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Evaluation of Orienteering Athletes' Decision Making Strategies for Some Variables

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Abstract

The aim of present study is to determine orienteering athletes' (OA) decision making strategies (DMS) for some variables. Subjects in the study are 325 OA (236 male, 89 female) chosen randomly among 1000 athletes attending 1st Turkish Grade Orienteering Championship between 23 and 24 November 2013 in Soma district Manisa. Data related to DMS were obtained in convenience with the method developed by Mann et al (1998; Melbourne Decision Making Questionnaire) and translated in Turkish and revised by (Deniz, 2004) and involving a Decision Making Styles Scale (DMSS) with 28 different items (Deniz,2004). Demographic data were gathered through a personal information form. Frequency distribution, t test and ANOVA variance analysis were used to determine the decision making level of orienteering athletes, to compare two and more independent variables, respectively. Difference between the groups' views was evaluated at the confidence level of P:0.05. Differences between mean scores given to the groups for the variables of gender, settlement area and sport age were found to be statistically significant. Statistically significant differences were also found in the scores for DMSS between the variables of age and sport age. No statistically significant difference was found to be between self-esteem and the scores of DMSS for the characteristics of being a national athlete. It was suggested that orienteering sport suitable for individuals from any age group can be advisable to develop and improve the DMS.

Keywords: Orienteering, decision making strategies, self – esteem

Introduction

It is known that not only physiological, psychological and technical- tactical works are important in the achievement of sportive success but also mental factors take place among the most effective factors for the success (Egesoy and Eniseler,1999). Orienteeringis a kind of sport gathering such features in its nature (Rüstem, 2012).

Orienteering, so-called sport of mind and thought, is among the developing sportive branches in recent years in Turkey related to finding directions by running and racing. Orienteeringis a sportive branch performed mainly in forest areas, rural using maps and compass (Özcan, 2007). This sportive branch can meet more expectations than other sports since it requires the highest achievement level in a confined area and also can function its duties of making and applying decisions physically together with the decisions already made as the result of the analytical understanding (Hartmann, 1988).

Coping with the problems encountered at every stage of daily life is a process requiring knowledge and skills rather than ability (Şirin and Güzel, 2006). Humans in general challenge for enlightening and knowing themselves and other people, expressing events and occurrence and search for confident solutions for the problems they face. Finding secure solutions for the problems faced depends primarily on making accurate decisions associated with the use of correct and realistic knowledge (Karasar,1994) Decision making ability of great importance in the determination of sportive success (Egesoy et al, 1999).

Decision making can be defined to be a process which requires taking measures by removing unfavourable conditions and overcoming obstacles and problems faced on the way to reach the aim (Alpugan and Oklav, 1997). Decision strategies used just in the time of making decision can be explained by the determination of how an individual will behave when (s) he faces a condition to make an obligatory decision (Diniz, 2005).

Individuals can use the decision making styles of careful (CDMS), avoidant (ADMS), postponing (PoDMS) and panic decision making (PaDMS). Individuals adopting CDMS search meticulously for related knowledge before making a decision and make choice after evaluating alternatives carefully. Individuals reflecting ADMSavoid from making a decision by tending to leave other people the last words and end decisions. Therefore, such individuals try to escape from making decision by taking over the responsibility to others. People accepted to use postponing PoDMS are observed always to delay reaching a decision and put off and neglect the decision making process. They continuously try to put off the decision without presenting a valid reason. People observed to behave in convenience with PaDMSsense themselves to be under stress resulting from time. They may sometimes exhibit unconscious attitudes in order to reach quick solutions due to the mentioned stress (Deniz, 2004).

The best thing for people to do is to make the most appropriate decision based on the conditions and knowledge in handand revise and renew the decisions for possible problematic situations (Adair, 2000). That individuals are always in continuous expectations and new searching processes forces them to face great difficulties using strategies they follow in making decisions. From this perspective, strategies and styles individuals use to make decisions in a defined approach and behaviour gain importance. It is a requirement that individuals should be assisted to acquire appropriate and effective decision making skills in order to satisfy with their lives and improve themselves (Ersever, 1996). Orienteeringis a

sportive branch in which it a requirement to develop strategy and make decision rapidly and thinking is important in addition to physical power (Andersson, 2003).

Understanding the decision making process of orienteeringathletes and expression of the elements of the process is important for its practical benefits. In this respect, present study is expected to help acquire orienteeringathletes the skills of efficient and quick decision making, thinking, making appropriate decisions, searching for the solutions for problems and overcoming them.

