

# An investigation of the attitudes of students studying in the field of sports sciences towards future expectations and brain migration

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# ABSTRACT

This study aims to determine the future expectation of university students studying in the field of sports sciences and to examine how it affects their attitudes toward brain migration. The "Brain Migration Scale". developed by Öncü et al. (2018), was used to evaluate the attitude toward brain migration, and the "Future Expectation Scale", developed by Şimşek (2012), was used to measure the future expectation of the students. The approval of the ethics committee was obtained for the study. This program data was collected by applying Sports in different universities with Sports Management program in Istanbul. 299 students responded to the survey questions via the google form link. The data were analyzed with SPSS 25.0 package program. It was determined that the data showed normal distribution. Multiple regression analysis and Pearson Product-Moment correlation tests were applied to the research data. According to the results of the research, it was found that there are significant and positive relationships between the participants' attitudes towards brain migration and their personal and professional future expectations, educational, economic, and total future expectations. On the other hand, it has been determined that there is no significant relationship between students' attitudes toward brain migration and their expectations for a social future. When looking at the impact force, it was seen that students' economic future expectation was more effective in predicting the attitude toward brain migration than their future expectation of education. In this context, it is important to ensure economic stability and improve working conditions in our country.

Keywords: Brain migration, sports, students, future expectations.

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## INTRODUCTION

Just as the needs of society grow, develop and change over time, the needs of the individual who created this society also change according to this development. Individuals feel the need to constantly renew themselves to adapt to the society in which she exists. Since it is known that competition and success are at the forefront of a good economic life, in industrial societies, especially young people should be qualified, knowledgeable and skilled people to reach their expectations. Therefore, young people, who have to adapt to a sophisticated lifestyle in the face of rapidly changing technological and scientific developments, should make well-accessible plans for the future, which turn into even more detailed expectations, especially after adolescence, to comply with this complex order (Güleri, 1994; Şimşek, 2012).

The expectation of the future is a mental symbol that contains people's opinions about the future, as well as their anxieties, and it has an important place in making these decisions because it provides a serious motivation for decisions to be taken about the future (Nurmi, 1991). Knowing the expectations or anxieties of the young population, which is one of the most valuable dynamics of a country for the future, is extremely important in preparing a better future for the youth. Especially, young people at the university level take their anxieties and expectations into account when planning their future. Moreover, examining the factors that determine the life satisfaction and expectations of university youth gain more importance with the increase in the number of students in universities in our country (Zengin and Şengel, 2020; Korkmaz et al., 2018). Despite the importance given to education in Turkey, the tendency of high-guality students who have completed university education to migrate abroad continues to increase. Reasons such as unemployment rates in Turkey, insufficient salaries in existing business lines, limited academic and physical conditions, higher living standards abroad and better wages trigger the trend of brain migration (Yılmaz, 2019).

In addition to the desire to lead a more comfortable and peaceful life, the person's preference to go to a place where he thinks he can make good use of his education and intellectual capital is among the other factors that support brain migration (Ulusoy, 2020). With the acceleration of globalization, the improvement of living standards, the development of technology and the increase in transportation opportunities, many developed countries wanted to attract qualified and educated people from underdeveloped or developing countries by offering opportunities in many fields from science to art, education to sports (Yılmaz, 2019). Developed countries, especially the USA, have always contributed to their education by offering all the conditions to qualified students (Cansız, 2006).

Although the concept of "brain migration", defined as the migration of people with higher education or qualified in their profession who have a high ability to produce and research to work or settle in developed countries, is a great advantage for the country receiving immigration, it is a great loss for the country that is giving migration. This means that the shortage of qualified manpower in underdeveloped countries will continue in the future (Atılgan, 1986).

