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EXAMINING THE FACTORS AFFECTING THE ACHIEVEMENT ORIENTATIONS OF UNIVERSITY STUDENTS WITH LOGISTIC REGRESSION ANALYSIS

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Abstract:
In this study, it is aimed to examine the variables that affect the achievement orientation of university students with logistic regression analysis. Gender, age, education program of university students, academic grade point average, order of preference for university entrance, mother's education level and father's education level constitute the independent variables with demographic content. Enjoying learning new information and working in a job in daily life, the desire to prove their current abilities, the desire to be better than their peers in education and business life, academic ideal and physical disability are other independent variables in the research. The "2x2 Achievement Orientations Scale Revised Form" developed by Elliot and Murayama (2008) and adapted into Turkish by Arslan and Akın (2014) was used to determine students' achievement orientations. The population of the research consists of undergraduate students of Recep Tayyip Erdogan University. The sample of the study consists of 155 students determined by the purposive sampling method. In the study, logistic regression analysis was used to determine the variables that predict the success orientation of university students. As a result of the analysis, it was seen that university students' mother's education level and the desire to prove their current skills were the predictors. It has been determined that the desire to be better than their peers in educational life and the high academic achievement averages are other predictive variables that affect success orientation. It was concluded that other variables (age, gender, preference, father education, enjoying learning new information, having an academic ideal, working in a job in daily life, physical disability) did not make a significant difference on the predicted variable.

Keywords: achievement orientation, skill, desire, mother's education level, academic achievement, logistic regression analysis

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1. Introduction

This section should comprise a description of the general framework, definitions and principles, primary issues and controversies, background information and contexts, etc. Achievement orientation is the academic goals and tendencies that determine the student's approach to academic tasks (Dweck & Leggett, 1988). Achievement orientations do not include the individual's goal of pursuing only successful tasks. Achievement orientations reflect a certain standard that students take as a criterion when evaluating their success in achieving a goal. Theorists in the field of learning psychology have stated that one of the greatest contributions to the literature on achievement motivation in recent years has been made by the "achievement goal theory".

The "achievement goal orientation" approach, which is a theoretical approach that makes a great contribution to the field of achievement motivation and explains the goals of academic behavior, shows which achievement goals students adopt in academic situations (Ames, 1992). This theory was put forward to determine the reasons for the performance of students in learning and school activities, as well as while fulfilling academic tasks (Pintrich, 2000).

There are two general-purpose styles that determine the attitudes and behaviors of students towards the knowledge, skills, assignments and responsibilities presented in the academic environment. The first of these is the aim of developing talent and in various researches; It has been conceptualized as "learning goals" (Dweck & Leggett, 1988) or "mastery goals" (Ames & Archer, 1988). Mastery goals and achievement orientations are associated with avoidance goals and orientations, with both positive (eg, Sideridis & Kaplan, 2011) and negative academic outcomes (eg, lower attention and grades, Barron & Harackiewicz, 2003). In studies, sub-variables of achievement orientations were determined as learning and performance orientation (Elliot, 1999; Pintrich, 2000). The learning orientation is characterized as the internalization of information by an individual. This information is based on a personal request. Learning orientations are related to a student's desire to fully learn the material to be learned and to master the subject in the learning process. Researchers stated that learning orientations were positively related to many adaptive variables (Pintrich, 2003).

Achievement goal orientation was developed specifically to explain achievement motivation and behavior. The achievement goal examines the purpose or reason for performing an achievement task and the criteria they establish to evaluate their competence or success in the task (Urdan, 1997). Achievement motivation is known to be an important determinant of academic achievement (eg, Robbins et al., 2004; Hattie, 2009; Plante et al., 2013; Wigfield et al., 2016). Achievement motivation encompasses a variety of different constructs such as goals and achievement motives (Murphy & Alexander, 2000; Wigfield & Cambria, 2010; Wigfield et al., 2016).

