

A research on individual innovativeness levels of football referees (Kocaeli region case)

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Abstract

The aim of this research is determining innovativeness levels of football referees in Kocaeli Region, defining their differences in terms of age, education and term of refereeing and discussing such differences within the scope of literature. The sample group of the research is composed of 132 football referees selected by convenience sampling method. "Individual Innovativeness Scale" was used for determining innovativeness levels of football referees. Besides, personal information section was attached to the scale to obtain demographic data of the sample group. In data evaluation, one-way analysis of variance was used since the scores of dependent variables are distributed both homogeneously and normally and since the number of groups was more than two and Levene's test was used concerning the variance homogeneity. In this research, it was determined that individual innovativeness levels of football referees were included in the "early majority" category at the rate of 44% and in the "early adopters" category at the rate of 34%. No football referee was included in the "laggards" category comprising the people who are biased towards change and who adopt the innovations later than anyone. Moreover, no significant difference was found between the individual innovativeness scores of football referees and the variables of age, education and term of refereeing ($p>.05$). As a result, it can be said that planning according to different variables other than age, educational background and term of refereeing will be more beneficial and appropriate in realization of new implementation and practices for football referees in the future. It must not be ignored that generalization made for all football referees has some limitations according to the data obtained as a result of this study.

Keywords: Football referees, innovativeness, innovation.

INTRODUCTION

Researchers show interest in the field of sports industry and management. Particularly sports products are important for the examination of technological innovations and the analysis of innovative behaviors (4).

We confront the term innovation in each field and day of our life. Thus, the necessity to examine the innovations we face and the compliance or non-compliance we show for them arises.

The changes in several fields, especially in science, technology and environment urge both people and society to change and be renewed. Besides, the developments in economic, social and political fields influence societies and urge to be renewed (9).

Innovation is defined as an idea, application or object that is perceived as new by individuals or society (3). The term innovation is related to all behaviors of individuals, who constitute the society, in social life although it is used in the meaning of

benefiting new methods and approaches in societal, cultural and administrative terms (1). Kabakçı (9) defined certain common concepts concerning innovation such as restructuring, constituting innovation, following, improving the corrupted structures or creating new elements, developing services and products.

When it is considered in terms of sports, it is seen that innovation is significant and several innovations enter into football field every passing day. Devocioğlu (5) mentioned that the basic principle for football that drags the masses down with it to survive is that it is always open to innovations. Also, according to Devocioğlu and Altıngül (6), sports technologies must comply with the innovations with all their resources in our day where control systems, managers and referees in sports are looking for the ways of benefiting from information systems and where a continuous and rapid change is faced.

Gündoğdu and Sunay (7) stated that innovation has a significant relationship with sports and it must

be adopted as a corporate culture in Turkish Sports Management for succeeding in all fields of sports. They also emphasized that educational studies must be carried out concerning this issue and an efficient innovation management must be implemented.

It is mentioned that continuous development of technology will bring the sports to a quite different point and will provide new products to be created for fulfilling new needs. Thus, the people in sports field must be innovative, researcher and open to learning (8).

The importance of the existence of people who are open to innovativeness and research in the sports field makes the research on innovativeness important in terms of football. Managing football in a better way and applying all kinds of innovations required by today's conditions have importance also for football referees. The aim of this research is determining innovativeness levels of football referees in Kocaeli Region, defining their differences in terms of age, education and term of refereeing and discussing such differences within the scope of literature.

Answers were searched for the following questions to fulfill the aim of the research.

- How is football referees distributed in terms of their individual innovativeness scores?
- Is there a significant difference between the individual innovativeness scores of football referees in terms of age?
- Is there a significant difference between the individual innovativeness scores of football referees in terms of education?
- Is there a significant difference between the individual innovativeness scores of football referees in terms of the term of refereeing?

MATERIAL AND METHOD

Descriptive statistics method was used in this research for finding answers to the questions concerning individual innovativeness levels of football referees. The difference between the variables in terms of the individual innovativeness scores of football referees was tried to be determined according to the obtained data.

Population and Sample Group

The population of the research is composed of 287 football referees work in Kocaeli Region in the 2013-2014 football seasons. And the sample group of

the research is composed of 132 football referees selected by convenience sampling method.

Data Collection Tools

The data of the research was obtained by applying Individual Innovativeness Scale to the sample group. Besides, personal information section was attached to the scale to obtain demographic data of the sample group.

Individual Innovativeness Scale was developed for determining innovativeness levels of individuals in general terms. The scale was adapted to Turkish by Kılıçer and Odabaşı (10) and its internal consistency coefficient was determined as 0.82 while test-retest reliability was determined as 0.87. Internal consistency alpha coefficient of this research was determined as 0.80. Alpar (2) asserted that having an alpha coefficient between 0.80 and 1.00 shows that a scale has a high reliability level.

According to the Individual Innovativeness Scale, the individuals who have a score higher than 80 are included in the "innovators" category; the ones who have a score between 69 and 80 are included in the "early adopters" category; the ones who have a score between 57 and 68 are included in the "early majority" category; the ones who have a score between 46 and 56 are included in the "late majority" category; and the ones who have a score lower than 46 are included in the "laggards" category. Considering innovativeness scores of individuals in general terms, it was also mentioned that the individuals who have a score of 68 and higher are highly innovative and the ones who have a score of 64 and lower have a low level of innovativeness (10).

