

# Identification of decision-making skills of the high school students participating in school sports activities

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## Abstract

The aim of this study is to identify the decision-making skills of the high school students participating in school sports activities. The sample of the study consisted of 221 (n=96 girls and n=125 boys) volunteer students studying in 4 different high schools affiliated to Kırıkkale Provincial Directorate of National Education in 2017-2018 academic year. The students participating in the study were divided into 3 different age groups. 49.3% (n=109) of the students are in the 14-15 age group, 35.7% (n=79) are in the 16-17 age group and 14.9% (n= 33) are in the 18-19 age group. "Melbourne Decision-Making Questionnaire" which was developed by Mann, Burnett, Radford and Ford (16) and whose validity and reliability in Turkish were carried out by Deniz (9) was used in the identification of decision-making skills of the students. The data obtained from the questionnaire were evaluated in SPSS 22.0 package program at 95% confidence interval and 0.05 significance level. In this study, the effect of two or more independent variables on more than one dependent variable was determined by two-way MANOVA analysis. In the statistical analyses, it was found that there was no interaction between the dependent variables ( $F_{(15, 577,36)}=.86, p>0.05$ ) and there was a statistically significant difference between the self-confidence, which is one of the sub-dimensions of the decision-making, and grade variable ( $F_{(3,213)}=2.85, p<.05$ ). In addition, it was determined that there was a statistically significant difference between the self confidence and team or individual sport variable ( $F_{(1,213)}=7.18, p<.05$ ). According to the findings obtained from the study, it was concluded that the highest mean value obtained from the decision-making styles of the students who participated in the school sports activities belonged to Part I "self-confidence", and also the self-confidence of the 12th grade students was higher than the 9th grade students. Another result obtained from the study is that the students who are interested in team sports have higher self-confidence than the students who are interested in individual sports. As a result of the evaluation, the fact that the students participating in the study adopted the style "Self-Esteem (Self-Confidence) in Decision-Making" at the most supports the hypothesis of this study.

**Keywords:** decision-making, high school student, school sports activities

## INTRODUCTION

It takes a certain period for individuals coming into the world to become independent in terms of sustaining their lives and fulfilling the tasks required in human life. This process is important for individuals to acquire different behaviors (21). The best thing that individuals can do for themselves is to make a decision based on the most appropriate options for the possible problems in their lives provided that they renew their knowledge and experience (1).

After the social structure is shaped by the democratic life, the necessity to make a choice for the individuals arises (17). The individuals who

have to choose the option that they believe to be the most accurate have uncertainty in most issues throughout their lives and they seek solutions to their problems in this uncertainty (13). There are many definitions in the literature about this choice process called decision-making. Kalaycı (11) defines the decision-making as the process of choosing inevitably the most ideal alternative among the existing alternatives according to the course of the events happening to the individuals. The reaction style that the individuals show in the process of decision-making and that becomes a habit is called as decision-making style (24).

The role of individual factors in the decision-making abilities of the individuals is high. As the options increase, the difficulty in making decisions increases proportionally (9). The level of education, the profession and the preferred work affect our lives to a great extent (6). Individuals solve their problems effectively thanks to the knowledge, skills and experiences they have (4). Decision-making ability, as in many areas of life, has an important place in sports (18). The decision-making abilities of sportspeople in sports competitions may affect the process positively or negatively. The wrong decisions of the sportspeople at the wrong time may change the outcome of the competition. Professional sportspeople can easily overcome the problems thanks to their experience and quick decision-making abilities (15).

In the literature review, it is seen that there are some studies related to decision-making abilities

## MATERIAL & METHOD

### Participants

The sample of the study consisted of 221 (n=96 girls and n=125 boys) volunteer students who studied in 4 different high schools affiliated to Kırıkkale Provincial Directorate of National Education in 2017-2018 academic year, and who participated in school sports activities in the branches such as football, volleyball, basketball, handball, swimming, badminton, and whose ages ranged between 14-19.

### Data Collection Tools

Melbourne Decision Making Questionnaire I-II was used to determine the decision-making abilities of the students participating in the study. Melbourne Decision Making Questionnaire (MDMQ) whose original was developed by Mann et al. (16) was adapted into Turkish and its validity and reliability was carried out by Deniz (9). MDMQ is divided into two parts.