Learning goals ("task engagement" or "mastery goals") describe their willingness to learn new things and develop competencies, while performance goals focus on

demonstrating one's higher competency and hiding one's relative inadequacy (eg, Elliot & McGregor, 2001).

Performance orientation is based on the student's goal of meeting performance expectations or surpassing their peers (Elliot, 1999; Harackiewicz, Brown, & Elliot, 1998; Rawsthorne & Elliot, 1999). Performance orientations are students' giving importance to social comparison, taking their work as a reference and using it as a reference. It reflects features such as being satisfied by trying to do better, trying to appear smarter and more talented, and avoiding appearing inadequate (Nicholls et al., 2003). It has been found that performance orientations are positively associated with maladaptive behaviors such as not making the necessary effort for learning, using superficial cognitive strategies, avoiding help-seeking behavior, feeling negative, and attributing failures to inadequacy (Meece et al., 1988).

If students tend to outperform others, then they pursue performance-approach goals. However, they pursue performance-avoidance goals if they tend to avoid performing worse than others (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Middleton & Midgley, 1997).

Researchers examine studies showing that performance-approach and performance-avoidance goals tend to exhibit a strong positive correlation (Elliot & Murayama, 2008; Pugh, Linnenbrink-Garcia, Koskey, Stewart, & Manzey, 2010; Ross, Shannon, Salisbury-Glennon, & Guarino, 2002; Senko & Harackiewicz, 2005). This correlation is possible. These constructs are not limited to a competency-related component. However, these constructs are also measured by items that contain semantic overlap (Elliot & Murayama, 2008). This strong positive correlation between constructs may also provide information that performance-approach and performance-avoidance goals cannot be distinguished (eg, Duda, 2005; Murayama, 2003; Roeser, 2004; Roeser, Peck, & Nasir, 2006; Tyson & Ben-Eliyahu, 2008; Urdan, 2004; Urdan and Mestaş, 2006; see also Bong, 2009; Brophy, 2005). There are also studies involving this uncertainty of the effects of performance goals (Darnon, Butera, Mugny, Quiamzade & Hulleman, 2007).

2. Literature review

Performance-approach orientation involves the goal of demonstrating competence by outperforming others, while performance-avoidance orientation requires the goal of avoiding judgments of inadequacy or failure. Avoidance orientation defines the goal of avoiding making as much effort as possible (Elliot & Thrash, 2002; Sideridis & Kaplan, 2011).

There are various factors behind the differences in students' achievement orientations, and some students adopt the goal of actually learning something, while others aim to prove that they are particularly talented or avoid appearing incompetent. There are results that school and classroom characteristics have an effect on students' achievement orientation. Purpose-oriented clues offered by the teacher and the school to the students are an important factor that determines the purpose of the students.

Classroom attitudes that support a competitive environment, classify students according to their achievement levels and emphasize getting high grades were found to be closely related to performance orientations. Classroom environments that do not emphasize academic success, support asking questions, emphasize the importance of learning and that grade measures the level of effort and knowledge, not the ability of the student, is seen as practices that support learning orientation (Young, 1997).

Students' cognitive abilities and achievements are among the best predictive variables of academic achievement (eg, Kuncel et al., 2004; Hailikari et al., 2007). There are several studies that include the expectation and value components of motivation as predictors of students' academic achievement, and examine students' previous achievement (Marsh et al., 2005; Steinmayr et al., 2018) or intelligence scores (Lotz et al., 2018; Schneider et al., 2018; Weber et al., 2013).

The variables that are considered important in the achievement orientation within the scope of the research are briefly summarized below:

A. Mother's level of education

In the studies examining the determinants of success goals, attention was also drawn to the family environment. In this sense, it has been observed that published studies focus on behaviors (e.g., Duchesne & Ratelle, 2010; Gonzalez, Greenwood, & WenHsu, 2001). There are many studies that included mother education level as predictors of students' academic achievement (Behnke, Piercy & Diversi, 2004; Plunkett & Bamaca-Gomez, 2003; Chiu & Khoo, 2005). Studies have shown that parents with advanced educational activities value children's education.