Present study is aimed to determine decision making strategies of orienteeringathletes according to some variables.

Method

Model of the study involves the searching and scanning. Scanning models are the study approaches aimed to look into a past or existing situation in a sample chosen from a population inhabiting extended groups. The event, individual or object evaluated in the study try to be determined considering their own conditions as they are. There is no challenge to change or affect them. There are things to learn and they exist there. What is important is to determine them by observing (Karasar, 1994)

Population and sample of the study include 1000 athletes attending 1st Turkish Grade Orienteering Championship between 23 and 24 November 2013 in Soma district Manisa and 325 OA (236 male, 89 female) chosen randomly among them respectively.

Data collection tools include a set of methods developed by (Mann et al, 1998). Melbourne Decision Making Questionnaire) and translated in Turkish and revised by (Deniz, 2004) and involving a Decision Making Styles Scale (DMSS) with 28 different items (Deniz, 2004). and a personal information form developed by the researcher of the present study. Melbourne Decision Making Scale (MDMS) is composed of two parts. Part I is aimed to determine self-esteem in decision making. The scale involves 6 items, 3 of which are scored normally while the rest 3 are scored reversely. Scores given to the items are 2 points for the answer “true”, 1 for “sometimes true” and 0 for “not true”. Maximum score of the scale is 12 points. Higher scores represent higher selfesteem in decision making. Part II includes 22 items and measures the decision making styles divided into 4 sub-factors, CDMS, ADMS, PoDMS and PaDMS (Mann et al, 1998; Deniz, 2004).

1. CDMS is the situation where individuals search meticulously for related knowledge before making a decision and make choice after evaluating alternatives carefully.This factor is expressed through 6 items (Akbulut, 2012; Andersson, 2003; Burnett,1991; Çetin, 2009; Diniz, 2005; Gacar, 2011).

2. ADMS is the situation when individuals avoid from making a decision by tending to leave other people the last words and end decisions and taking over the responsibility to others.This factor is expressed through 6 items (Alpugan et al, 1997; Deniz, 2004; Deniz, 2004; Ersever, 1996; Gürçay, 2001; Karasar, 1994).

3. PoDMS is the situation when people continuously try to put off the decision without presenting a valid reason, which is expressed through 5 items (Avşaroglu, 2007; Candangil, 2005; Deniz, 2006; Hartmann, 1988; Mann et al, 1998).

4. PaDMS represents a condition when people may perform unconscious and hurrying attitudes in order to reach quick solutions due to the stress feeling related to time. This factor is expressed through 5 items (Adair 2000; Egesoy et al, 1999; Erten, 2007; Kıoumourtzoglou et al, 1998; Mc Pherson, 1999).

Confidence of MDMS I-II was calculated for each part by (Deniz, 2004) using the methods of the repetition of the test and inner consistency. In the test repetition method, MDMS I and II were applied 2 times to 56 universitystudents in a 3 – week interval and confidence coefficients found from subscales in test repetition method were calculated to range from r=.68 to r=.87. In the calculation of inner consistency, Deniz (2004) analysed the items and as the result of the analysis, 26 of totally 28 items taking place in the scales were found to have a total item correlation above 33 while other two had a total correlation of 26 and 27. Inner consistency coefficients of MDMS I-II applied to 154 university students were found to be 72, 80, 78, 65 and 71 for self-esteem in decision making, CDMS, ADMS, PoDMS and PaDMS, respectively (Deniz, 2004). Data analysis was carried out using SPSS 16.0 software package. In the analysis, t test was used to compare two independent variables while ANOVA variance analysis was used for more than two variables. Difference between the views of the groups was determined at the significance level of P:0.05.

Results

This part gives the results of the study and comments on them. Table 1 represents the frequency distributions of participants' demographic characteristics.t test was used to compare the variables of gender and being national athlete with the values obtained from the subscales of selfesteem and decision making styles and statistical results are given in Table 2 and 5 while ANNOVA variance analysis test was used to make comparison between the variables of gender, birth place and sport age and the values obtained from the subscales of selfesteem and decision making styles and statistical results are given in Table 3,4and 6.

