

Career Management Scale in Sports Organizations: A Validity and Reliability Study

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ABSTRACT

Background: We wish to share the results of the scale we developed on the subject by evaluating the validity and reliability test of the career management scale in sports organizations.

Methods: The study group consists of 317 participants working in provincial directorates of sports. The construct validity of the scale was tested by explanatory factor analysis and confirmatory factor analysis. Scale reliability was measured with Cronbach's Alpha and test-retest. The discrimination of the scale was tested based on the difference between the lower 27% and the upper 27%. A correlation analysis was carried out between scale factors. To calculate the reliability of 30 items in the career management scale, "Cronbach's Alpha", the internal consistency coefficient, was calculated.

Results: The overall reliability of the scale was found to be very high as Alpha = 0.976. The analysis results showed that the fit statistics calculated with the confirmatory factor analysis fit well, and positive correlations were found between the dimensions of the scale and overall scores as a result of the correlation analysis ($p < 0.05$).

Keywords: Career, Career Management, Sports Management, Organizational Career Management, Individual Career Management

INTRODUCTION

Today, the rapid social and organizational development and change have led to shifts in individual needs and expectations. Today's world experiences a period in which competitiveness is increasingly gaining popularity and importance along with necessary human resources, thus organizations aim to increase the satisfaction level and achieve organizational success through the best management of available human resources.

Each individual is a member of the institution they work for and individuals should recognize themselves as an element of the institution (1). It is obvious that employees' job satisfaction in business and social life will contribute positively to the management.

Human resources management is defined as "the management of activities that are undertaken to maintain employees' satisfaction, motivation, development, and high performance" (2) to achieve the strategic goals and objectives of organizations. Since our age is the age of change, innovation and technology, institutions and organizations need innovations and changes that will differentiate themselves and stand out from others (3). Organization employees work for organizational purposes and are attached to the organization to the extent that they can achieve their own goals (4). In this context, human resources departments work in many business cycles ranging from the selection of staff to the training of staff. Thus, the focus of the study is career management, which is crucial for not only employees but also for the organization.

Career management refers to the organization's support for the fulfilment of individual career goals by integrating organizational goals and individual goals with the activities of the organization to train the qualified personnel that it will need in the future (5).

Considering sports as a multidimensional concept, we believe that qualified employees will be recruited for the

right job and at the right time, and productivity in sports management will most probably increase as long as human resources are taken care of by sports managers. Besides, with a good career management practice, individuals knowing or predicting their future position will have an enhanced job and organizational commitment. For this reason, considering that career management is a good motivation factor, it can be argued that employees should be supported in the course of their business life as part of the priorities of organizations since the successful performance of employees will directly affect organizational success. Following the literature review, it has been revealed that there is no measurement tool in sports organizations both in human resources management and career management, and thus, the study has been designed to develop a career management scale in sports organizations.

MATERIAL & METHODS

This research was designed in a descriptive survey model. Since the study is aimed at developing a scale, the stages to follow were to determine the features to be tested, to write the items to be included in the scale, to obtain an expert opinion, and to rearrange the items, to perform validity and reliability analysis through the application (6).

The study group consisted of a total of 317 participants (female: 137 (43.2%); male: 180 (56.8%)) working in provincial directorates of sports located in different provinces.

In the first stage of scale development, the literature review of studies on career management of employees in provincial directorates of sports was made. Based on the literature review, an item pool of 50 items was created. The trial form was presented 4 faculty members from the Physical Education and Sports Department and 2 from the Faculty of Economic and Administrative Sciences to receive their opinions. Experts assessed the

comprehensibility of the items and the appropriateness of career management for the characteristics of employees in sports organizations. In line with expert opinions, 7 items were removed from the scale and some items were corrected in terms of comprehensibility. Following the relevant arrangement, a 43-item trial form was created. Participants were asked to express their opinions on a 5-point Likert-type scale ranging from "totally agree", "agree", "undecided", "disagree", and "totally disagree".