Parents' past achievements become a benchmark for their children, as their past understanding of education can increase structural factors on children's behavior within the family. A parent's academic success may depend on intelligence, discipline, or both. These traits are passed on to their children. Academically successful parents encourage what is important in their children and prioritize academic success in their children's lives. gives (Nelson, 2009).

The education level of mothers can determine their children's academic success orientations. In particular, this can happen through inherited genes, upbringing, and especially through the interactions between the two. Well-educated mothers can spend economically on further education in child-rearing and child development. Parents can prepare more nutritious spaces and healthier home environments to increase the student's knowledge capacity (Kornrich & Furstenberg, 2013; Guryan et al., 2008; Kalil et al., 2012; Aslam & Kingdon, 2010; Andrabi, Das & Khwaja, 2009).

It is seen that the education level of the mother improves and positively affects the test scores of the students (Carneiro et al., 2013). It has been determined that mothers are the parents who help students more in their academic studies. Mothers' education is seen as the variable that causes a significant impact on students' academic success. The educated mother has more skills to guide and shape her child academically in the upper levels of education. Mother's education functions as a significant predictor of high

academic achievement orientation (Fantuzzo & Tighe (2000) and Trusty (2000). It is also seen that students with high maternal education level have higher academic scores when compared to students with low maternal education level (Krashen, 2005).

B. Willingness to prove skills

According to the self-efficacy theory, what a person believes strongly affects his choice of task, his level of effort, his resilience to life, and how he will perform (Bandura, 1997). Students' beliefs about their´ academic abilities affect their perseverance, academic performance, and self-regulation in their learners. Self-efficacy becomes a force that determines and motivates one's self-beliefs and academic performance. A person's skill in academic settings is a significant predictor of his academic performance (Pajares, 1996). Features such as effort, the difficulty of tasks, attention, talent and luck are the determinants of academic success. It is seen that external attributions are important for the academic success orientation of successful and unsuccessful students, but successful students also emphasize the role of internal attributions such as ability and effort (Bouchaib, Ahmadou & Abdelkader, 2018). Self-efficacy and causal attribution appear to be mutually related. When students have a high level of self-efficacy, they attribute their success to internal causes and show a strong personal motivation for their skills to achieve their goals (Stajkovic & Summer, 2006; Garcia-Fernandez et al., 2016).

The student's performance or ego goals reveal their desire to demonstrate their talent and outperform others. Goal orientations have important consequences on one's academic motivation. When students focus on performing better than others, they are more likely to choose to do the tasks and work they know they can do better. Also, students focused on mastery prefer to choose challenging tasks and are concerned with their own progress as well as outperforming others. Researchers examining student goal orientations suggest that students with full goal orientation are more likely to maintain positive academic orientation and motivation in school (Ames, 1992).

Mastery-type goals can be explained by the use of deeper information processing strategies and skill acquisition, comprehension monitoring, metacognitive, and self-regulation strategies in learning (Pintrich & DeGroot, 1990). These high-level relationships have been found in studies of different academic and subject areas.

C. Desire to be better than peers

Research on the effectiveness of communicating reasons to students in achievement orientations consists of two theoretical frameworks: expectancy-value theory (Wigfield & Eccles, 2000) and self-determination theory (Ryan & Deci, 2000). Theories pushed forward also reveal different explanations for why reasons affect students' utility value, their academic motivation, and achievement. Both theories suggest similar benefits of providing justifications.

The expectancy-value theory points out that students' expectations of achievement and their perceptions of task predict their academic choices and achievement orientations in the next return (Wigfield & Eccles, 2000). Students' perceptions and knowledge of how

beneficial a learning task will be in one's life can increase their interest and success orientation towards lessons. It is thought that providing students with a reason why the learning content is useful increases their academic orientation, desire to learn, interest and success (eg, Canning & Harackiewicz, 2015; Durik et al., 2015; Hulleman, Godes, Hendricks, & Hrackiewicz, 2010). Self-determination theory (Ryan & Deci, 2000) proposes that externally motivated actions become self-determined as individuals internalize and integrate prescribed arrangements and values themselves. Presenting justifications in educational settings provides students with the information they need to define themselves and internalize the value of their activities. Thus, students can increase their own internal regulation (Deci, Vallerand, Pelletier & Ryan, 1991).