**Part I:** This part aims to determine the self-esteem (self-confidence) in decision-making. It consists of six items and three items are scored in positive direction and three items are scored in reverse direction. Scoring is done by the answers given to the items. It is 2 points for "True", 1 point for "Sometimes True", and 0 point for "Not True". The maximum score that can be obtained from the Questionnaire is 12. High scores indicate high self-esteem in decision-making (14).

and styles on different people who are present in sports community or not (12). A significant difference was found between self-esteem and careful decision-making styles (vigilance) in the study conducted by Akpınar et al. (2) to determine the decision-making levels of hockey sportspeople studying at the university. In a study conducted by Halim et al. (10) to determine the self-esteem and decision-making styles of the pre-service teachers in the process of decision-making, it was found that pre-service teachers had a higher score in the self-confidence sub-dimension of decision-making.

As a result, the ability of decision-making is an important factor for the personal development of the individuals. Therefore, the high self-esteem and decision-making styles of the sportspeople in decision-making will positively affect their careers and personalities (23).

**Part II:** It consists of 22 items and measures decision-making styles. It has four sub-factors (9).

**Factor 1: Vigilance:** It is the state in which individuals search for the necessary information meticulously before making a decision and make a choice after evaluating the alternatives carefully. This factor was expressed in six items (2, 4, 6, 8, 12, 16).

**Factor 2: Buck-passing:** It is the state in which individuals refrain from making a decision and tend to leave the decision to others and thus try to avoid making a decision by giving this responsibility to somebody else. This factor was expressed in six items (3, 9, 11, 14, 17, 19).

**Factor 3: Procrastination:** It is the state in which individuals permanently sidestep, postpone and delay making a decision without a valid reason. This factor was expressed in five items (5, 7, 10, 18, 21).

**Factor 4: Hyper vigilance:** It is the state in which individuals feel under pressure of time and thus exhibit hasty behaviors and try to reach quick solutions when they have to make a decision. This factor was expressed in five items (1, 13, 15, 20, 22) (3).

In the scoring of MDMQ II, vigilance is evaluated with the score range 0-12, buck-passing is evaluated with the score range 0-12, procrastination is evaluated with the score range 0-10 and hyper vigilance is evaluated with the score range 0-10. This questionnaire is also answered as MDMQ I. The

high scores indicate that the decision-making style is used (9).

It was found in the questionnaire that internal consistency reliability coefficient (cronbach alpha) of self-esteem in decision-making of Physical Education and Sports Teachers was 0.74, and 0.76 for decision-making styles (cronbach alpha).

### Statistical Analysis of Data

Two-way MANOVA analysis was used in the study. This statistical method was preferred because of the existence of two independent variables and more than one dependent variable (19).

## RESULTS

**Table 1.** Frequency Distribution of Participants According to Gender and Age

Age group	Gender				Total	
	Female		Male		N	%
	N	%	N	%		
14-15 age	44	45.8	65	52.0	109	49.3
16-17 age	33	34.4	46	36.8	79	35.7
18-19 age	19	19.8	14	11.2	33	14.9
<b>Total</b>	<b>96</b>	<b>100</b>	<b>125</b>	<b>100</b>	<b>221</b>	<b>100</b>

In Table 1, 49.3% (n=109) of the students who participated in the study are in the 14-15 age group, 35.7% (n=79) in the 16-17 age group and 14.9% (n=33) in the 18-19 age group. 45.8% (n=44) of the female students are in the 14-15 age group,

34.4% (n=33) in the 16-17 age group and 19.8% (n=19) in the 18-19 age group. 52.0% (n=65) of the male students are in the 14-15 age group, 36.8% (n=46) in the 16-17 age group and 11.2% (n=14) in the 18-19 age group.