Although low wages in our country are shown as the most important reason for brain migration, it is seen that low wages are not the most important reason but there are other factors as well. The most important of these factors is the opportunity for "better advancement in the profession" abroad (Güngör and Tansel, 2009). On the other hand, income levels were influential in their decision not to return to their country of origin. In support of this idea, Karataş and Ayyıldız (2021) stated that migration abroad has increased significantly. In terms of today's conditions, approaching the phenomenon of brain migration from a different perspective, the development of communication and the globalization of the world make it inevitable for students to make choices (Erdoğan, 2003). Our national athlete Halil Mutlu, who emigrated as

a natural result of globalization, is the most concrete example of this. Halil Mutlu experienced many difficulties after immigrating to our country and overcame it with sports. He did not return to his country due to the place he acquired and due to economic concerns (Temel et al. 2021). Determining the factors that positively or negatively affect the attitudes related to brain migration will provide efficiency in the management of possible problems in the decision-making processes of students studying in the field of sports sciences. The relations that have developed as a result of our country's transition from the economic bottleneck and the increase in the understanding of globalization, together with the ease of following the opportunities in economically developed countries, may cause high-skilled sports people to search for different ones. Migration is a critical element that threatens the sustainability and quality of understanding of competition in the field of sports sciences. However, no study has been found in our country, especially in the sports sciences, on brain migration and its expectations. Therefore, this emphasizes the importance of the study when the limitations and expansion of the study are evaluated. Determining the tendencies and attitudes toward the brain migration of students studying in sports sciences will lead to the development of academic studies and practices in the field.

In this study, the main starting point of our study was to contribute to the understanding of this relationship in an academic context by examining the relationship between the future expectations of the students studying in the field of sports sciences and their attitudes towards brain migration.

The questions within the scope of the research, which are thought to contribute to the literature, are as follows:

Q1: What are the attitudes and future expectations of students studying in the field of sports sciences toward brain migration?

Q2: Do the future expectations of students studying in the field of sports sciences significantly predict their attitudes toward brain migration?

### METHOD

### Research design

This research is in the relational survey model and offers a descriptive quality. The scanning model aims to describe a past or present situation as it is (Karasar, 2012).

### Study group

The sample consists of students studying at the faculty of sports sciences, the school of physical education and

sports and 2-year sports management programs located in Istanbul. A total of 299 students responded to our

survey. Information about the demographic characteristics of the students was given in Table 1.

		Ν	Kolmogorov-Smirnov
	Personal and professional future	299	.20
	Educational future	299	.27
Future expectation scale sub-dimensions	Economic future	299	.11
	Social future	299	.50
	Future expectation (All)	299	.33
	Brain migration	299	.07

 Table 1. Normality values for future expectation and brain migration scales.

## Data collection tool

### Brain migration scale

This scale was developed by Öncü et al. (2018) to evaluate the attitude toward brain migration. The scale was collected under 16 items and two components (driving and attractive factors). Each item included has a 5-Likert type of "I strongly disagree (1 point)", "I disagree", "neither agree nor disagree", "I agree", and "I completely agree (5 points)". Items 3 and 15 are encoded inversely. The lowest and highest scores on the scale are between 16 and 80. An increase in the score indicates an increased tendency to migrate. The Cronbach Alpha of the scale is .91 for the whole, and .88 and .86 for its subcomponents. In our study, Cronbach's alpha value of the scale was .90.

### Future expectation scale

Students' future expectations were determined using the "Future Expectation Scale" developed by Şimşek (2012). The scale is grouped under 4 sub-dimensions, that is, personal and professional future, educational future, economic future and social future, and consists of 33 items. The items are answered as "I Strongly Disagree (1)", "Slightly Agree", "Moderately", "Agree" and "Completely Agree (5)". In the evaluation of the answers given to the scale, "1 to 1.79 low; 1.80 to 2.59 below middle; 2.60 to 3.39 medium; 3.40 to 4.19 above middle; five different levels have been determined as "4.20 to 5.00 high". In our study, the internal consistency of Cronbach's alpha value of the scale was found as .962.

### Data collection and analysis

The data obtained in the research were analyzed with the SPSS 25.0 package program. It was determined that the

data showed normal distribution according to the Kolmogorov-Smirnov and Shapiro-Wilk test results. Multiple regression analysis and Pearson Product-Moment correlation tests were applied to the research data. In the evaluation of the data, the significance was accepted as p < 0.05. (Table 1)

### RESULTS

When the descriptive characteristics of the students are examined, it is seen that 51.2% are male, 48.8% are female, 28.4% are 21 years old, 86% are undergraduate students, 30.4% are in the 2nd grade, and it was determined that the income status of 68.2 of them was 2850 TL and below. Also, 45.8% of the students' mothers were primary school graduates, and 38.8% of the students' fathers were primary school graduates (Table 2).