Bandura's (1986) social learning theory argues that students are more likely to pay attention to and learn from information from peers of similar age. This may be because students share the same demographic similarities across the information taught and the material used. It is thought that peer reasons are more persuasive than instructor reasons in the transfer of knowledge.

Existing studies have found that peers significantly impact college students' academic achievement, employment choice, non-cognitive ability, and other aspects (Carrell et al., 2009; Nanda & Sørensen, 2008; Shin et al., 2017).

By promoting a learning environment that responds to students' both school and environmental needs, peers can affect adolescents' academic motivation, classroom participation and school belonging, and achievement orientation (Wentzel, 2012; Wentzel & Wigfield, 2007; Deci, Vallerand, Pelletier & Ryan, 1991; National Middle School Association [NMSA], 2010). The concept of peer emotional support (Wentzel et al., 2010) is associated with positive academic achievement and outcomes of social achievements (Patrick et al., 2007). It can include higher learning participation, positive influence among peers, and life satisfaction. Thus, it can increase students' academic and social success orientation and well-being (Upadyaya & Salmela-Aro, 2013). Many studies show that students with high learning goals do better academically than their low goal and motivated peers. People with a high learning goal are more successful than their peers in using cognitive strategies and making better academic performance, and overcoming difficulties (Luo et al., 2011; Tuominen-Soini et al., 2012).

The aim of this study is to Examine the Factors Affecting the Achievement Orientations of University Students with Logistic Regression Analysis. For this purpose, answers to the following questions were sought:

1) What are the demographic characteristics of university students?
2) Which variables predict students' achievement orientation scale scores?

3. Material and Methods

3.1. Participants

The universe of the research consists of undergraduate students of Recep Tayyip Erdogan University. The sample of the study consists of 155 students determined by the convenient sampling method. University students from 1st to 4th grade were included in the study.

The purposive sampling method represents a group that includes different non-probability sampling techniques. This sampling is also known as selective or subjective sampling. Since it is necessary to select the units to be studied with match sampling, it is also based on the choice and judgment of the researcher. According to the purpose and subject of the research, the participants are selected for sampling according to different criteria such as their field of expertise or willingness to participate in the research (Oliver, 2006).

3.2. Data collection tool

The personal information form developed by the researcher to determine the success orientation of university students consists of 12 questions. The 2x2 Achievement Orientations Scale (Revised Form), whose validity and reliability studies were conducted, is a Likert-type scale. This scale consists of 12 items. Table 1 includes the questions in the scale. For every question; (1) Strongly disagree (2) Disagree (3) Undecided (4) Agree and (5) Strongly agree criteria were used.

In this study, the "2x2 Success Goal Orientations Scale Revised Form" developed by Elliot and Murayama (2008) and adapted into Turkish by Arslan and Akın (2014) had used. Cronbach alpha internal consistency reliability coefficients of the scale were. 72 for the learning-approach subscale, and. 72 for the learning-avoidance subscale, .68 for the performance-approach subscale, .62 and. 69 for the performance-avoidance subscale. The item-total correlation coefficients of the scale ranged between. 50 and. 70. In the confirmatory factor analysis, it was seen that the four-dimensional model consisted of 12 items (learning-approach subscale, learning-avoidance subscale, performance-approach subscale and performance-avoidance subscale) gave a good fit. In the confirmatory factor analysis, the four-dimensional model was found to fit well (x^2 = 172.08, SD = 48, RMSEA = .076, NNF I= .97, NFI = .98, CFI = .98, IFI = .98, RFI = .96, GFI = .94, SRMR = .048). These results show that the Revised Turkish version of the 2x2 Achievement Goals Questionnaire is a valid and reliable measurement tool.