Necessary approval was obtained for the current research with the decision of the Ethics Committee of the Rectorate of Siirt University, dated 10.07.2020 and numbered 53.

Data Collection: Before applying the scale to the employees, the participants were informed about career management, and the volunteer employees were asked to participate in the application after the purpose of the study

was elucidated.

The construct validity of the scale was tested by explanatory factor analysis and confirmatory factor analysis. Scale reliability was measured with Cronbach's Alpha and test-retest. The discrimination of the scale was tested based on the difference between the lower 27% and the upper 27%. Correlation analysis was made between scale factors.

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RESULTS

Reliability analysis was applied for the career management in sports organizations scale and the Alpha coefficient was found to be 0.980. Item analysis for the effects of the items on internal consistency is given below.

Table1. Item Analysis of the Career Management Scale in Sports Organizations

	Scale score when the item is deleted	Variance when the item is deleted	Item total correlation	Cronbach's Alpha when item is deleted
1. I believe I can advance to a management position in this organization	121,0662	1248,189	,688	,979
2.The duties and responsibilities in this organization are directly proportional to my career	121,1640	1245,403	,750	,979
3.This organization meets my physiological and social needs	121,0284	1248,629	,751	,979
4.The knowledge, abilities, and skills of the employees in this organization are identified	120,8896	1245,554	,778	,979
5.There are sufficient opportunities for career advancement in this organization	120,8454	1241,220	,835	,979
6.Business analysis is done in the organization	120,8107	1247,610	,801	,979
7.Performance evaluation is made in this organization and suitable positions are identified for employees	120,6719	1242,854	,819	,979
8.This organization holds courses and seminars for career development	120,8896	1246,440	,772	,979
9.The goals and objectives of the organization are clearly defined.	121,4101	1254,686	,707	,979
10.All employees are on equal terms to advance in this organization	120,6909	1243,664	,776	,979
11.I believe I have improved myself in this organization	121,2114	1245,825	,803	,979
12.I feel a high sense of belonging in this organization	121,4574	1255,673	,713	,979
13.I can overcome the problems I will face in this organization	121,7098	1271,472	,586	,980
14.I feel lucky to work in this organization	121,3691	1255,784	,723	,979
15.This organization ensures that I achieve my career goals	121,1262	1251,946	,768	,979
16.I am aware of the strengths and weaknesses of this organization	121,6877	1283,298	,422	,980
17.My superiors help me achieve my career goal	121,1009	1249,705	,761	,979
18.Employees of this organization are experts in their fields	121,0189	1252,671	,741	,979
19.I am aware of my responsibilities to advance in this organization	121,4290	1266,967	,594	,980
20.I am aware of my strengths and weaknesses	122,0568	1294,858	,287	,980
21.It motivates me to believe that I will advance in this organization	121,1703	1256,389	,674	,979
22.I attend courses/symposiums for my career	121,2618	1260,042	,579	,980
23.I think human resources activities are sufficient in this organization	120,8107	1248,078	,782	,979
24.Successful employees are appreciated in this organization	120,8139	1243,253	,773	,979
25.I am aware of what I have to do for organizational success	121,6909	1274,309	,552	,980
26.I can continue to work in this organization even if I	121,4448	1268,058	,608	,980

do not achieve my career goal				
27.The qualifications of the employees in this organization are directly proportional to the goals of this organization	120,9905	1251,775	,780	,979
28.Future business planning is done in this organization	120,9653	1244,179	,820	,979
29.This organization appreciates and ensures individual satisfaction	120,8864	1242,272	,824	,979
30.This organization appreciates business ethics	121,1104	1245,991	,794	,979
31.This organization is a guide in identifying career paths	120,8991	1243,737	,845	,979
32.This organization appreciates successful employees	120,9117	1241,954	,798	,979
33.The advancement and promotion system is based on voluntariness	120,9085	1250,710	,757	,979
34.There is access to advanced computers	121,0789	1260,288	,604	,980
35.Relationship with business friends is excellent	121,4322	1262,790	,672	,979
36.Employees in this organization have the right to participate in decisions	121,0694	1251,881	,784	,979
37. This organization ensures occupational safety and a sense of belonging	121,0473	1248,349	,790	,979
38.Career management instruments are available in this organization	120,6845	1246,634	,784	,979
39.Employees recruited are experts in their field	121,1136	1251,177	,755	,979
40.Employees make retirement plans in this organization	121,1167	1256,686	,680	,979
41.Training and development seminars are given in this organization	120,9558	1247,182	,752	,979
42.This organization has a succession planning	120,7603	1274,341	,526	,980
43.In this organization, promotions, transfers, and relocations are made according to the expertise of the employees	120,7129	1243,661	,789	,979