Research question 1: How are the brain migration attitudes and future expectation levels of the students studying in the field of sports sciences?

The results of the research on the future expectations of the students studying in the field of sports sciences and their answers to the general "Brain Migration Scale" were given in Table 3.

It was determined that the attitudes of the students studying in the field of sports sciences toward brain migration were low (X = 28.17) and their future expectations were below the average (X = 2.55). The findings regarding the scores obtained by the students studying in the field of sports sciences from the lower dimensions of the future expectation scale were given in Table 4.

When the findings related to the sub-dimensions of the Future Expectation Scale were examined, it was found that the students studying in the field of sports sciences

Variables	Subvariables	n	%
Gender	Woman	146	48.8
Gender	Male	153	51.2
	19	35	11.7
	20	63	21.1
<b>A</b> ma	21	85	28.4
Age	22	36	12.0
	23	39	13.0
	24 and up	41	13.7
	Associate degree	42	14
Education status	License	257	86
	1st class	51	17.1
0	2nd grade	91	30.4
Class	3rd grade	87	29.1
	4th grade	70	23.4
	\$2.850 and under	204	68.2
Monthly income	2851 TL - 4600 TL	36	12.0
	\$4.651 and up	59	19.7
	Literate and author	49	16.4
	Primary	137	45.8
Mother education status	High school	49	16.4
	Associate degree and above	64	21.4
	Literate and author	47	15.7
Eath an advanting start	Primary	116	38.8
Father education status	High school	62	20.7
	Associate degree and above	74	24.7

Table 2. Descriptive properties of students (n = 299).

**Table 3.** Findings on future expectations and brain drain levels of the study participants.

	Ν	Min.	Max.	Ā	Ss	Skew	Pressure
Future Prospects	299	1.06	4.95	2.55	.83	.48	.05
Brain Drain	299	16.00	72.00	28.17	10.69	.83	.11

 Table 4. Findings on future expectation subdivisions.

	Ν	Min.	Max.	x	Ss	Skew	Pressure
Personal and professional future	299	1.00	5.00	3.77	1.08	93	09
Educational future	299	1.00	5.00	2.40	1.16	.59	55
Economic future	299	1.00	5.00	2.07	0.97	.83	.07
Social future	299	1.00	5.00	1.96	0.92	.99	.55

1 - 1.79 low; 1.80 - 2.59 below medium; 2.60 - 3.39 medium; 3.40 - 4.19 above the middle; 4.20 - 5.00 high.

were hopeful at a higher level (X = 3.77) in their expectations about their personal and professional future. On the other hand, it is understood that they are hopeless in their expectations about the social future at a level below the average (X = 1.96).

Research question 2: Do the future expectations of students studying in the field of sports sciences significantly predict their attitudes toward brain migration?

In order to see if the participants' attitudes towards brain migration predict their future expectations, the necessary statistical analysis was performed. Pearson Product Moment correlation coefficients were calculated to examine the relationship between the variables before the stepwise regression analysis was performed. When examining the correlation coefficients in multiple regression analysis, the point to be considered is that there are no high correlation coefficients among the predictive variables. According to Pallant (2005), the maximum correlation value between the variables should be 90; according to Büyüköztürk (2010), it should be 80 at most. The fact that the correlation coefficient is above these values indicates that there may be multicollinearity between these variables. The correlation coefficients showing the relationships between the variables were given in Table 5.

As seen in Table 5, there are significant and positive relationships between students' attitudes towards brain migration and their personal and professional future expectations (r = .386; p < .01), educational future expectations (r = .334; p < .05), economic future expectations (r = .239; p < .05) and total future expectations (r = .304; p < .05). On the other hand, it was determined that there was no significant relationship between students' attitudes toward brain drain and their social future expectations (r = .047; p > .05).

Personal and professional besides educational and economic future expectations variables were entered into the stepwise regression analysis. The correlation between attitudes toward brain migration and the independent variables in Table 5 was considered. Table 6 shows the results of stepwise regression analysis regarding the variables of personal and professional, educational and economic future expectations, respectively, to predict attitudes towards brain migration.

