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An Investigation of The Relationship Between Preservice Teachers' Attitudes Towards Graduate Education and Academic Motivations

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The aim of this research is to examine the relationship between preservice teachers' attitudes towards graduate education and their academic motivations. The correlational survey model, which is one of the quantitative research methods, has been used in the research. The sample of the research consists of 864 preservice teachers studying at Atatürk University Kazım Karabekir Faculty of Education in Erzurum, Türkiye. "Scale for Attitude Towards Graduate Studies" and "Academic Motivation Scale" have been used as data collection tools in the research. In the analysis of the data, descriptive statistics, Mann Whitney U test and Kruskal Wallis test have been used. It is understood that the participating preservice teachers generally express positive views on the items of the attitude scale towards graduate education and their academic motivations are high. Among the variables, significant differences are found according to gender, department and grade level. Significant differences are also found out in the attitudes towards graduate education and academic motivations of preservice teachers' education in favour of female preservice teachers. As a result, a positive and significant relationship between preservice teachers' attitudes towards graduate education and their academic motivations is detected. Thanks to the research results, the reasons for lack of motivation of students in higher education institutions can be investigated and it can be a guide for the prospective studies that can make a difference in the attitudes of students who have negative attitudes towards graduate school.

Introduction

Today, graduate education has become extremely important thanks to the potential gains and outcomes it might provide the candidates with. For this reason, graduate education is carried out differently from undergraduate education in terms of content and opportunities (Güven & Tunç, 2007). Because the developing world offers people more opportunities to research and progress and allows the individual to develop herself. The general purpose of individuals during their undergraduate education is to acquire a good profession and to plan

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their education life accordingly. While some individuals decide to pursue graduate education in undergraduate education, some individuals make this decision after completing their undergraduate education.

Graduate education is the education given to specialize in a particular field. Graduate education is a training program designed to train highly qualified scientists, researchers and employees needed by the society (Bülbül, 2003). Graduate education, when compared to higher education, it aims to provide the individual with the method and skill of conducting more detailed scientific research, solving problems, specializing in areas of expertise, producing knowledge and synthesizing. Graduate education has purposes such as raising quality people not only individually but also socially. Planning and efficient execution of graduate education is closely related to the level of development of that country (Alhas, 2006). The most important element of graduate education is to contribute to the professional lives of undergraduates, to preserve professional vitality, to develop, produce and disseminate knowledge rather than transmit it. İnce and Korkusuz (2006) define graduate education as the process of gaining knowledge about research, professional development, teaching and related professional culture, academic culture, and ethics at all levels. According to Karakütük (2002), graduate education consists of master's and doctorate education, specialization in medicine, proficiency in art in the branches of art, and the training, scientific studies and application activities required by these. As the number of undergraduate graduates increases, the tendency towards graduate education in our country also has increased. Education faculties that train teachers have started to produce many graduates in the same direction. In recent years, when it has become more difficult to be appointed as a teacher, it is seen that preservice teachers also tend to graduate education.

When individuals apply for graduate education, they start their graduate education by taking their undergraduate success into account. In other words, school success is a requirement for graduate education. One of the important factors affecting school success is motivation. The type of motivation an individual has to be successful in school is academic motivation. The student goes to school for a purpose and gets success. It can be predicted that an individual with high academic motivation will have a positive attitude towards postgraduate education and will maintain this motivation.

Academic motivation

The word motivation is derived from Latin is called "movere", which refers to the "mental state" that directs the person towards a desired goal and meaning movement (Putra & Gupron, 2020). According to Akbaba (2006), this concept includes various intrinsic and external causes and their mechanisms that motivate people to a behavior, determine the level of violence and energy of these behaviors, and give a certain direction to the desired behavior. All kinds of intrinsic and extrinsic power that activates the organism and awakens the desire to learn is defined as motivation (Pink, 2011/2013). It is also described as a situation that affects the organism and moves it for a purpose (Gençtanırım, 2015). Ünal-Karagüven (2012) defines motivation as "a situation or the creation of such a situation, which is formed by all the factors that determine the degree of willingness to participate in an activity".