3.3. Data analysis

The dependent variable is the 2x2 Achievement Orientations Scale score. University students' gender, age, program, academic grade point average, university entrance preference order, mother's education level, and father's education level are independent variables with demographic content. Enjoying learning new information and working in a job in daily life, the desire to prove their current abilities, the desire to be better than

their peers in education and business life, academic ideal and physical disability are other independent variables in the research.

4. Results and Discussion

4.1. Results

Findings were obtained as a result of researching the situations that affect the success orientation of university students. In the light of these findings, interpretations were made about which characteristics and variables affect students' achievement orientation.

Research Question 1: What are the demographic characteristics of university students?

Demographic characteristics of university students participating in the research: 71.6% of the university students constituting the research sample are female and 28.4% are male. When the data set is examined, the age distribution of university students is between 19 and 28 years old. 24.5% of the students are 22 years old, 19% are 23 years old, 18.7% are 21 years old, 8.4% are 20 years old, 6.5% are 24 years old and 22.9% are in other age distribution. The average age is 22.

The order of preference of the programs students study is as follows: University students were ranked program choice 1-3 (40.6%), 13 and above (20%), 4-6 (19.4%), 7-9 (10.3%), 10-12 (9.7%).

The mother education levels of university students were examined. Mothers were determined as primary school graduate (52.9%), secondary school graduate (14.8%), high school graduate (11.6%), illiterate (7.1%), literate (7.1%) and undergraduate (6.5%).

Father education status of university students was examined. Primary school graduate (31%), high school graduate (24.5%), undergraduate degree (19.4%), secondary school graduate (18.1%), literate (5.8%), and illiterate (1.3%) in the form of father education levels were determined.

The status of university students' enjoyment of learning new information was examined. It was found that the students liked to learn new information (99.4%) and disliked (0.6%).

The willingness levels of university students to prove their current abilities were examined. It was found that the students wanted to prove their current abilities (87.7%) and they did not want to prove their abilities (12.3%).

When the level of desire of university students to be better than their peers in education and business life was examined (83.9%), it was determined that they wanted to be better (16.1%) and did not have such a desire.

When the level of having an academic ideal of university students was examined, it was seen that 17.4% of them did not have an ideal and 82.6% of them had academic ideals. Among the students who have ideals, 68.7% want to do a master's degree and 31.2% want to do a doctorate.

When the status of university students working in a job in daily life was examined, it was determined that 72.3% of them did not work and 27.7% of them worked in a job.

When the physical disability status of university students was examined, it was found that 98.1% did not have a disability and 1.9% had a disability.

Research Question 2: Which variables predict students' achievement orientation scale scores?

Within the scope of this research, data related to age, gender, preference, mother's education, father's education, skill, desire, ideal, occupation (1), disability and academic score were collected from 155 students. In this study, variables were included in the logistic regression analysis in order to determine which of the variables that determine the success orientation of university students is a predictor.

Table 1: Iteration history

Iteration		**-2Log Likelihood (-2LL)**	**Coefficients**
			Constant
Step 0	1	115.738	1.535
	2	111.426	1.954
	3	111.334	2.028
	4	111.334	2.030
	5	111.334	2.030

When Table 1 is examined, it is seen that the -2LL value of the model starts with 115,738. This value is high since the -2LL value corresponding to the perfect fit is zero (0).

Table 2: Classification table

Observed Achievement Orientations	**Predicted**		
	Achievement Orientations		**Percentage Correct**
	Low	High	
Low	0	18	0.00
High	0	137	100.00
Overall Percentage 88.4			

When Table 2 is examined, when the situation is evaluated in terms of the predictive variables discussed in this study, it is seen that all university students in the sample were classified as having high achievement orientations, and the percentage of correct classification was 88.4%, in line with the first classification results.