When the item analysis was examined, it was seen that there was no item to be excluded. Explanatory factor analysis was applied to reveal the construct validity of the scale. As a result of the Bartlett test ($p = 0.000 < 0.05$), it was determined that there is a relationship between the variables included in factor analysis. As a result of the test ($KMO = 0.973 > 0.60$), it was determined that the sample size was sufficient for factor analysis. The varimax method was selected in the factor analysis application, and the structure of the relationship between the factors remained the same. As a result of factor analysis, variables were grouped under 3 factors with a total explained variance of 68.24%. 13 items were excluded from the scale due to the factor loading being below 0.4 and co-loading. The factor structure of the scale is shown below.

Table2. Factor Structure of the Career Management Scale

Dimension	Factor Loading
QUALIFICATION OF HUMAN RESOURCES (Eigenvalue = 17.922; Explained Variance = 30.220; Alpha = 0.968)	
38. Career management instruments are available in this organization	0,791
41. Training and development seminars are given in this organization	0,751
37. This organization ensures occupational safety and a sense of belonging	0,725
32. This organization appreciates successful employees	0,698
24. Successful employees are appreciated in this organization	0,690
36. Employees in this organization have the right to participate in decisions	0,687
30. This organization appreciates business ethics	0,687
43.In this organization, promotions, transfers, and relocations are made according to the expertise of the employees	0,681
23. I think human resources activities are sufficient in this organization	0,669
29. This organization appreciates and ensures individual satisfaction	0,660
31. This organization is a guide in identifying career paths	0,655
40. Employees make retirement plans in this organization	0,652
10. All employees are on equal terms to advance in this organization	0,602
7. Performance evaluation is made in this organization and suitable positions are identified for employees	0,587
27. The qualifications of the employees in this organization are directly proportional to the goals of this organization	0,579
8. This organization holds courses and seminars for career development	0,578
ORGANIZATIONAL CAREER MANAGEMENT (Eigenvalue = 1.334; Explained Variance = 22.372; Alpha = 0.930)	
1. I believe I can advance to a management position in this organization	0,816

2. The duties and responsibilities in this organization are directly proportional to my career	0,736
5. There are sufficient opportunities for career advancement in this organization	0,697
6. Business analysis is done in the organization	0,666
3. This organization meets my physiological and social needs	0,629
21. It motivates me to believe that I will advance in this organization	0,591
17. My superiors help me achieve my career goal	0,575
19. I am aware of my responsibilities to advance in this organization	0,501
18. Employees of this organization are experts in their fields	0,494
INDIVIDUAL CAREER MANAGEMENT (Eigenvalue = 1,216; Explained Variance = 15,648; Alpha = 0,878)	
13. I can overcome the problems I will face in this organization	0,749
14. I feel lucky to work in this organization	0,707
26. I can continue to work in this organization even if I do not achieve my career goal	0,706
12. I feel a high sense of belonging in this organization	0,688
11. I believe I have improved myself in this organization	0,541
Total Variance=%68.24; General Reliability (Alpha)=0.976	

In the final form of the Career Management Scale, the reliability of 30 items was found to be very high as alpha = 0.976. The determined factor structure of the scale was tested by confirmatory factor analysis. Confirmatory Factor Analysis (CFA) is a type of structural equation modelling (SEM) that can measure the relationship between observed variables and latent variables (7). The most frequently used goodness of fit indices in studies in the literature was used in the study. The diagram for confirmatory factor analysis is given below.