Pink (2011/2013) divides motivation into intrinsic and extrinsic based on its origin. An individual with intrinsic motivation satisfies his own needs, satisfies his/her curiosity, or performs an action that he/she likes. In extrinsic motivation, the individual takes an action to get reward, avoid punishment, or gain admiration from others.

Intrinsic motivation is defined as an individual's natural tendency to overcome difficulties as

they pursue their personal interests and showcase their talents. When individuals are intrinsically motivated, there is no need for any incentive or punishment to act because the action is satisfying and rewarding for the individual (Deci & Ryan, 1985). Extrinsic motivation is not related to the activity itself; it only focuses on what to achieve. Extrinsic motivation arises through extrinsic influences such as rewards, punishments, pressures and demands. Extrinsic motivation arises as a result of extrinsic factors. According to Yüksel (2004), in this type of motivation, the stimulus that increases motivation is given from outside. However, extrinsic motivating factors affect the individual's intrinsic motivation to do a task (Baltaş, 2002). Studies show that intrinsically motivated students perform better than those with extrinsic motivation alone (Yüksel, 2004). However, it has been concluded that both intrinsic and extrinsic motivation are closely related to students' academic motivation and have a positive effect (Afzal, Ali, Khan & Hamid, 2010).

Academic motivation can be defined as the student's motivation to achieve a specific learning goal and is associated with the term learning motivation (Wilkesmann, Fischer & Virgillito, 2012). The concept of academic motivation is defined as "the generation of energy necessary for learning" (Bozanoğlu, 2004). One of the most important psychological concepts in education is undoubtedly motivation. In fact, it is also known that motivation is associated with various outcomes such as curiosity, persistence, learning and performance (Deci & Ryan, 1985). Based on these definitions, it can be concluded that academic motivation is one of the important variables of the learning-teaching process and contributes to academic success. Şeker (2016) explains academic motivation as the ability of students or preservice teachers to influence the learning and teaching process. The ability to have an effective learning experience is closely related to the level of motivation, and studies on the subject show that motivation has a strong and significant effect on academic achievement (Vallerand & Bissonnette, 1992).

According to the literature research, it is seen that there are many studies on attitude. When these studies are reduced to attitudes towards graduate education, it has been observed that there is intense interest in the literature on attitudes towards postgraduate education. In a study conducted by Carpinelli, Hirsh, Kimmel, Perna and Rockland (2007) attitudes of engineering faculty students towards graduate studies were examined. Ünal and İlter (2010) investigated the attitudes of preservice teachers towards higher education according to different variables. Graduate students' attitudes towards statistics according to gender and previous statistical experience by Chowdhury (2018). In the research by Şaşmaz-Ören and Karapınar (2016) the professional competence perceptions of preservice teachers, their attitudes towards higher education and the relationship between the two variables were examined. Türer, Balçın, Sevindik and Er (2013) searched the attitudes of education faculty students towards graduate education. İzgi (2016) investigated Social studies preservice teachers' attitudes towards graduate education. In the study conducted by Demir and Beşoluk (2017), preservice science teachers' attitudes towards graduate education were examined. Finally, İnel-Ekici, Ekici and Can (2020) researched the views and evaluations of preservice science teachers about the graduate education process.

While Akandere, Özyalvaç and Duman (2010) have examined high school students' attitudes towards physical education lessons, their motivation towards academic success and their academic success in the process, Sıcak and Başören (2015) have researched high school students' learning motivations according to various variables. Gömleksiz and Serhatlıoğlu (2013) have examined preservice teachers' views on their academic motivation levels. Alemdağ, Öncü and Yılmaz (2014) have studied the learning motivation and learning performance perception of physical education preservice teachers in terms of various variables.