Table 3: Variables in the equation

Step 0	**B**	**S.E.**	**Wald**	**df**	**p**	**Exp(β)**
Constant	2.030	.251	65.537	1	.000	7.611

As seen in Table 3, here are the degrees of freedom and significance level of the Wald statistic, which tests the significance of the standard error variable related to the constant term forming the initial model, and Exp(β), that is, the exponential logistic regression coefficient. The exponential logistic regression coefficient represents the odds ratio.

Table 4: Variables not in the equation

	Variables	Score	df	p
Step 0	Age	5.960	1	.666
	Gender	.004	1	.789
	Prefer	.035	1	.979
	Mother education	.307	1	.494
	Father education	.003	1	.852
	Information	.132	1	.734
	Skill	13.428	1	.000
	Desire	8.525	1	.001
	Ideal	.327	1	.399
	Job(1)	.318	1	.741
	Disabled	.402	1	.553
	Academic score	3.843	1	.488
Overall Statistics		37.869	12	.000

The variables that are not included in the initial model/equation presented in Table 4 are the predictive variables of the research. It is seen that the error chi-square statistic value, also called the first chi-square value, is significant ($X^{2\beta}$=37.869, p<.05). The significance of this value reveals that the coefficients of the other predictor variables that are not included in the model are significantly different from zero (0). It is also seen that adding one or more of these variables to the model can increase the predictive power of the model.

Table 5: Iteration history for the case in which predictive variables entered the model

Iteration History[a,b,c,d]															
Iteration		**-2Log likelihood**	**Coefficients**												
			Constant	**Age**	**Gender**	**Prefer**	**Mother education**	**father education**	**Information**	**Skill**	**Desire**	**Ideal**	**Job(1)**	**Disabled**	**Academic score**
Step 1	1	95.094	-2.369	.123	-.125	.018	.192	-.071	-2.772	1.259	.846	-.007	.334	.481	.021
	2	80.755	-4.943	.211	-.230	.041	.416	-.148	-4.933	2.019	1.505	-.034	.511	1.048	.045
	3	77.693	-8.013	.331	-.269	.091	.584	-.196	-6.886	2.511	1.939	-.096	.648	1.780	.065
	4	77.238	-9.862	.431	-.255	.131	.641	-.211	-8.422	2.738	2.098	-.115	.747	2.605	.074
	5	77.201	-9.299	.447	-.252	.136	.648	-.213	-9.505	2.775	2.119	-.114	.762	3.576	.075
	6	77.190	-8.305	.448	-.252	.136	.648	-.213	-10.509	2.776	2.119	-.114	.762	4.578	.075
	7	77.186	-7.305	.448	-.252	.136	.648	-.213	-11.509	2.776	2.119	-.114	.762	5.580	.075
	8	77.184	-6.304	.448	-.252	.136	.648	-.213	-12.510	2.776	2.119	-.114	.762	6.580	.075
	9	77.184	-5.304	.448	-.252	.136	.648	-.213	-13.510	2.776	2.119	-.114	.762	7.581	.075
	10	77.183	-4.304	.448	-.252	.136	.648	-.213	-14.510	2.776	2.119	-.114	.762	8.581	.075
	11	77.183	-3.304	.448	-.252	.136	.648	-.213	-15.510	2.776	2.119	-.114	.762	9.581	.075
	12	77.183	-2.304	.448	-.252	.136	.648	-.213	-16.510	2.776	2.119	-.114	.762	10.581	.075
	13	77.183	-1.304	.448	-.252	.136	.648	-.213	-17.510	2.776	2.119	-.114	.762	11.581	.075
	14	77.183	-.304	.448	-.252	.136	.648	-.213	-18.510	2.776	2.119	-.114	.762	12.581	.075