**Table 2.** Mean Values Concerning the Decision Abilities of the Participants

Sub-dimensions	Class	Team & Individual	Mean	Sd	N
Confidence	9	Team	5.36	1.38	25
		Individual	5.05	1.32	20
		<b>Total</b>	<b>5.22</b>	<b>1.35</b>	<b>45</b>
	10	Team	5.76	1.16	37
		Individual	5.00	1.11	30
		<b>Total</b>	<b>5.42</b>	<b>1.20</b>	<b>67</b>
	11	Team	5.85	1.48	41
		Individual	5.47	1.66	30
		<b>Total</b>	<b>5.69</b>	<b>1.55</b>	<b>71</b>
	12	Team	6.33	1.85	21
		Individual	5.71	.77	17
		<b>Total</b>	<b>6.05</b>	<b>1.49</b>	<b>38</b>
	<b>Total</b>	Team	5.81	1.46	124
		Individual	5.28	1.31	97
		<b>Total</b>	<b>5.57</b>	<b>1.42</b>	<b>221</b>
Careful decision-making	9	Team	9.36	2.27	25
		Individual	8.95	2.46	20
		<b>Total</b>	<b>9.18</b>	<b>2.34</b>	<b>45</b>
	10	Team	9.49	2.63	37
		Individual	9.10	2.20	30

		<b>Total</b>	<b>9.31</b>	<b>2.44</b>	<b>67</b>
		Team	10.02	1.98	41
	11	Individual	9.10	1.81	30
		<b>Total</b>	<b>9.63</b>	<b>1.95</b>	<b>71</b>
		Team	9.48	2.14	21
	12	Individual	10.06	1.39	17
		<b>Total</b>	<b>9.74</b>	<b>1.84</b>	<b>38</b>
		Team	9.64	2.26	124
	<b>Total</b>	Individual	9.24	2.03	97
		<b>Total</b>	<b>9.46</b>	<b>2.17</b>	<b>221</b>
		Team	4.32	2.27	25
	9	Individual	3.30	1.81	20
		<b>Total</b>	<b>3.87</b>	<b>2.12</b>	<b>45</b>
		Team	3.24	2.43	37
	10	Individual	3.93	2.69	30
		<b>Total</b>	<b>3.55</b>	<b>2.55</b>	<b>67</b>
		Team	4.07	2.38	41
	11	Individual	3.33	1.88	30
		<b>Total</b>	<b>3.76</b>	<b>2.20</b>	<b>71</b>
		Team	3.48	3.17	21
	12	Individual	2.59	2.12	17
		<b>Total</b>	<b>3.08</b>	<b>2.75</b>	<b>38</b>
		Team	3.77	2.53	124
	<b>Total</b>	Individual	3.38	2.21	97
		<b>Total</b>	<b>3.60</b>	<b>2.40</b>	<b>221</b>
		Team	3.68	2.23	25
	9	Individual	2.85	2.18	20
		<b>Total</b>	<b>3.31</b>	<b>2.22</b>	<b>45</b>
		Team	3.19	2.72	37
	10	Individual	3.60	2.85	30
		<b>Total</b>	<b>3.37</b>	<b>2.76</b>	<b>67</b>
		Team	3.59	2.11	41
	11	Individual	3.30	2.25	30
		<b>Total</b>	<b>3.46</b>	<b>2.16</b>	<b>71</b>
		Team	3.29	2.80	21
	12	Individual	2.18	2.04	17
		<b>Total</b>	<b>2.79</b>	<b>2.52</b>	<b>38</b>
		Team	3.44	2.43	124
	<b>Total</b>	Individual	3.10	2.42	97
		<b>Total</b>	<b>3.29</b>	<b>2.42</b>	<b>221</b>
		Team	4.68	2.61	25
	9	Individual	3.95	2.26	20
		<b>Total</b>	<b>4.36</b>	<b>2.46</b>	<b>45</b>
		Team	3.49	2.43	37
	10	Individual	4.23	2.05	30
		<b>Total</b>	<b>3.82</b>	<b>2.28</b>	<b>67</b>
		Team	4.29	2.28	41
	11	Individual	3.80	1.95	30
		<b>Total</b>	<b>4.08</b>	<b>2.15</b>	<b>71</b>
	12	Team	4.05	2.77	21

	Individual	3.06	2.16	17
	<b>Total</b>	<b>3.61</b>	<b>2.53</b>	<b>38</b>
<b>Total</b>	Team	4.09	2.49	124
	Individual	3.84	2.09	97
	<b>Total</b>	<b>3.98</b>	<b>2.32</b>	<b>221</b>

It was controlled multidimensional statistics whether or not the dependent variables were interacting in itself, and it was determined that

there was no interaction ( $F_{(15, 577,36)} = .86, p > .05$ ). The main effects were examined due to the lack of multiple interactions.