Terlemez, Şahin and Dilek (2015) have examined the motivation levels of high school students for learning, the differences in proficiency between the programs and the reasons for these differences. Teachers' instructional behaviors were examined as important predictors of academic motivation (Maulana, Opdenakker & Bosker, 2016). Önal (2017) has searched the effect of augmented reality educational applications on the learning motivation of mathematics teachers. In the study conducted by Koç (2018) the relationship between academic motivation and life satisfaction of students enrolled in sports science faculties was examined. Abdelrahman (2020) has investigated the effects of metacognitive awareness and academic motivation on academic achievement. In the research done by Li, Peng, Lu, Liao and Li (2020) the relationship between peer relations, self-efficacy, academic motivation and math achievement was examined. Finally, Fulgencio, Baldado, Enriquez, Delos-Santos, Plaza and Tus (2021) have searched the effect of self-efficacy on the academic motivation of high school seniors.

As a result of the researches, it has concluded that the attitudes of preservice teachers towards graduate education are generally positive. In these studies, attitudes towards graduate education have examined in terms of variables such as gender, level of success, family income, department and level of education. However, these variables were applied in different studies and in different samples. İlhan, Sünkür and Yılmaz (2012) has applied his research to primary school preservice teachers with different variables. In this study, the relationship between the concept of attitude towards graduate education and the concept of academic motivation will be examined and a different dimension from other studies will be investigated.

When today's education is examined, it is seen that individuals' attitudes towards lessons and educational processes contribute to their academic success. It is thought that the positive or negative attitudes of individuals affect and shape their educational processes and continuation. The main goal of individuals in the education process is to achieve academic success. Every individual has a desire and motivation to achieve this success. This desire is called motivation. The motivation that individuals have in terms of education is called academic motivation. As a result of the studies it was concluded that the attitudes of preservice teachers towards graduate education are generally positive. In these studies, attitudes towards graduate education have examined in terms of variables such as gender, level of success, family income, department and level of education. However, these variables have been applied in different studies and in different samples. İlhan et al. (2012) has applied his research to primary school preservice teachers with different variables. Dişlen Dağgöl (2020) found a positive significant relationship between academic motivation and learner empowerment. Karakış (2021) found a positive and significant relationship between professional commitment, career development aspirations and motivation towards teaching profession. Bano and Riaz (2023) found that academic motivation positively influenced the effect of students' communication motives on academic achievement. Orakci (2023) stated that pre-service teachers' having positive attitudes, motivation, efficacy beliefs and understanding would contribute significantly to the improvement of the quality of education. However, no study has been found examining the relationship between students' positive or negative attitudes towards graduate education and their academic motivation. In this study, the relationship between the concept of attitude towards graduate education and the concept of academic motivation will be examined and a different dimension from other studies will be investigated.

This research is considered important as it is thought that the academic motivation of the teacher candidate will be related to his/her attitude towards graduate education. In today's educational approach, students' attitudes should also be included in the process. Because an individual's

attitude towards something makes it easier for him to reach that goal and increases his interest in that goal. Contrary to the traditional understanding of education, including students' attitudes in the education process increases the effectiveness of the process.

In the studies conducted, the concept of academic motivation has been examined in terms of self-efficacy, test anxiety, research skill, life satisfaction, motivation to study, age, gender, grade, graduation status, and achievement variables. However, these variables have been examined in different samples in different studies and their relationship with the attitude towards graduate education hasn't been examined.

The purpose of the study

In this study, it is aimed to determine the attitudes and academic motivations of preservice teachers towards graduate education and to determine the relationship between their attitudes and motivations and to examine this relationship in terms of gender and grade level.

The problem of the research has been determined as "Is there a significant relationship between preservice teachers' attitudes towards graduate education and their academic motivations?"

Based on this problem, the following sub-problems have been created:

- Do the preservice teachers' attitudes towards graduate education show a significant difference according to gender and grade level?
- Do the preservice teachers' academic motivations differ significantly according to gender and grade level?
- Is there a significant relationship between the preservice teachers' attitudes towards graduate education and their academic motivations?