	15	77.183	.696	.448	-.252	.136	.648	-.213	-19.510	2.776	2.119	-.114	.762	13.581	.075
	16	77.183	1.696	.448	-.252	.136	.648	-.213	-20.510	2.776	2.119	-.114	.762	14.581	.075
	17	77.183	2.696	.448	-.252	.136	.648	-.213	-21.510	2.776	2.119	-.114	.762	15.581	.075
	18	77.183	3.696	.448	-.252	.136	.648	-.213	-22.510	2.776	2.119	-.114	.762	16.581	.075
	19	77.183	4.696	.448	-.252	.136	.648	-.213	-23.510	2.776	2.119	-.114	.762	17.581	.075
	20	77.183	5.696	.448	-.252	.136	.648	-.213	-24.510	2.776	2.119	-.114	.762	18.581	.075

When Table 5 is examined, the iteration story, in the beginning, is for the initial model with only the constant term. while the iteration story in this table is for the intended model. It is seen that the value of -2LL. which was 115.738 at the beginning. decreased to 77.183.

The -2LL difference is 34.150 (111.334-77.183) when the predictor variables are included in the basic model with only the constant term. In this case. the change in the fit of the model is significant.

Table 6: Omnibus tests of model coefficients

Step		Chi-square	df	p
1	Step	34.150	12	.001
	Block	34.150	12	.001
	Model	34.150	12	.001

When Table 6 is examined, the significant p-value of the model chi-square value indicates the existence of a relationship between the predicted variable and the combination of the predictor variables. The significance of the model chi-square statistic means rejecting the null hypothesis (Ho) that "there is no difference between the initial model with only the constant term and the intended model formed when the predictor variables are included in the analysis". This finding shows that the relationship between the predictor variables and the predicted variable is supported.

Table 7: Model summary

Step	(-2LL)	Cox & Snell R^2	Nagelkerke R^2
1	77.183[a]	.198	.386

When the Cox & Snell R^2 value presented in Table 7 is examined, it explains 19.8% of the variance in the predicted variable of achievement orientations when the predictive variables entered the analysis. The Nagelkerke R^2 value is 38.6%.

Table 8: Hosmer ve Lemeshow test

Step	Chi-square	df	p
1	10.467	8	.234

Table 8. When the predictor variable is analyzed. the Hosmer and Lemeshow test result is not significant (p>.05). indicating that the model-data fit is at a sufficient level.

Table 9: Classification table[a]

Observed Achievement Orientation	Predicted		Percentage Correct
	Low	High	
Low	7	11	38.9
High	1	136	99.3
Overall Percentage 92.3			

When Table 9 is examined, 7 of the students with low achievement orientation were classified correctly and 11 were classified incorrectly, with the classification made according to the predictive variables, and the rate of correct classification was 38.9%. Of the 137 students with high achievement orientation, 136 were classified correctly and 1 was classified incorrectly. The correct classification rate of the model is 99.3%.

Table 10: Variables in the equation

Step 1	**Predictor**	**β**	**S.E.**	**Wald**	**df**	**p**	**Exp(β)**
	Age	.448	.244	3.362	1	.067	1.565
	Gender	-.252	.703	.128	1	.720	.777
	Prefer	.136	.203	.452	1	.502	1.146
	Mother education	.648	.309	4.400	1	.036	1.912
	Father education	-.213	.277	.594	1	.441	.808
	Information	-24.510	40192.935	.000	1	1.000	.000
	Predictor	**β**	**S.E.**	**Wald**	**df**	**p**	**Exp(β)**
	Skill	2.776	.788	12.412	1	.000	16.059
	Desire	2.119	.748	8.034	1	.005	8.323
	Ideal	-.114	.829	.019	1	.891	.892
	Job(1)	.762	.737	1.069	1	.301	2.143
	Disabled	18.581	22058.136	.000	1	.999	117349375.990
	Academic score	.075	.032	5.528	1	.019	1.078
	Constant	5.696	40192.936	.000	1	1.000	297.607

As seen in Table 10, it is seen that university students show higher achievement orientation as the education level of mothers increases ($p<.05$). The significance level of the predictor variables and the Exp(β) exponential logistic regression coefficient are given in the table. The exponential logistic regression coefficient represents the odds ratio. When the odds ratio is examined, it is seen that the probability of students' achievement orientation increases 1.912 times as the mother's education level increases.