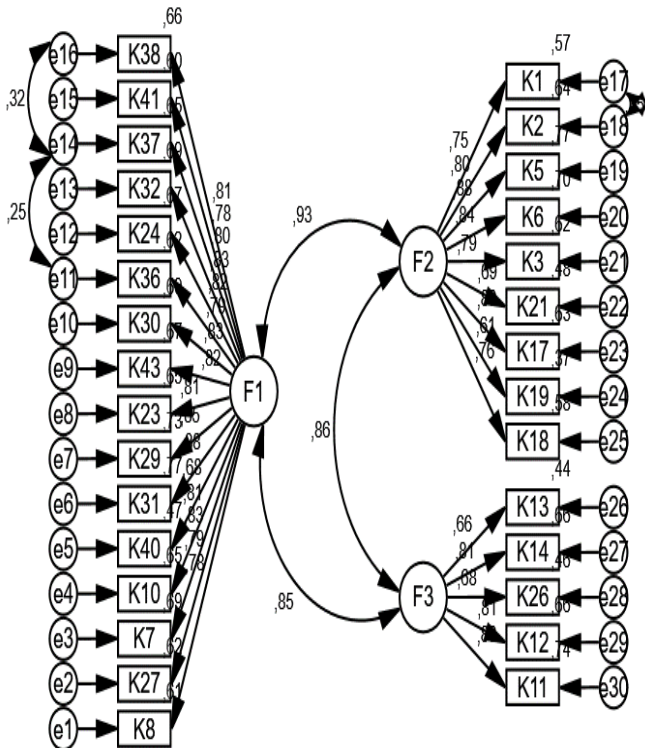


Figure1. Diagram for Confirmatory Factor Analysis
Criteria of the goodness of fit for confirmatory factor analysis are given below.

Table3. Confirmatory Factor Analysis Index Values

Index	Normal Value*	Acceptable Value**	Value
χ^2/sd	<2	<5	2,665
GFI	>0.95	>0.90	0.90
AGFI	>0.95	>0.90	0.90
CFI	>0.95	>0.90	0.92
RMSEA	<0.05	<0.08	0.07
RMR	<0.05	<0.08	0.05

*, ** Sources: (8; 9; 10; 11; 12; 13).

It was determined that the analysis results and the fit statistics calculated by the confirmatory factor analysis fit with the previously determined factor structure of the scale at an acceptable level. Standardized factor loadings, t values, and explanatory (R^2) values formed by the items are given below.