Table 5. Correlation coefficients between future expectations of students studying sports sciences and attitudes toward brain drain.

	(1)	(2)	(3)	(4)	(5)	(6)
Personal and professional future (1)	1					
Educational future (2)	.800**	1				
Economic future (3)	.548**	.748**	1			
Social future (4)	.307**	.331**	.490**	1		
Future expectation total (5)	.803**	.878**	.874**	.676**	1	
Brain drain (6)	.386**	.334**	.239**	0.047	.304**	1

\*\* p < .05.

Table 6. Step-by-step regression analysis results on personal and professional future expectations, educational future expectations and economic future expectations as fatiguers of attitudes toward brain drain.

Model	Tiresome variables	В	Standard Error	(β)	t	р	R	R2	$\Delta^{\mathbf{R2}}$	F	р
1	Constant	22.86	1.39		16.48	.00**	.24	.06	.05	18.051	.00**
I	Didactic	2.22	.52	.24	4.25	.00**	.24				
	Constant	18.94	1.49		12.73	.00**					
2	Didactic	0.36	.59	.04	.61	.54	.39	.15	.14	26.197	.00**
	Economic	4.03	.71	.36	5.69	.00**					

\*\*p < .01; \*p < .05 Tolerance value on all models >.10 and VIF <10.

When the stepwise regression analysis results of "Model 1" were examined in Table 6, it was seen that the educational future expectation variable is a predictor of determining students' attitudes towards brain drain and explains 6% of the total variance (R2 = .06).

In the stepwise regression analysis of "Model 2",

besides the educational future expectation variable, the economic future expectation variable was also added to the model. Educational and economic future expectation variables together explain 15% of the total variance regarding attitudes toward brain migration (R2 = .15). In this case, the variable of economic future expectation makes a 14% contribution to the regression model to explain the attitude towards brain migration. In this regression equation, attitude toward brain migration was positively predicted by economic future expectation ( $\beta$  = .36; t = 5.69; p < .01). Considering the magnitude of influence, it can be said that the economic future expectation gather attitude towards brain the attitude towards brain the magnitude of influence, it can be said that the economic future expectation future expectation.

### DISCUSSION

In this study, the prediction of brain migration attitudes of 299 sports science students by future expectations was investigated. When the research findings were examined, it was found that the attitudes of the students studying in the field of sports sciences towards brain migration were low, and their future expectations were below the middle. Especially in developed countries, the future of their economies is under threat due to low fertility rates and ageing populations. Therefore, they need labour from other countries. Naturally, the labour shortage is growing, and the survival of the existing social system requires a great deal of brain migration. In the globalizing economy, according to the International Migration Organization, every state realizes that migration is an inevitable component of economic and social life. Brain migration has very complex dimensions in today's world. In developing countries, coping with brain migration would be beneficial for both individuals and societies. For policymakers and practitioners to deal effectively with mentioned problems, they must acknowledge that brain migration is a multifaceted issue.

When we look at the reasons that push the brain migration, factors such as the economic welfare of the country, low employment and living standards are seen (Yılmaz, 2019). Brain migration, which means the migration of qualified, valuable and well-educated students abroad, has increased considerably in our country in recent years, it is seen in our study that the attitudes of students studying in the field of sports sciences toward brain drain are low. This made us think that the economic future expectation of the students participating in our study is more effective in predicting the attitude towards brain migration than the educational future expectation and that education and personal success are not sufficient.

In the study conducted by Güngör and Tansel (2009), the main reason why individuals who go abroad for

educational purposes and receive an education there return to their country from abroad is to bring their knowledge and experience to their country and to benefit. It is understood from the statements of the participants who want to return to Turkey that one of the most important reasons for the decision to return is social conflict. According to the qualified personnel working abroad, the social life is seen as worse than the social life in Turkey, and it is thought that the social activities and friendly environment in Turkey are better than the country where they work, which has revealed that not only the emigration country but also the characteristics of the emigrant country are effective in brain migration.

