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Full Length Research Paper

A study about problem solving skill variable in terms of some variables of footballers who play football professionally

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The aim of this study is to present the problem solving skill levels of sportsmen who play football professionally, and to determine whether problem solving skill levels differ according to sportsmen's, sports club, age, marital status, parents' educational status, father's occupation, occupation in the game, year of playing football professionally and age of starting sport. Totally, 80 sportsmen played at Bank Asya League. Twenty (20) who played at Akhisar Municipality Youth and Sports Club, 23 who played at Göztepe A.Ş., 21 who played at Çaykur Rizespor A.Ş. and 16 played at Konya Sports Club participated in the research. In order to get the aim of the research, Problem Solving Inventory which was adapted in Turkish by Şahin and his friends and developed by Heppner and Peterson (1982) was used. The inventory was 6 Likert type which consisted of 35 items. Statistical Package for the Social Sciences (SPSS) programme was used for evaluating frequency; t-test and one way variance analysis (ANOVA) were used for individual groups and Scheffe-F test was used for finding the group which was the reason for differences. Finding revealed that, professional footballers were beyond the mid-high level of problem solving skills (in the inventory, the least value is 32 and the highest value was 192 and the score found at the end of the search was $\overline{X}$ = 88, 91). While there were no meaningful differences in sportsmen's marital status, education status, parents' education status, father's occupation, sportsmen's problem solving level variables, occupation in the game, the year of playing football professionally and the age of starting sport, there were meaningful differences in their sports club and age variables.

Key words: Professional footballer, Bank Asya League, problem solving skill.

INTRODUCTION

The word "problem" is a romenesque notion which means "matter" in Arabic and corresponds to "challenge" in today's Turkish. The challenge notion states a pickle which needs resolution, learning and coming to the conclusion. In the Turkish Language Agency, challenge is explained as the situation that needs to be considered, and requires turning of the scales by talking (Kalayci, 2001). The equivalence in different language dictionaries is identified as the problem whose equivalence should be found scholarly, and whose hardness, matter, trouble, elusive situation and annoying thing need care and consideration (Sungur, 1997). Dewey (1998) described problem as anything that confuses the human mind, challenges, anything that is vague. According to Binghan (1998), problem is an obstacle that confronts existing power which one needs to gather strength for reaching one's aim; and as for Morgan (1999), it is a conflict situation that one faces on the way to achieving one's aim (quoted by Güçlü, 2003), while Aslan (2002) described problem as facing a danger which must be overcome by strength. Cüceloğlu (2003) described it as an accasion that comes out after some abstacles that inhibit one from reaching one's target. As for Karasar (2005), problem is an indecisiveness that disturbs one psychically and ideationally and any situation that has many likelihood solutions. Human life is full of problems

which need to be solved. In order to overcome these problems, people should be creative, critical, and sane and be able to produce effective solutions.

In this condition, the problem solving notion that aims to overcome problems, comes out in most conditions and studies (Köşterelioğlu, 2007). Ülker (1997) minds problem as a thought that a person spends time feeling and finding solution to it (quoted by Köşterelioğlu, 2007). Işik (2000) stated that problem solving is a serious effort geared towards putting away difficulties in order to reach a certain aim. Also, Isik (2000) asserted that all activities are involved in it. Gelbal (1991) indicated that problem is a complicated situation and problem solving is getting rid of it.

Increasing complex social structure, technological developments, political, social and economic crises expose people increasingly to growing problems. Problem solving skill is important for people who live in these conditions. Thus, problem solving has been an important issue in psychology for many years (Güler, 2006). In the early stages of human life people face plain and simple problems that have to do with satisfying their needs, but in later stages, they face versatile complicated problems. The more these problems are braved and solved well, the more people's unity to life is more successful. Especially, one's ability to solve problem faced in one's early life's work increases one's self confidence and provides positive developments in life's work. This means one must have brain first, and then develop environment (Arslan, 2003).