Method

Research model

This study is a relational survey study from quantitative research methods. According to Neuman (2006/2016), research in which the relationship between two or more variables is examined without any interference with these variables is defined as a relational survey. Correlation studies are important studies that provide the information needed to find the relationships between the variables, if any, to determine the size of the relationship, and to carry out higher-level studies to be done later (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz & Demirel, 2014). In this study, it is a relational survey research since the relationship between preservice teachers' attitudes towards graduate education and their academic motivations is examined.

Population and sample

The population of this research consists of a total of 4437 preservice teachers, 1530 male and 2907 female, from 25 departments studying at Atatürk University, Kazım Karabekir Faculty of Education in the fall semester of the 2021-2022 academic year. The sample of the research consists of 864 preservice teachers in the departments determined in accordance with the easily accessible sampling method. The sample constitutes approximately 20% of the population. The distribution of preservice teachers in the sample participating in our research according to different variables is given in Table 1.

Table 1 *Distribution of the sample by various variables*

Variable		N	%
Gender	Female	635	73.5
	Male	229	26.5
Grade	1st grade	193	22.3
	2nd grade	227	26.2
	3rd grade	289	33.4
	4th grade	155	17.9
Department	English Language Teaching	190	22
	Department of Turkish Language	142	16.4
	German Language Teaching	145	16.8
	Department of Music Education	81	9.4
	Department of Turkish Language and Literature	59	6.8
	Psychological Counseling and Guidance	144	16.7
	Pre-school Education	103	11.9

Data collection tools

Personal information form

For the preservice teachers who participated in the research, a personal information form was created and used, including variables such as gender, department and grade level.

Scale for attitude towards graduate studies

Within the scope of this research, Bezen, Aykutlu, Seçken and Bayrak (2016) "Scale for Attitude Towards Graduate Studies (SATGS)" has been applied in order to determine preservice teachers' attitudes towards graduate education. The scale is a 27-item 5-point Likert type scale. Exploratory factor analysis (EFA) has been used in the analysis of this scale and the KMO value has been found to be 0.93 as a result of the analysis. This scale; it has a four-factor structure: Interest and Importance, Fear and Anxiety, Lack of Need, Desire and Want. The reliability coefficient obtained from this scale is 0.950, and the total variance explained is 60.315%. The scale has been applied as a pilot application to a group of 20 preservice teachers. Then, 5 items of the scale, which was formed as 32 items and applied to 200 preservice teachers, have been removed from the scale due to the fact that the items gave a result below the factor load value (Bezen et al., 2016). The Cronbach alpha value for the data collected in this study is .92.

Academic motivation scale

Academic Motivation Scale (AMS), was developed by Vallerand and Bissonnette (1992). Ünal-Karagüven (2012) adapted the scale into Turkish. First, the study group size of the linguistically equivalent scale included 390 university students. Construct validity was tested by taking expert opinion for content validity. The KMO value for the factor analysis of the scale is 0.883 and the total variance explained is 58.06%. The standard error of the measurement is between 0.40 and 2.93. After performing the internal consistency test from a 28-item scale, Cronbach's alpha values have been measured as 0.67 to 0.87. The Cronbach's alpha value for the initial form of AMS varies between 0.83 and 0.86. The Cronbach alpha value for the data collected in this study is .87.

Data analysis

In this study, firstly, it was examined whether the obtained data were normally distributed. Median and arithmetic mean values were calculated to see if the collected data were normally distributed. Kolmogorov-Smirnov and ShapiroWilk tests were applied. Q-Q plots and box plots were examined. After this examination, it was determined that the data obtained were not normally distributed. In the analysis of the data, the Mann-Whitney U test, one of the non-

parametric tests, was analyzed whether there was a significant difference between two categorical variables and a continuous variable. Whether there was a significant difference between a variable with more than two categories and a continuous variable was analyzed with the Kruskal-Wallis test. Finally, whether there was a significant relationship between the two variables was tested with the Spearman Rank Differences Correlation Coefficient.