Some of the most important reasons why students who want to study abroad view brain drain negatively are foreign language, communication limitations, cultural differences, family, and economic reasons. When we look at the education system in our country, in order to adapt to the rapidly changing time environment, depending on the conditions of the country, an education and training program in the field of secondary education and sports sciences, which prioritizes business relations, foreign language, social and cultural personal and social needs. is rapidly implemented. Due to the multitude of factors that attract developed countries, students who have decided to study abroad should be offered opportunities such as practicing their profession, applying what they have learned, developing, producing, and foreign languages (Bakırtaş, and Kandemir, 2010).

When the findings related to the sub-dimensions of the Future Expectation Scale are examined, it has been determined that the students studying in the field of sports sciences are hopeful at the upper average level in their expectations about their personal and professional future while they are hopeful at a lower level in their expectations about the social future. This determination expresses the effectiveness of the quality of education in the schools of the students, their future and their expectations, and the problems that they arise in this sense.

In a study conducted by Findlay et al. (2010), some people have gone abroad to study and those who have gone to gain international experience and increase their recognition, as well as people who have expressed their preference for studying abroad without specifying any specific reason. The positive contribution of the education received to their careers is among the primary expectations of students who go abroad to study. In a study conducted on students who left their country to study abroad, it was observed that students could go abroad to study the department they wanted because they did not have the chance or possibility to go to the desired department (Findlay et al., 2010).

In addition, correlation analysis was performed before stepwise regression analysis to determine whether the future expectations of students studying in the field of sports sciences predicted (significantly) their attitudes toward brain migration. Accordingly, it was found that there were moderate and significant positive relationships between the attitudes of the students studying in the field of sports sciences towards brain migration and their personal and professional future expectations, educational and total future expectations. In addition, it was found that there was a low and significant positive relationship between students' attitudes toward brain migration and their economic future expectations.

In our study, it was found that there was no significant relationship between the attitudes of students towards brain migration and their social future expectations. Participants reported that the education given in Turkey is positive in terms of academic competence.

According to the regression analysis, it was found that the educational future expectations of the students studying in the field of sports sciences are a predictor of the attitudes of the students toward brain migration and explained 6% of their attitudes. At the beginning of these problems are university graduates being unemployed in Turkey, not being able to perform their profession, and educated people finding a job easily in developed countries (Tahsin, 2010). It was found that the educational future expectations of the students studying in the field of sports sciences, together with their economic future expectations, explained 15% of the students' attitudes towards brain drain. It can be said that students' economic future expectations contribute 14% in predicting their attitudes towards brain drain, and considering the magnitude of influence, students' economic future expectations are more effective in predicting their attitudes towards brain drain than students' educational future expectations. Some of the participants stated that the reason that prompted them to study abroad was not the difficulties they encountered in the Turkish education demand, but their own plans and goals. Others stated that it is important to get a scholarship, develop a foreign language and gain an advantage over others in the field. In a study conducted on students benefiting from four different foreign education programs, the expectation that their foreign language level can be improved is important in choosing foreign education (Teichler and Steube, 1991). The participants, who stated that the difficulties encountered in the Turkish education system were the main reason forcing them to study abroad, pointed out that the Turkish education system could not be kept up-to-date and an imposing system based on rote learning (Sekin, 2008). The inadequacy of the state's economic policy, the lack of new employment opportunities, low wages and worries about the future, unfortunately, push our university graduates abroad. Considering the contribution of brain migration and reverse brain migration to the country's economy and the losses they cause; this issue should be seriously considered and investigated (İsmail, 2019).

#### RECOMMENDATIONS

In future research, the relationship between the universities of departments and quotas and unemployment can be investigated. In addition, pioneering research on labour mobility and brain migration can be carried out in sports services, which will be built by the phenomenon of unemployment. The future expectations of students studying in the field of sports sciences and the related brain migration is an ongoing negative situation in our country as in underdeveloped countries. Therefore, it is beneficial to re-examine and discuss human resources policies, especially in sports services.

Migration abroad for educational purposes negatively affects the economic development of an underdeveloped country and widens the development gap even more. The main reason why education-oriented migration flows from less developed countries to developed countries in different ways is that education and training opportunities are sufficient in developed countries. Developed countries that demand labour in certain areas meet these needs from young, educated and qualified manpower in underdeveloped countries. As a result, the loss of the backward countries is more than the developed countries. In this context, it is important to ensure economic stability and improve working conditions in our country.

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