Problem solving varies with the types of problem. Some problems can be solved by diffffernt ways, some need to be approached emotional, while others need to be approached with a new perception. The common way of solving problem is to remove obstacles that hinder one from achieving one's aim (Cüceloğlu, 2003).

Coping with problem depends on a person's problem solving skill, the ability to evaluate oneself cognitively and to focus considerably (Heppner et al., 1985). When a person encounters a problem, first, he/she searches for clues with his/her senses, perceptual processes step in; and then gathered data are given meaning and interpreted. Later, the most possible behavioral reactions are considered and the most befitting behaviour manner is selected. In the last phase, a solution is put into practice that is considered to be the best (Jane, 2001). The way a person evaluates and perceives his/her own problem solving skills is an important metacognitive component that affects how he/she approaches and copes with difficulties (Heppner and Reeder, 1983). The way a person perceives himself/herself affects data handling system, which is related to problems encountered from oneself and the environment simultaneously (Heppner and Krauskop, 1987).

Sport is an ensuring success environment which resolves problems and contraversions (Volkamer, 2009). Peole who do sport try to solve problems via abstract thoughts (problem solving thoughts) by relying on thoughts that emerge with experience when they face any of them. Owing to problem solving thought, sportsmen can use existing skills and abilities purposively (Baumann, 1994). Because people are social living creatures, it is possible in every environment that they face problems. It is true that sportsmen always face problems either from sport or social environments. In order to solve these faced problems, sportsmen should have problem solving skills.

MATERIALS AND METHODS

In the study, totally 80 sportsmen that play at Bank Asya League, of which 20 play at Akhisar Municipality Youth and Sports Club; 23, at Göztepe A.Ş.; 21, at Çaykur Rizespor A.Ş. and 16, at Konya Sports Club were given questionnaires. Problem Solving Inventory which was adapted in Turkish by Şahin and his friends and developed by Heppner and Peterson (1982) was used in the study. This inventory scored between 1 and 6 is Likert type and measures one's own perceptions about one's problem solving skills. In the course of scoring 9th, 22nd and 29th items were left aside from scoring. The 1st, 2nd, 3rd, 11th, 14th, 15th, 17th, 21st, 25th, 30th and 34th items are scored in the inventory. The Problem Solving Inventory has six sub-dimensions which are: Impetuous Approach, Considering Approach, Avoidant Approach, Evaluator Approach, Self-assured Approach and Planned Approach. The least point is one and the utmost point is 6 in the answer key. At least, 32 and utmost 192 points can be taken in the whole Problem Solving Inventory. The total high score from the scale indicates that the individuals are perceived to be inadequate with regards to problem solving (Sahin et al., 1993). To evaluate the statistics, Statistical Package for the Social Sciences (SPSS) Windows version 13.00 package programme was used. Analysis of variance (ANOVA) test, mean frequency distribution and standard deviation were done.

RESULTS

This study was done with the aim of presenting sportsmen's problem solving skill levels that play football professionally. The information obtained is interpreted as follows: In the first phase of the study, the demographic features of the participating sportsmen were determined. According to this, 20(25.0%) participants play at Akhisar Municipality Youth and Sports Club, 23(28.7%) participants play at Göztepe A.Ş Club, 21(26.3%) participants play at Çaykur Rize Sport Club and 16 (20.0%) participants play at Konya Sport Club. The age distribution of the footballers is 22(27.5%) of which we have between 18 and 22; 22(27.5%), between 23 and 27; 28(35.0%), between 28 and 30 and 8(10%), between 33 and over. The marital status dispersion of the footballers is: 32(40%) are married and 48(60%) are single. The education status dispersion of the participants is: 7(8.7%) of them graduated from secondary school, 56 (70.0%) of them graduated from high school and 17(21.3%) of them are university students. The mother's education status dispersion of the participants is: 9(11.3%) of them are illiterate, 11(13.7%) of them are literate, 30(37.5%) of

Table 1. Results of researchers related to X and Ss values of Problem Solving Sub-dimentions and Total Point.