Findings

Whether there is a significant difference between preservice teachers' attitudes towards graduate education scores in terms of gender variable has been tested with the Mann-Whitney U Test and the test results are shown in Table 2.

Table 2 *The difference between attitude scores towards graduate education and gender variable*

Scale	Gender	N	M	Mean Rank	Sum of Ranks	U	p
Total	Female	635	101	452.17	287128.50	60216.5	.000
	Male	229	95	377.95	86551.50		

According to the results of the Mann-Whitney U test, the attitude scores of the female preservice teachers (M=40) in the "Interest and Importance" sub-dimension of the preservice teachers differed significantly from the male preservice teachers' attitude scores (M=36) (U=59868, p=.000). In the "Lack of Need" sub-dimension, female preservice teachers' attitude scores (M=25) are significantly higher than male students' attitude scores (M=23) (U=57841.5, p=.000). No difference was observed in terms of gender variable in the "Fear and Anxiety" and "Desire and Want" dimensions (p>.05). Regarding the gender variable, the "Total" attitude scores of preservice teachers regarding graduate education, the attitude scores of female preservice teachers (M=101) are higher than the attitude scores of male preservice teachers (M=95), and the difference is significant (U=60216.5, p=.000).

Whether there is a significant difference between preservice teachers' attitudes towards graduate education scores in terms of grade level has been tested with the Kruskal Wallis Test and the test results are presented in Table 3.

Table 3 *The status of preservice teachers' attitudes towards graduate education by grade variable*

Scale	Grade	N	M	Mean Rank	Sd	x^2	p	Significant Difference
Total	1st grade	193	103	481.83	3	12.424	.006	1>4 1>3
	2nd grade	227	99	439.94				
	3rd grade	289	98	410.43				
	4th grade	155	97	401.34				

When Table 3 is examined, a significant difference was observed in the "Interest and Importance" dimension (p=.024). In the "Fear and Anxiety" dimension, the 1st grade preservice teachers' attitude scores (M=103) have been observed higher than the 4th grade (M=97), 2nd grade (M=99) and 3rd grade (M=98) and a significant difference was obtained (p=.001). In the "Desire and Want" dimension, the attitude scores of the 1st grade preservice teachers (M=103) are significantly higher than the 3rd grade preservice teachers' attitude scores (M=98) (p=.023). No significant difference was observed in attitude scores in terms of grade variable in the dimension of "Lack of Need" (p>.05). According to the results of the Kruskal-Wallis test, the attitude scores of the 1st grade preservice teachers (M=103) are significantly higher than the 3rd grade preservice teachers' attitude scores (M=98) and the attitude scores of 4th grade

preservice teachers' (M=97). There is a significant difference between preservice teachers' attitudes towards graduate education in terms of grade level variables (p=.006).

Whether there is a significant difference between the academic motivations of the preservice teachers in terms of the gender variable has been tested with the Mann-Whitney U Test and the results of the analysis are given in Table 4.

Table 4 *Difference between academic motivation scores and gender variable*

Sub-dimentions	Gender	N	M	Mean Rank	U	p
Intrinsic Motivation to Know	Female	635	24	465.28	51893.5	.000
	Male	229	20	341.61		
Intrinsic Motivation to Accomplish	Female	635	18	462.19	53857.5	.000
	Male	229	16	350.19		
Intrinsic Motivation to Experience Stimulation	Female	635	19	462.16	53784	.000
	Male	229	16	350.26		
Extrinsic Motivation İdentified Regulation	Female	635	25	458.2	58388.5	.000
	Male	229	24	361.24		
Extrinsic Motivation Introjected Regulation	Female	635	16	452.89	59762.5	.000
	Male	229	14	375.97		
Extrinsic Motivation External Regulation	Female	635	22	438.88	68648.5	.208
	Male	229	22	414.78		
Amotivation	Female	635	4	402.09	92019	.000
	Male	229	6	516.83		