Table 1. Demographic characteristics of participants

		N	%
Gender	**Female**	89	27.4
	Male	236	72.6
	Total	325	100.0
Age	**10 to 13 years**	61	18.8
	14 to 17 years	130	40.0
	18 to 21 years	54	16.6
	22 to 25 years	80	24.6
Birth place	**Province**	115	35.4
	District	59	18.2
	Grand Municipality	151	46.5
Are you a national athlete?	**Yes**	56	17.2
	No	269	82.8
How long have you been busy with sports?	**1 year and below**	132	40.6
	2 to 3 years	66	20.3
	4 to 5 years	39	12.0
	6 years and above	88	27.1

Table 2. t values ofthe differences between the means and standard deviations and means of scores female and male participants received from selfesteem and decision making styles scale

Self – esteem/ Decision Making Styles	Gender	N	Ẋ	SD	t	p
Self – esteem	**Female**	89	6.64	1.632	3.320	**.014**
	Male	236	6.00	1.490	3.186	
CDM	**Female**	89	3.94	2.651	1.829	.130
	Male	236	3.37	2.428	1.757	
ADM	**Female**	89	8.08	2.831	1.019	.512
	Male	236	7.75	2.585	.978	
PoDM	**Female**	89	6.95	2.349	-.558	.313
	Male	236	7.19	3.709	-.679	
PaDM	**Female**	89	6.87	3.973	1.065	.907
	Male	236	6.49	2.387	.857	

Statistically significant differences were found between male and female participants in the mean scores they received from selfesteem scale at significance level of P.0.05. Mean scores female participants received were seen to be higher than those male participants got.

Statistically significant differences were not found between the scores male and females received decision making subscales at the significance level of P.0.05.

Table 3. Mean and SD of scores participants in different age groups received from selfesteem and decision making styles

Self – esteem/ Decision Making Styles	Age		N	Ẋ	SD	F	P	Dif.
Self – esteem	**10 to 13 years**		61	6.29	1.563	.417	.741	
	14 to 17 years		130	6.19	1.525			
	18 to 21 years		54	5.98	1.721			
	22 to 25 years		80	6.21	1.490			
	Total		325	6.18	1.553			
CDM	**10 to 13 years**		61	3.42	2.020	2.478	.061	
	14 to 17 years		130	3.91	2.471			
	18 to 21 years		54	3.57	2.522			
	22 to 25 years		80	2.96	2.776			
	Total		325	3.53	2.499			
	10 to 13		61	7.85	2.488	.860	.462	

ADM	**years**							
	14 to 17 years		130	7.61	2.723			
	18 to 21 years		54	8.29	2.360			
	22 to 25 years		80	7.91	2.851			
	Total		325	7.84	2.654			
PoDM	**10 to 13 years**		61	8.26	5.974	2.981	**.032**	**1 to 2.3.4**
	14 to 17 years		130	6.77	2.534			
	18 to 21 years		54	6.79	2.031			
	22 to 25 years		80	7.05	2.343			
	Total		325	7.12	3.390			
PaDM	**10 to 13 years**		61	6.29	1.563	4.248	**.006**	**4 to 1.2.3**
	14 to 17 years		130	6.19	1.525			
	18 to 21 years		54	5.98	1.721			
	22 to 25 years		80	6.21	1.490			
	Total		325	6.18	1.553			

There is no statistically significant difference between mean scores participants in different age groups received from selfesteem scale at the significance level of P.0.05.

It can be seen when considered the mean scores the participants in different age groups received from the subscales of decision making styles that there is statistically no difference between CDMS and ADMS at the significance level of P.0.05. However, significant

difference was found to be between PoDMS and PaDMS at P.0.05 significance level. Mean PoDMS scores the participants in 10 to 13 age group received were found to be higher than others while for PaDMS, 22 to 25 age group received lower mean scores than that of 10 to 13 age group, but higher than 14 to 17 and 18 to 21 age groups.

Table 4. Means and standard deviations of the scores the participants with different birth places received from self-esteem and DMSS

Self – esteem/ Decision Making Styles	**Birth place**	**N**	**Ẋ**	**SD**	**F**	**P**	**Diff.**
Self esteem	**Province**	115	5.89	1.471	3.055	**.019**	**1-3**
	District	59	6.32	1.675			
	Grand	151	6.34	1.545			

	Municipality						
	Total	325	6.18	1.553			
CDM	**Province**	115	3.64	2.524	.190	.827	
	District	59	3.42	2.561			
	Grand Municipality	151	3.49	2.470			
	Total	325	3.53	2.499			
ADM	**Province**	115	7.66	2.481	1.106	.332	
	District	59	7.60	2.420			
	Grand Municipality	151	8.07	2.857			
	Total	325	7.84	2.654			
PoDM	**Province**	115	7.41	4.684	1.351	.260	
	District	59	7.40	1.975			
	Grand Municipality	151	6.79	2.535			
	Total	325	7.12	3.390			
PaDM	**Province**	115	6.50	2.359	.411	.663	
	District	59	6.38	2.149			
	Grand Municipality	151	6.74	3.491			
	Total	325	6.59	2.907			

There is a statistically significant difference between the mean scores the participants received from selfesteem scale and their birth places at the significance level of P.0.05.