Sub-dimentions of problem solving inventory	n	$\overline{X}$	Ss	Min.	Max.	The maximum and minimum points in the inventory
Impetuous approach	80	30.0000	7.07465	17.00	46.00	9 - 54
Considering approach	80	13.2625	5.10335	5.00	28.00	5 - 30
Avaidant approach	80	10.2250	4.51152	4.00	20.00	4 - 24
Evaluator approach	80	9.0750	3.40430	3.00	17.00	3 - 18
Self-assured approach	80	15.6250	5.38487	7.00	30.00	7 - 42
Planned approach	80	10.7250	4.38921	4.00	22.00	4 - 24
Total point	80	88.9125	20.24358	42.00	136.00	32 - 192

them graduated from primary school and 30(37.5%) of them graduated from secondary school. The father's education status dispersion of the participants is: 5(6.3%) of them are literate, 27(333.7%) of them graduated from primary school and 48(60%) of them graduated from secondary school. The father's occupation dispersion of the participants is: 20(25%) of them are officials, 21(26.3%) of them are workers, 15(18.7%) of them are tradesmen, 3(3.7%) of them are farmers and 21(26.3%) of them are self-employed. The occupation of the participants in the game dispersion is: 12(15%) of them are goalkeepers, 27(33.7%) of them are defence players, 23 (28.7%) of them are midfield players, 9(11.3%) of them are wing players and 9(11.3%) of them are forward players. The year of playing football professionally dispersion is: 15 (18.7%) of them are between 0 and 3, 15(18.7%) of them are between 4 and 6, 21(26.3%) of them are between 7 and 9 and 29(36.3%) of them are between 30 and over. The age of starting sport dispersion of the participants is: 41(51.3%) are between 0 and 10, 29(36.3%) are between 11 and 13, 8(10%) are between 14 and 16 and 2(2.4%) are between 17 and over. On the second phase of the research, footballers's problem solving levels are determined.

Table 1 shows problem solving sub-dimension and total points of sportsmen participating in the search were analyzed. At the end of this search, impetuous approach was found as $\overline{X}$ = 30.00, considering approach was $\overline{X}$ = 13.26, avoidant approach was $\overline{X}$ = 10.22, evaluator approach was $\overline{X}$ = 9.07, self-assured approach was $\overline{X}$ = 15.62 and planned approach was $\overline{X}$ = 10.72; and also problem solving total point was $\overline{X}$ = 88.91. Regarding the minimum score of 32 and maximum score of 192 total point of the scale, where sportsmen's total point was $\overline{X}$ = 88.91 in the problem solving inventory examined, it can be said that sportsmen participating in the research have over mid-level problem solving skills.

Table 2 shows problem solving sub-dimension and F-test results in relation to total points analyzed according to sport club variable. Hereunder, a meaningful difference was found in avoidant and self-assured approach points in sport clubs. The avoidant approach points is, respectively $\overline{X}$ = 8.04 for those who play at Çaykur Rize Sport Club; $\overline{X}$ = 8.70 for those who play at Akhisar Municipality Youth and Sports Club; $\overline{X}$ = 11.78 for those who play at Göztepe Sport Club and $\overline{X}$ = 12.75 for those who play at Konya Sport Club. The self-assured approach points is $\overline{X}$ = 13.61 for those who play at Çaykur Rize Sport Club; $\overline{X}$ = 14.52 for those who play at Göztepe Sport Club; $\overline{X}$ = 16.50 for those who play at Akhisar Municipality Youth and Sports Club and $\overline{X}$ = 18.75 for those who play at Konya Sport Club.