When Table 4 is examined, in the dimension of "Intrinsic Motivation to Know", female preservice teachers' academic motivation scores (M=24) are higher than male preservice teachers' academic motivation scores (M=20), and the difference is significant (U=51893.5, p=.000). In the dimension of "Intrinsic Motivation to Accomplish", female preservice teachers' academic motivation scores (M=18) are higher than male preservice teachers' academic motivation scores (M=16), and the difference is significant (U=53857.5, p=.000). In the dimension of "Intrinsic Motivation to Experience Stimulation" female preservice teachers' academic motivation scores (M=19) are higher than male preservice teachers' academic motivation scores (M=16), and the difference is significant (U=53784, p=.000). In the "Extrinsic Motivation İdentified Regulation" dimension, female preservice teachers' academic motivation scores (M=25) are higher than male preservice teachers' academic motivation scores (M=24), and the difference is significant (U=58388.5, p=.000). In the dimension of "Extrinsic Motivation Introjected Regulation", female preservice teachers' academic motivation scores (M=16) are higher than male preservice teachers' academic motivation scores (M=14), and the difference is significant (U=59762.5, p=.000). The academic motivation scores of male preservice teachers (M=6) in the dimension of "Amotivation" are higher than the academic motivation scores of female preservice teachers (M=4), and the difference is significant (U=92019, p=.000). In the dimension of "Extrinsic Motivation External Regulation", no significant difference has been observed in terms of gender variable (p>.05).

Whether the academic motivations of the preservice teachers show a significant difference according to the grade they are studying has been tested with the Kruskal Wallis Test and the findings obtained as a result of the test are given in Table 5.

Table 5 *Difference between academic motivation scores and grade variable*

Sub-dimension	Grade	N	M	Mean Rank	Sd	X^2	p	Significant Difference
Amotivation	1st grade	193	4	376.25	3	15.605	.001	4>1

2nd grade	227	4	439.30	3>1
3rd grade	289	5	447.92	
4th grade	155	5	463.84	

When Table 5 is examined, no significant difference was found in terms of the grade level variable of the preservice teachers in the dimensions of "Intrinsic Motivation to Know", "Intrinsic Motivation to Accomplish", "Intrinsic Motivation to Experience Stimulation", "Extrinsic Motivation Identified Regulation", "Extrinsic Motivation Introjected Regulation" and "Extrinsic Motivation-External Regulation" (p>.05). In the dimension of "Amotivation", in terms of the grade variable, the academic motivations of the 1st grade preservice teachers (M=4) are lower than the academic motivations of the 3rd grade preservice teachers (M=5) and the 4th grade preservice teachers (M=5) and the difference is significant (p=.001).

The Spearman Rank Differences Correlation Coefficient has been calculated to determine whether there is a significant relationship between preservice teachers' attitudes towards graduate education and their academic motivation scores, and the results obtained as a result of the test are given in Table 6.

Table 6 *The relationship between attitude scores towards graduate education and academic motivation scores*

	Sub-dimensions	1	2	3	4	5	6	7	8	9	10	11	12
1	Interest and Importance	1											
2	Fear and Anxiety	,505**	1										
3	Lack of Need	,549**	,502**	1									
4	Desire and Want	,700**	,481**	,434**	1								
5	Total Attitude Scores	,920**	,720**	,735**	,783**	1							
6	Intrinsic Motivation to Know	,411**	,342**	,337**	,223**	,428**	1						
7	Intrinsic Motivation to Accomplish	,463**	,327**	,324**	,260**	,456**	,758**	1					
8	Intrinsic Motivation to Experience Stimulation	,398**	,279**	,285**	,182**	,384**	,743**	,723**	1				
9	Extrinsic Motivation Identified Regulation	,175**	,127**	,203**	0,042	,185**	,558**	,425**	,402**	1			
10	Extrinsic Motivation Introjected Regulation	,268**	,088**	,133**	,080**	,215**	,439**	,600**	,470**	,374**	1		
11	Extrinsic Motivation External Regulation	0,046	-0,026	0,049	0,006	0,03	,235**	,199**	,127**	,557**	,352**	1	
12	Amotivation	-,212**	-,291**	-,273**	-,181**	-,288**	-,427**	-,329**	-,271**	-,325**	-,067	-,067	1