It can be observed that participants born in the border of a province had lower scores of selfesteem than those in a grand municipality area. It is seen when the mean scores the participants with different birth place received from the subscale of DMS are considered that there are no significant differences at P.0.05 level.

Table 5. t values ofthe differences between the means and standard deviations and means of scores the participants received from selfesteem and decision making styles scale for being national athlete

Self – esteem/ DMS	**Are you a national athlete ?**	**N**	**Ẋ**	**SD**	**t**	**p**
Self-esteem	**Yes**	56	5.85	1.710	-1.722	.954
	No	269	6.24	1.514	-1.590	
CDM	**Yes**	56	3.08	2.524	-1.460	.975
	No	269	3.62	2.489	-1.447	

ADM	**Yes**	56	8.76	2.358	2.891	.691
	No	269	7.65	2.676	3.140	
PoDM	**Yes**	56	7.83	2.121	1.736	.363
	No	269	6.97	3.583	2.407	
PaDM	**Yes**	56	7.96	4.584	3.955	.598
	No	269	6.31	2.330	2.627	

It was seen that there is no statistically significant difference between selfesteem and DMS for being a national athlete at significant level of P.0.05.

Table 6. Means and standard deviations of the scores the participants with different sport ages received from self-esteem and DMSS

Self – esteem/ DMS	**Length of the time participants perform sports**	**N**	**X**	**SD**	**F**	**P**	**Diff.**
Self-esteem	**1 year and shorter**	132	6.48	1.788	3.068	**.011**	**1-2**
	2 to 3 years	66	5.89	1.530			
	4 to 5 years	39	6.12	1.080			
	6 years and longer	88	5.96	1.290			
	Total	325	6.18	1.553			
CDM	**6 months and below**	132	3.85	2.583	4.834	**.001**	**4 to 1.2.3**
	2 to 3 years	66	3.80	2.667			
	4 to 5 years	39	3.89	2.613			
	6 years and above	88	2.68	1.980			
	Total	325	3.53	2.499			
ADM	**1 year and below**	132	7.86	2.479	.424	.736	
	2 to 3 years	66	7.83	2.527			
	4 to 5 years	39	7.43	3.093			
	6 years and above	88	8.01	2.814			
	Total	325	7.84	2.654			
PoDM	**1 year and below**	132	7.15	4.425	.459	.711	
	2 to 3 years	66	6.74	2.463			
	4 to 5 years	39	7.07	2.659			
	6 years and above	88	7.38	2.346			
	Total	32	7.12	3.390			

		5					
PaDM	**1 year and below**	132	6.60	3.487	.872	.456	
	2 to 3 years	66	6.34	2.563			
	4 to 5 years	39	6.17	2.511			
	6 years and above	88	6.95	2.288			
	Total	325	6.59	2.907			

There is a statistically significant difference between the scores the participants at different sport age received from selfesteem scale at significance level of P.0.05. Mean scores of the athletes for 1 year and shorter were found to be higher than those for 2 to 3 years.

It was stated when mean scores of the participants with different sport ages and DMS were evaluated that there is a statistically significant difference in CDMS at the significance level of P.0.05. It was seen that mean scores the participants performing sports for 6 years and longer received are lower than those for 1 year and shorter, 2 to 3 yearsand 4 to 5 years.It was found that there is no statistically significant difference between the subscales of ADM, PoDM and PaDM at P.0.05 significance level.

Discussion and Conclusion

It was determined that the difference between gender and selfesteem level in making decision is significant. It was seen that mean scores of females are higher than that males received. No statistically significant difference was found between female and male individuals' subscale of decision making styles.