In Table 3, problem solving sub-dimension and F-test results in relation to total points were analysed according to age variable. Hereunder a meaningful difference was found in considering and self-assured approach points. The footballers' points in considering approach is respectively $\overline{X}$ = 11.50 for those who are between 28 and 32; $\overline{X}$ = 12.95 for those who are between 18 and 22; $\overline{X}$ = 15.09 for those who are between 23 and 27 and $\overline{X}$ = 15.25 for those who are between 33 and above. The footballers' points in self-assured approach is respectively $\overline{X}$ = 13.53 for those who are between 28 and 32; $\overline{X}$ = 115.81 for those who are between 18 and 22; $\overline{X}$ = 17.37 for those who are 33 and above and $\overline{X}$ = 17.45 for those who are between 23 and 27. A meaningful relation could not be found in footballers' marital status, education status, mother's education status, father's education status, father's occupation, occupation in the game, the year of playing football professionally and the age of starting sport (Sig. = <0.05).

DISCUSSION

This study was done with the aim of revealing problem solving skills of football players who play professionally and whether they differ in terms of personal quality.

At the end of the study, when total point mean ($\overline{X}$ = 88.91) got from the problem solving inventory and minimum of 32 and maximum of 192 points taken from the inventory are considered, it can be said that sportsmen have beyond the moderate level problem solving skill. With this, when maximum and minimum points are taken from sub-dimensions of problem solving inventory, it can be asserted that sportsmen have beyond

Table 2. The F-test results related to total point and Problem Solving Inventory sub-dimentions of participants related to Played Sport Club.

Sub-dimentions of problem solving inventory	Played Sport Club	n	$\overline{X}$	Ss	F	p-value
	Akhisar Belediyesi	20	29.2500	7.11466		
	Göztepe	23	30.8261	6.29323		
Impetuous Approach	Çay-Kur Rize	21	31.5714	7.95972	1.099	0.355
	Konya	16	27.6875	6.77956		
	Total	80	30.0000	7.07465		
	Akhisar Belediyesi	20	14.4500	6.77049		
	Göztepe	23	13.0435	3.90196		
Considering Approach	Çay-Kur Rize	21	11.4762	5.20211	1.547	0.209
	Konya	16	14.4375	3.57713		
	Total	80	13.2625	5.10335		
	Akhisar Belediyesi	20	8.7000	4.71392		
	Göztepe	23	11.7826	3.96526		
Avaidant Approach	Çay-Kur Rize	21	8.0476	3.73465	5.903	0.001
	Konya	16	12.7500	4.13924		
	Total	80	10.2250	4.51152		
	Akhisar Belediyesi	20	8.9500	4.34650		
	Göztepe	23	10.3043	2.68726		
Evaluator Approach	Çay-Kur Rize	21	8.0000	3.00000	1.776	0.159
	Konya	16	8.8750	3.24294		
	Total	80	9.0750	3.40430		
	Akhisar Belediyesi	20	16.5000	6.43592		
	Göztepe	23	14.5217	4.66972		
Self-assured Approach	Çay-Kur Rize	21	13.6190	4.67414	3.586	0.018
	Konya	16	18.7500	4.49444		
	Total	80	15.6250	5.38487		
	Akhisar Belediyesi	20	12.3500	6.01992		
	Göztepe	23	9.6957	3.59842		
Planned Approach	Çay-Kur Rize	21	9.4762	4.02019	2.343	0.080
	Konya	16	11.8125	2.53558		
	Total	80	10.7250	4.38921		
	Akhisar Belediyesi	20	90.2000	25.95664		
	Göztepe	23	90.1739	14.22754		
Total	Çay-Kur Rize	21	82.1905	22.39335	1.218	0.309
	Konya	16	94.3125	15.50363		
	Total	80	88.9125	20.24358		

the moderate level on sub-dimensions of problem solving skill.

In this research, it is found that while there is a meaningful difference in sportsmen's marital status, education status, parents' education status, father's occupation, occupation in the game, the year of playing football professionally and the age of starting sport variables, there is no meaningful difference in playing team and age variables.

When scientific studies are examined about problem solving, it is seen that the results of this study on footballers have parallelism with them. In Akpinars' study

Table 3. The F-test results related to total point and Problem Solving Inventory sub-dimentions of participants related to age variable.