** p<0.01, * p<0.05

According to Table 6, there is a positive relationship between the "Interest and Importance" dimension and the "Intrinsic Motivation to Know" dimension (r=.411). There is a positive correlation between the dimension of "Interest and Importance" and the dimension of "Intrinsic Motivation to Accomplish" (r=.463). There is a positive correlation between the dimension of "Interest and Importance" and the dimension of "Intrinsic Motivation to Experience Stimulation" (r=.398). A positive correlation has been found between the dimension of "Interest and Importance" and the dimension of "Extrinsic Motivation Identified Regulation" (r=.175). There is a positive relationship between the "Interest and Importance" dimension and the "Extrinsic Motivation Introjected Regulation" dimension (r=.268). There is a negative

relationship between the dimension of "Interest and Importance" and the dimension of "Amotivation" (r=-.212).

According to the relationship level given in the table in the dimension of "Interest and Importance" in the attitudes of preservice teachers towards graduate education, the highest relationship has been established with the dimension of "Intrinsic Motivation to Accomplish". It shows that preservice teachers who are interested in graduate education are focused on achieving their goals. Secondly, it was found that preservice teachers who want to know, that is, to learn new things, attach importance to graduate education.

There is a positive correlation between the "Fear and Anxiety" dimension and the "Intrinsic Motivation to Know" dimension (r=.342). A positive correlation has been found between the "Fear and Anxiety" dimension and the "Intrinsic Motivation to Accomplish" dimension (r=.327). A positive correlation has been found between the "Fear and Anxiety" dimension and the "Intrinsic Motivation to Experience Stimulation" dimension (r=.279). There is a positive correlation between the "Fear and Anxiety" dimension and the "Extrinsic Motivation İdentified Regulation" dimension (r=.127). There is a negative relationship between "Fear and Anxiety" and "Amotivation" dimension (r=-.291).

It has been observed that there is a positive correlation between the dimension of "Lack of Need" and "Intrinsic Motivation to Know" (r=.337). It has been concluded that there is a positive relationship between the dimension of "Lack of Need" and "Intrinsic Motivation to Accomplish" (r=.324). There is a positive relationship between the dimension of "Lack of Need" and "Intrinsic Motivation to Experience Stimulation" (r=.285). A positive correlation has been found between the "Lack of Need" and the "Extrinsic Motivation İdentified Regulation" dimension (r=.203). There is a negative relationship between the "Lack of Need" and the "Amotivation" dimension (r=-.273).

As a result of the data in Table 6, the highest level of relationship in the "Lack of Need" dimension in the relationship between attitudes towards graduate education and academic motivations is in the dimension of "Intrinsic Motivation to Know". In this direction, it has been concluded that preservice teachers who think graduate education as a need for the teaching profession want to learn new information and go to school with a focus on this.

In the "Desire and Want" dimension, a positive correlation has been found between the "Intrinsic Motivation to Know" and "Desire and Want" (r=223). A positive correlation has been found between the scores of "Intrinsic Motivation to Accomplish" and "Desire and Want" dimension (r=260). There is a positive relationship between the "Desire and Want" dimension and "Intrinsic Motivation to Experience Stimulation" (r=.182). On the other hand, there is a negative relationship with the dimension of "Amotivation" (r=-.181).

Discussion and conclusions

The fact that female preservice teachers are involved in the study supports a widespread perception that the teaching profession is considered more as a female profession (Çapa & Çil, 2000). As a result of this study, it has been concluded that female preservice teachers' attitudes towards graduate education are higher than male preservice teachers in terms of gender variable of preservice teachers. İlhan et al. (2012) and Sıvacı, Gülbahar and Çöplü (2018) have found no significant difference in the attitudes of preservice teachers towards graduate education in terms of gender variable in their studies. Ünal and İlter (2010) has found that women's attitude scores towards graduate education are higher in accordance with the study conducted in their

study. In the study conducted by Büyükgöze and Gelbal (2016), no difference has been observed regarding graduate education according to the gender variable. This difference may be due to the examination of different sample groups.