Table4. Factor Loadings

Items		Factors	β	Std. β	S.Error	t	p	R^2
K8	<---	F1	1,000	0,778				0,739
K27	<---	F1	0,922	0,787	0,059	15,539	p<0,001	0,655
K7	<---	F1	1,067	0,833	0,064	16,737	p<0,001	0,460
K10	<---	F1	1,076	0,808	0,067	16,075	p<0,001	0,657
K40	<---	F1	0,842	0,684	0,064	13,091	p<0,001	0,435
K31	<---	F1	1,074	0,875	0,060	17,871	p<0,001	0,581
K29	<---	F1	1,097	0,855	0,063	17,322	p<0,001	0,367
K23	<---	F1	0,998	0,805	0,062	16,008	p<0,001	0,633
K43	<---	F1	1,071	0,816	0,066	16,288	p<0,001	0,479
K30	<---	F1	1,043	0,828	0,063	16,602	p<0,001	0,620
K36	<---	F1	0,915	0,786	0,059	15,534	p<0,001	0,704
K24	<---	F1	1,098	0,816	0,067	16,296	p<0,001	0,774
K32	<---	F1	1,105	0,831	0,066	16,679	p<0,001	0,640
K37	<---	F1	0,977	0,805	0,061	15,999	p<0,001	0,566
K41	<---	F1	1,012	0,776	0,066	15,274	p<0,001	0,661
K38	<---	F1	1,028	0,813	0,063	16,214	p<0,001	0,602
K1	<---	F2	1,000	0,752				0,648
K2	<---	F2	1,022	0,800	0,055	18,486	p<0,001	0,690
K5	<---	F2	1,076	0,880	0,064	16,742	p<0,001	0,666
K6	<---	F2	0,973	0,839	0,061	15,836	p<0,001	0,618
K3	<---	F2	0,957	0,787	0,065	14,694	p<0,001	0,685
K21	<---	F2	0,821	0,692	0,065	12,699	p<0,001	0,666
K17	<---	F2	0,938	0,795	0,063	14,872	p<0,001	0,648
K19	<---	F2	0,660	0,606	0,060	10,967	p<0,001	0,731
K18	<---	F2	0,879	0,762	0,062	14,155	p<0,001	0,766
K13	<---	F3	1,000	0,660				0,468
K14	<---	F3	1,380	0,811	0,110	12,493	p<0,001	0,652
K26	<---	F3	1,072	0,678	0,100	10,755	p<0,001	0,694
K12	<---	F3	1,399	0,810	0,112	12,479	p<0,001	0,619
K11	<---	F3	1,552	0,859	0,119	13,075	p<0,001	0,605

Considering the standardized coefficients, it was determined that the factor loadings were high, the standard error values were low, and the t values were significant. These results confirm the construct validity of the predetermined factor structure. The difference between the Lower 27% and Upper 27% groups was tested to determine the discrimination of the scale.

Table 5. Differentiation Status of Career Management Scores by Lower 27% and Upper 27% Groups

Groups	Lower %27 (n=86)		Upper %27 (n=86)		t	sd	p
	Ort	Ss	Ort	Ss			
Qualification of Human Resources	1,885	0,513	4,210	0,372	-34,008	170	0,000
Organizational Career Management	1,845	0,540	4,017	0,520	-26,866	170	0,000
Individual Career Management	1,702	0,487	3,519	0,675	-20,236	170	0,000
Career Management General	1,843	0,468	4,037	0,359	-34,478	170	0,000

Independent Groups T-Test

Career Management Scores were found to differ according to the Lower 27% and Upper 27% groups ($p < 0.05$).

DISCUSSION

It is also the responsibility of sports management to implement the determined policies and decisions by providing and using human and material resources effectively to reach the determined goals of sports-related services (14). The success of sports organizations will increase with the employee-oriented work of the people responsible for management in both public and private sports organizations. The fact that the individuals in the organization know where they will be in the future or the organizations are in a guiding position in the progress of the goals they want to reach will directly affect organizational success. This will be

possible with correct career management. There is no measurement tool in the literature to measure career management. Therefore, this study was aimed at developing a career management scale to determine the career management of employees in sports organizations.

To reveal the construct validity of the scale, an explanatory factor analysis method was applied. As a result of the Barlett test ($p = 0.000 < 0.05$), it was determined that there is a relationship between the variables included in the factor analysis. As a result of the test ($KMO = 0.973 > 0.60$), it was determined that the sample size was sufficient for factor analysis. In the factor analysis application, the varimax method was chosen and the structure of the relationship between the factors remained the

same, and a career management scale that consists of 30 items and 3 sub-factors was developed. The dimension of "qualification of human resources" consists of 16 items, the dimension of "organizational career management" consists of 9 items, and the dimension of "individual career management" consists of 5 items. Besides, the analysis revealed that the fit statistics calculated with the confirmatory factor analysis showed good agreement and positive correlations were found between the dimensions of the scale and the overall scores as a result of the correlation analysis ($p < 0.05$).

CONCLUSION

These results showed that the career management scale is at a sufficient level in terms of validity and reliability in determining the career management of employees in sports organizations. The current study was conducted in the provincial directorates of sports in certain provinces. However, other studies are recommended in different provinces, with large sample groups, and in various sports organizations.

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