Sub-dimentions of problem solving inventory	Age group	n	$\overline{X}$	Ss	F	p- value
Impetuous Approach	Between 18 and 22	22	29.0455	6.51356	.344	.0794
	Between 23 and 27	22	31.0909	8.47354		
	Between 28 and 32	28	30.1429	7.02226		
	33 and over	8	29.1250	4.94072		
	Total	80	30.0000	7.07465		
Considering Approach	Between 18 and 22	22	12.9545	3.76041	2.641	0.055
	Between 23 and 27	22	15.0909	6.30879		
	Between 28 and 32	28	11.5000	4.36739		
	33 and over	8	15.2500	5.54849		
	Total	80	13.2625	5.10335		
Avaidant Approach	Between 18 and 22	22	9.9091	4.06974	.570	.636
	Between 23 and 27	22	10.5000	4.95456		
	Between 28 and 32	28	10.7500	4.91878		
	33 and over	8	8.5000	2.82843		
	Total	80	10.2250	4.51152		
Evaluator Approach	Between 18 and 22	22	8.7273	3.32640	2.097	0.108
	Between 23 and 27	22	8.8636	3.28482		
	Between 28 and 32	28	8.7143	3.44111		
	33 and over	8	11.8750	3.09089		
	Total	80	9.0750	3.40430		
Self-assured Approach	Between 18 and 22	22	15.8182	5.14214	2.707	0.051
	Between 23 and 27	22	17.4545	5.88563		
	Between 28 and 32	28	13.5357	4.31605		
	33 and over	8	17.3750	6.36817		
	Total	80	15.6250	5.38487		
Planned Approach	Between 18 and 22	22	10.7273	3.36907	2.034	0.116
	Between 23 and 27	22	12.1818	5.41283		
	Between 28 and 32	28	9.2857	3.45186		
	33 and over	8	11.7500	5.77556		
	Total	80	10.7250	4.38921		
Total	Between 18 and 22	22	87.1818	15.32703	1.512	0.218
	Between 23 and 27	22	95.1818	25.36709		
	Between 28 and 32	28	83.9286	19.66371		
	33 and over	8	93.8750	15.42204		
	Total	80	88.9125	20.24358		

on determining problem solving skill levels of elite women hockey players in Turkey, it is seen that women hockey players have beyond the moderate level problem solving skill; a meaningful difference could not be found in age and education level variables but a meaningful difference was found in the year of playing hockey, to become nationalistic, the utmost championship that they attend and the competition places variables (Akpinar, 2012). In İnce and Şen's study on determining problem solving skill levels of sportsmen who play basketball at displacement league, it is seen that sportsmen have beyond the moderate level problem solving skill; a meaningful diff-

erence could not be found in age and occupation in the play variables, but a meaningful difference was found in group and gender variables (Ince and Şen, 2006). Taylan applied problem solving inventory to three groups by adapting Hepper's problem solving inventory, reliability and validity. The inventorty was applied to students who study at Ankara University, College of Science and at the end of the study a meaningful difference could not be encountered in gender and class variables but a meaningful difference was found when class and programme were taken together (Taylan, 1990). On Basmac's study on examining some variables about percepting university students's problem solving skills, a meaningful difference was not found in their settlements (city or town), parents' education level, education receive in classes that get students prepared for their numerogical, linguistic and flair points and gender and problem solving skills (Basmaci, 1998). At the end of Katkat's study on the comparison of gender and fields of teacher candidates' problem solving skills, a meaningful difference was not found in teacher candidates' gender and different class variables, but a meaningful difference was encountered in types of university enrollment and types of point variables (Katkat, 2001). At the end of Tekin et al. (2007) study on examining students' problem solving skills who study at school of physical education and sport, meaningful differences were found in avoidant approach on behalf of female students, the way of considering, avoidant, evaluator, self-assured and planned approach on behalf of students who go on doing sport.

Consequently, it was found that footballers who participated in this study were over the moderate level ($\overline{X}$ = 88.91; Minimum, 32; Maximum, 192).

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