Avşaroğlu, (2007) stated that statistically significant difference was found between students' gender and mean score of selfesteem in decision making. Such a result is convenient with the present study and similar results were determined in the present study in that there is no statistically significant difference between the subscales of decision making styles. Similar results were obtained in the study of Özcan (2007) on the determination of selfesteem and stress levels in decision making according to some individual characteristics of high school students with different control centre. The results of Tozoğlu (2013) revealed similarities with the present study by determining that there is no significant difference between gender and selfesteem levels among police staff (Tozoğlu et al, 2014). Ersever (1996) conducted an experimental study to determine the effects of decision making skills program on decision making styles of university students (Ersever, 1996). In the respect of the gender, it was determined that inner response decision style was used more frequently by male than female. It was also determined that students with lower selfesteem levels use more inner response and instability styles than those with higher level of self-esteem who use reasonable decision making styles. Güçray (2001) determined the relationships between selfesteem, problem solving skills and some variables in the decision making process of adolescent (Güçray, 2001). As the result of the study, males were found to have significantly higher self-esteem levels in decision making than females.

It was seen when the mean scores males and females received for the subscales of decision making styles were taken into consideration that there was no statistically significant difference between them at the significance level of P.0.05.

Statistically no significant difference was found between the means of the scores participants at different ages received from selfesteem scale.

It was seen when the mean scores individuals received for the subscales of decision making styles were taken into consideration that there was no statistically significant difference between CDM and ADM. However, statistically significant differences were determined between PoDM and PaDM styles. It was found that mean PoDMS scores of the individuals in 10-13 age group were higher than other age groups. In PaDMS, mean scores of the individuals in 22-25 age group were lower than those in 10-13 age group and higher than those in 14-17 and 18-21 age groups.It was stated in Tozoğlu et al (2014), where the effects of sportive activity on the disabled's selfesteem were evaluated thatthere are significant differences between age groups. It was found in Tiryaki (1997) that the decision making skills increases with the increasing age and such a result is convenient with that found in the present study. Burnett (1991) stated that there is a true relationship between CDMS and selfesteem. Gacar (2011) determined that PaDM differed significantly, which is also supported by (Uzunoğlu, 2008 and Titrek, 2013). Erten (2007) also stated that as the age increases decision making skills matures.

It was found in the present study that there is a statistically significant difference between birth place and mean scores taken from selfesteem scale, which is lower among the individuals born in province than those born in grand municipality. It is seen when mean scores the individuals born in different places received from subscales of decision making styles are evaluated that there is no statistically significant difference between them. Tatlılıoğlu (2010) stated that PaDMS is significantly different among university students for their living areas and the mean PaDM scores of the students spending most of their life in district, province and grand municipality are significantly higher than that of those who spend most of their life in village and town.

Mean scores of selfesteem and DMS subscales national athletes received were found not to be significantly different. Kioumourtzoglou et al (1998) found in their study that there is statistically no difference in decision making time and the skills of making true decision between Greek National Waterball team and basketball students at physical education department. Egesoy et al (1999) stated in their study carried out on football players that there is statistically no difference between professional and amateur footballers in true and rapid decision making skills. Such results are in convenience with the results found in the present study. However, the results in Mc Pherson (1999) are in contrast to the results found in the present study. The author of the mentioned study tested the decision making processes during a match and reported that elite and champion table tennis players and new players showed different decision making levels and elite table tennis players were found to have better decision making skills (Akbulut, 2012). Çetin (2009) stated that t value calculated based on mean scores the students received from CDMS, ADMS and PoDMSwas not significant at 0.05 significance level.

According to the study, significant differences were found between the mean scores individuals at different ages received from selfesteem scale. It can be seen that mean scores of individuals busy with sports for 1 year and less (six months) are higher than those busy for 2-

3 years. Tozoğlu et al (2014) concluded in a study where the effect of sportive activity performance on the disabled's selfesteem was evaluated that there is significant difference between the time periods of the disabled.

When considered the DMS subscale scores of the participants at different sports age were evaluated it was seen that CDMS showed significant differences at the level of P.0.05. It was also seen that mean scores of the individuals busy with sport for 6 years are lower than those for less than 1 year, 2 to 3 years and 4 to 5 years. It was found that there is no significant difference between the styles of ADM, PoDM and PaDM at P.0.05 level. Deniz (2004) stated that there is a true and significant relationship between the selfesteem in decision making and attention scores of university students. Mann et al (1998) found that there is a significant relationship between self-esteem in decision making and CDMS. Such a result supports the results in Avsaraoglu (2008) and the present study. Akbulut (2012) stated that overall scores of DMS and its subscales of self-esteem and CDM are significantly higher among amateur footballers than professionals (Akbulut, 2012). Deniz (2006) stated that individuals with high self-esteem can often be satisfied with their life. A true relationship was found to exist between problem focused overcoming style among the stress overcoming styles and self-esteem in decision making and careful decision making while a significant negative relationship was observed between ADMS, PoDMS and PaDMS Akbulut (2012).

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