and Sport, 77(1), 111-121.
- Nasiri, K., Khabiri, M., Sajjadi, N., & Kazem Nejad, N. (2009). Analysis and modeling of evaluation of national handball team coaches. Sports Management, 1, 119-139.
- Nelson, L., Cushion, C., & Potrac, P. (2012). "Enhancing the provision of coach education: the recommendations of UK coaching practitioners Physical". Education and sport pedagogy, 7, 1-15.
- Oliveira, A. M., Gerevini, A. M., & Strohschoen, A. A. G. (2017). Diário de bordo: uma ferramenta metodológica para o desenvolvimento da alfabetização científica. Revista Tempos E Espaços Em Educação, 10(22), 119-132.
- Orlowski, J., Wicker, P., & Breuer, B. (2016). Labor migration among elite sport coaches: An exploratory study. International Review for the Sociology of Sport, 5, 1-15.
- Peasant Qahfarkhi, A. (2010). Evaluating the performance of national volleyball team coaches using 360-degree feedback, Master Thesis in Physical Education and Sports Sciences, University of Tehran.
- Peterson, D., & Nix, C.L. (2010). the Effect of the coaches use humor on female volleyball players evaluation of their coaches. Journal of Sport Behavior, 18(2), 14-20.
- Ramezani, N. R., & Hakimi, I. (2012). Management and leadership styles in sports, Hatmi Publications, first edition, Tehran, 140-120.
- Ringuet-Riot, C., Carter, S., & James, D.A. (2014). Programmed innovation in team sport using needs driven innovation. The conference of the International Sports Engineering Association. Available online at www.sciencedirect.com.
- Rodrigues, B. M., Santos, J. E. B., & Vasconcelos, C. A. (2020). Conceptions of undergraduate students in Chemistry on the use of interactive interfaces in and for the activities developed in the distance course. Journal of Research and Knowledge Spreading, 1(1), e11649.
- Rouhani, M., Talibpour, M., & Ramezani Nejad, R. (2013). Factor Analysis of Performance Evaluation Indicators of Iranian Professional Football Coaches. Applied Research in Sports Management, 2(2), 48-35.
- Santos, J. E. B. (2020). Cartographic narratives: the teaching of mathematics and ICT. Journal of Research and Knowledge Spreading, 1(1), e11645.
- Santos, S. (2010). "Coaches' perceptions of competence and acknowledgement of training needs related to professional competences". Journal of Sports Science and Medicine, 9, 62-70.



- Shafiee, M., Goodarzi, M., Hamidi, M., & Yadollahi, J. (2007). Designing and explaining the selection criteria for the coaches of the national swimming, diving and water polo team from the perspective of the coaches of this field. Journal of Movement, 32, 19-36.
- Silva, C. V. S., & Santos, G. O. (2020). Digital interfaces: a methodological proposal as a strategy of teaching and learning in Mathematics classes. Journal of Research and Knowledge Spreading, 1(1), e11651.
- Surujlal, J., & Mac Lean, J. (2009). "performance appraisal of coaches: A comparative study". African Journal for Physical Education, Recreation and Dance, 15(1), 43-52.
- Svein K. (2010). Physical education teacher education on the education market who's defining what physical education teachers need to know. Physical Education and Sport Pedagogy, 15(3), 227-241.
- Tabrizi, R. (2002). Prioritization of some characteristics of coaches from the perspective of coaches and wrestlers at the national level. Harakat Magazine, 11, 131-119.
- Talibpour, M., & Ismaili, M. (2007). "Study and Prioritization and Evaluation of Coaching Dimensions in Sports Teams of Iranian Universities". Research in Sports Science, 16, 92-106.
- Vahed, B. (2007). Development of evaluation indicators for athletics coaches, Master Thesis in Sports Management, Faculty of Physical Education and Sport Sciences, University of Tehran.
- Verhagen, E.A., Van Stralen, M.M., & Van Mechelen, W. (2010). "Behaviour, the key factor for sports injury prevention". Sports Med, 40(11), 899-906.

#### Notas de autor

- 1 Malayer University, Malayer, Iran.
- 1 Malayer University, Malayer, Iran.
- 1 Malayer University, Malayer, Iran.
  - K\_azizmalayeri@yahoo.com

#### Información adicional

How to cite: Malayeri, K. A., Sarif-Taherpour, M., & Mohammadi, M. (2021). Factor analysis of educational evaluation indicators of Iranian sports coaches. Revista Tempos e Espaços em Educação, 14(33), 15299. http://dx.doi.org/10.20952/revtee.v14i33.15299

Authors' Contributions: Malayeri, K. A.: designed the study, prepared the plan, wrote the first draft of the manuscript and edited the final version; Sarif-Taherpour, M.: provided advice in solving problems about comparing the foundations of results and analysis the data; Mohammadi, M.: managed the literature searches and gathered theoretical foundations. All authors read and approved the final manuscript.



Ethics Approval: Approved by Ethic committee of the Malayer University.