Analysis of Data

One-way analysis of variance (One Way ANOVA) was used since the scores of dependent variables are distributed both homogenously and normally and since the number of groups was more than two. In addition, Levene's test was used in accordance with the homogeneity of variance. The significance level has been accepted as 0.05. Statistics software of SPSS 15.0 for Windows was used for descriptive statistics and the other statistical operations.

RESULTS

The presentation of the results obtained by the scale used within the scope of the research and

tables and frequency distributions of the findings are presented as follows.

When Table 1 is examined, it is seen that football referees are formed by a young age group and the majority of referee group is included in the student group and the term of refereeing of them appears to be new.

When Table 2 is analyzed, it is seen that 8 of football referees are included in "innovators" category at the rate of 6%, 45 in the "early adopters" category at the rate of 34%, 58 in "early majority" category at the rate of 44% and 21 in "late majority" category at the rate of 16%.

When Table 3 is analyzed, the point average of football referees obtained from innovativeness scale is 65.62 and standard deviation is 9.23. The lowest score that can be obtained from the scale is 14 and the highest score is 94 and the lowest score obtained by the participants is 48 and the highest score is 90.

As can be seen in Table 4, the scores of innovativeness level of football referees do not show a significant difference according to their ages [$F_{(3-128)} = 1.218, p > .05$].

As it can be seen in Table 5, the scores of innovativeness level of football referees do not show a significant difference according to their educational background [$F_{(4-127)} = 1.193, p > .05$].

When Table 6 is analyzed, the scores of innovativeness level of football referees do not show

a significant difference according to their term of refereeing [$F_{(3-128)} = .080, p > .05$].

Table 1. Demographic characteristics of football referees.

Characteristics	N	%
Age		
Age between 15-20	33	25.0%
Age between 21-25	56	42.4%
Age between 26-30	25	18.9%
Age between 31-37	18	13.6%
Total	132	100
Education		
High School	4	3.0%
Associate	23	17.4%
Undergraduate	36	27.2%
Post Graduate	4	3.0%
Student	65	49.2%
Total	132	100
Term of Refereeing		
Up to 1 Year	52	39.3%
2-3 Years	39	29.5%
4-6 Years	17	12.8%
7-19 Years	24	18.1%
Total	132	100

Table 2. Distribution of innovativeness levels of football referees.

Innovativeness Levels	N	%
Innovators	8	6%
Early Adopters	45	34%
Early Majority	58	44%
Late Majority	21	16%
Total	132	100

Table 3. Descriptive statistics on innovativeness scores level of football referees.

	N	Mean	SD	Min.	Max.	The lowest and the highest scores that can be obtained from the inventory
Innovativeness Score	132	65.62	9.23	48	90	14-94

Table 4. ANOVA results of scores of innovativeness level according to the ages of football referees.

Source of Variance	Sum of Squares	Sd	Average of Squares	F	P
Intergroup	310.061	3	103.354	1.218	.306
In-group	10864.999	128	84.883		
Total	11175.061	131			

Table 5. ANOVA results of scores of innovativeness level of football referees according to their educational background.

Source of Variance	Sum of Squares	Sd	Average of Squares	F	P
Intergroup	404.717	4	101.179	1.193	.317
In-group	10770.343	127	84.806		
Total	11175.061	131			

Table 6. ANOVA results of scores of innovativeness level of football referees according to their term of refereeing.

Source of Variance	Sum of Squares	Sd	Average of Squares	F	P
Intergroup	20.906	3	6.969	.080	.971
In-group	11154.154	128	87.142		
Total	11175.061	131			

DISCUSSION

In this study, the levels of football referees working in Kocaeli Region were examined in terms of their individual innovativeness scores and the differences between certain demographic characteristics were inquired.

It was determined that the innovativeness levels of football referees are included in the "early majority" category at the rate of 44% and "early adopters" category at the rate of 34% according to the results of this study. Those in the "early majority" category are defined as cautious and self-possessed against innovations and those in the category of "early adopters" are defined as the ones who provide information about innovations to the other members of society and show the way to the other individuals according to Rogers (3). No football referee was included in the "laggards" category comprising the people who are biased towards change and who adopt the innovations later than anyone. According to these results, it can be said that football referees are open to innovation in general. Participation, promotion of new ideas and opinions and efforts of excellence are effective for innovation efforts including sports management activities according to Newell and Swan (11).

No significant difference was found between the individual innovativeness scores of football referees and the variables of age, education and term of refereeing as a result of this study. As well as being conscious of the other variables which may have impact on scores of innovativeness levels of football referees, an inquisition at the size of these three variables was performed within the scope of this study.

As a result, it can be said that planning according to different variables other than age, educational background and term of refereeing will be more beneficial and appropriate in realization of new implementation and practices for football

referees in the future. It must not be ignored that generalization made for all football referees has some limitations according to the data obtained as a result of this study. Particularly, it will be possible to get different results and findings if these studies made for football referees are performed with different variables and larger groups.

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