As the desire of university students to prove their existing skills increases, their achievement orientation also increases. When the odds ratio is examined, it is seen that the probability of students' achievement orientation increases 16,059 times when the desire of the students to prove their existing skills increases.

As the desire of university students to be better in education and business life from their peers increases, their success orientation also increases. When the odds ratio is examined, it is seen that the probability of achievement orientation increases 8.323 times when students' desire to be better than their peers in education and business life increases.

As the academic average scores of university students increase, their achievement orientation also increases. When the odds ratio is examined, it is seen that the probability of achievement orientation increases 1.078 times when the academic average scores of the student's increases.

It is seen that other predictive variables (age, gender, preferences, father education, enjoying learning new information, having an academic ideal, working in a job in daily life, physical disability) did not make a significant difference on the predicted variable.

4.2. Discussion

The concept of academic success is one of the most discussed topics in education. It can be difficult to express academic success in social sciences with a single variable. Many different personal, environmental and developmental characteristics of the student can change success. Studies have also pointed out the existence of more than one variable as a determinant of success. The concept of achievement orientation includes both the student's approach to academic tasks and academic goals. Success orientations or success goals have an important place in the lives of university students. In this study, many variables that were not frequently included in previous studies that could guide university students' success orientations were also included in the analysis. For example, the level of parental education, gender, age, the order of preference of the programs in which the students' study, their enjoyment of learning new information, the level of desire to prove their abilities, the level of desire to be better than their peers in education, the level of having an academic ideal, which is thought to be an important factor in a person's life. These include working in a job in daily life and physical disability.

As a result of the analysis, it was seen that the mother's education level is an effective predictor of university students' success orientation. This is supported by similar studies (Behnke, Piercy, & Diversi, 2004; Plunkett & Bamaca-Gomez, 2003; Chiu & Khoo, 2005). The fact that the mother's education is an important success orientation variable reveals that the education level of the mother from a young age to university provides an endless motivation for the individual.

In the study, it was found that university students had a desire to prove their existing skills as another predictor variable. When students' desire to prove their existing skills increased, their orientation to success also showed linearity. Similarly, other researchers have emphasized the role and importance of internal attributions in students' academic success orientations (Bouchaib, Ahmadou, & Abdelkader, 2018). The source of the predictiveness of this variable can be explained as the fact that the individual unwittingly tends to success while trying to prove his talent.

Another predictor variable is university students' desire to be better than their peers in education. The peer factor is seen as an important element in displaying performance in education for individuals. Researchers also think that peers affect students' participation in the classroom and their orientation toward success (Wentzel, 2012; Wentzel & Wigfield, 2007; Deci, Vallerand, Pelletier, & Ryan, 1991). Competing with

peers can help university students to stay ahead of their peers not only in education but also in business life.

5. Recommendations

Based on the research findings, many variables were found that are predictors of university students' success orientations. One of the most striking is that as the education level of the mother increases, the student's success orientation also increases. Father's education level did not make a significant difference. Researchers may be advised to conduct qualitative research that will reveal why maternal education is so important to the student at university. Qualitative research can be useful for providing in-depth information.

It has been observed that the desire of university students to prove their existing skills also increases the orientation to success. For this reason, it can be recommended to create areas in the university that support the self-perception of the students and show more performance. It is thought that students who are met with more motivating stimuli will naturally want to exhibit their own success. As university students' desire to be better than their peers in education and business life increases, their success orientation also increases. It can be suggested to create educational environments where students can compete more with their peers. Thus, success targets in different fields expected from students can be achieved. It is not surprising that academic achievement averages in courses are a predictor variable that motivates students in success orientation. By increasing the number of tasks, assignments and activities that support students academically in faculties, they can be shown how to achieve success.

Conflict of interest statement

The authors declare no conflicts of interest.

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