**Table 3. Main Effects**

	Dependent variable	Df	Mean Square	F	p
<b>Class</b>	<b>Confidence</b>	<b>3</b>	<b>5.45</b>	<b>2.85</b>	<b>.04</b>
	Careful decision-making	3	3.36	.72	.54
	Avoiding decision-making	3	4.89	.86	.46
	Delaying decision-making	3	4.67	.79	.50
	Panic decision-making	3	4.33	.81	.49
<b>Team &amp; Individual</b>	<b>Confidence</b>	<b>1</b>	<b>13.77</b>	<b>7.18</b>	<b>.01</b>
	Careful decision-making	1	4.12	.88	.35
	Avoiding decision-making	1	12.19	2.14	.15
	Delaying decision-making	1	10.46	1.77	.19
	Panic decision-making	1	6.82	1.27	.26
<b>Error</b>	<b>Confidence</b>	<b>213</b>	<b>1.92</b>		
	Careful decision-making	213	4.71		
	Avoiding decision-making	213	5.69		
	Delaying decision-making	213	5.91		
	Panic decision-making	213	5.36		
<b>Total</b>	<b>Confidence</b>	<b>221</b>			
	Careful decision-making	221			
	Avoiding decision-making	221			
	Delaying decision-making	221			
	Panic decision-making	221			

According to Table 3, it was found that there was a statistically significant difference between self-confidence, which is one of the sub-dimensions of decision-making, and grade variable ( $F_{(3, 213)} = 2.85, p < .05$ ). The Bonferonni follow-up test was used to determine where the significant difference was derived from. According to the findings, the self-confidence of the 12th grade students was found to be significantly higher than the 9th grade students.

In addition, it was found that there was a statistically significant difference between self-confidence, which is one of the sub-dimensions of decision-making, and team or individual sport variable ( $F_{(1, 213)} = 7.18, p < .05$ ). According to the Bonferonni follow-up test, the self-confidence of the sportspeople interested in team sports was found to be significantly higher than the sports people interested in individual sports.

## DISCUSSION AND CONCLUSION

The findings of the study support the hypothesis of this study. As a result of the study, a statistically significant difference was found between the self-confidence, which is one of the sub-dimensions of decision-making, and the grade variable. The highest mean value obtained from

decision-making styles was obtained from the sub-dimension "self-confidence". In accordance with the findings, the self-confidence of the 12th grade students was found to be significantly higher than the 9th grade students. This situation can be considered as individuals are self-confident as a

result of the experience and knowledge they gained. It can be concluded that 12th grade students become aware of their abilities as a result of their experience and therefore, their self-esteem is high. Besides, it was found that there was a statistically significant difference between the self-confidence, which is one of the sub-dimensions of decision-making, and team or individual sport variable. The self-confidence of the sportspeople interested in team sports was found to be significantly higher than the sportspeople interested in individual sports. Collaboration in team sports is more than individual sports. Therefore, it can be deduced that it is inevitable that individuals who are interested in team sports will show more success in their self-confidence level because their communication skills and socialization will be more intense.

When the literature is examined, we have seen different studies supporting this study. It was deduced from the study of Avşaroğlu (5) conducted on university students that self-confidence "self-esteem" mean scores differed significantly depending on the grade variable, and there was no significant difference in the mean scores of decision making styles. The studies of Taşgıt (20), Akpınar et al. (2) and Uğur (23) support our study.

The individuals who strive to reach new information continuously in order to improve themselves in self-recognition stage are the individuals with high self-confidence while making a decision. The self-confidence of the individual positively affects the level of self-esteem in every decision-making moment (8).

In the study of Birol and İnce (7), it was concluded that 4th grade students were more self-confident than other grade students in the "self

confidence" dimension of decision-making depending on the grade variable. This result has parallels with our study. According to the result drawn between the relationships of the other grades, while the 1st grade students delay making a decision, 4th grade students feel panic while making a decision, and this situation has no parallel with our study.

In a study conducted by Temel et al. (22), no significant difference was found depending on the age variable.

In accordance with the findings obtained from other studies, similar results were achieved as well as different results. The reason for the difference in

the findings of the study can be interpreted as the sample varies depending on the sample is limited to a broader or narrower population. This study is important as an example for future studies.

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