In the study, it has been determined that the attitude scores of the preservice teachers studying in the 1st grade in terms of the grade level variable were higher than the preservice teachers studying in the 3rd and 4th grades. In the previous studies conducted in the literature, a difference has been found in terms of the grade level variable. In their study, Demir and Beşoluk (2017) has found that the 1st graders have the lowest and 4th graders have the highest attitude score. Similarly, in the study conducted by İlhan et al. (2012), it has been determined that lower grades, except 4th graders, have higher attitudes towards graduate education and increased as the grade level increases. However, looking at this result, it can be said that the attitudes of preservice teachers towards graduate education decrease as the grade level increases. The reason for the decrease in these attitude scores may be test anxiety and fear of not being able to find a job.

When the data obtained are examined in terms of academic motivation, it has been concluded that the academic motivation levels of female preservice teachers are higher than the academic motivation levels of male preservice teachers. It has been observed that the intrinsic motivation levels of female preservice teachers in academic motivation are higher than the academic motivation levels of male preservice teachers. In the "Amotivation" dimension, it has been concluded that the academic motivation of male preservice teachers is higher than that of female preservice teachers. A similar result has been obtained in the study conducted by Gömleksiz and Serhatlıoğlu (2013), and it has been concluded that the views of preservice teachers on academic motivation differ according to their gender. Eymur and Geban (2011) state in their study that female students generally get higher scores than male students in all dimensions. As a result of the mentioned studies and the study, it can be said that the academic motivation of female students is higher than that of male students.

When examined in terms of grade level, it has been found that as the grade level increases, the "Amotivation" levels of the preservice teachers increase. Similarly, Eymur and Geban (2011) emphasize in the study they conducted that first-year students are more motivated than upper-classes, and as a result, first-year students may be more willing and eager to learn. In addition, as a result of the application of AMS at different levels, it has been concluded that intrinsic motivation decreases as the age progresses. It can be thought that this situation decreases the academic motivation of preservice teachers due to concerns such as exam anxiety and not being able to find a job. Or, the reason for the decrease in the academic motivation of preservice teachers may be the feeling of tiredness arising from academic studies.

As a result of the research, it has been determined that there is a positive relationship between the attitudes of preservice teachers towards graduate education and their academic motivations in the dimensions of "Intrinsic Motivation to Know", "Intrinsic Motivation to Accomplish", "Intrinsic Motivation to Experience Stimulation", "Extrinsic Motivation İntrojected Regulation", "Extrinsic Motivation İdentified Regulation" and "Extrinsic Motivation External Regulation". A negative correlation has been found between the scores of "Amotivation" and attitude towards graduate education. By looking at these results, it has been concluded that the attitudes of preservice teachers towards graduate education are directly proportional to their academic motivations.

Female preservice teachers have higher academic motivation than male preservice teachers.

There are also studies in the literature that give similar results (Alemdağ et al., 2014; Sıcak & Başören, 2015). The difficulty or ease of being assigned with the KPSS score from the department in which the preservice teachers study affects their academic motivation. A decrease has been observed in the academic motivation of preservice teachers as the grade level increases, and this gives a similar result in the study of Sıcak and Başören (2015). Motivation is a situation that can change depending on time and condition (Turner & Paris, 1995). Exam anxiety, not being able to find a job and being fed up with academic studies can be considered as the reason for the decrease in the academic motivation of preservice teachers.
There is a positive relationship between preservice teachers' attitudes towards graduate education and their academic motivations. It has been concluded that preservice teachers, who think graduate education as a need for the teaching profession, want to learn new information and go to school with a focus on this.

As a result of the research, it has been seen that preservice teachers are generally willing to do graduate education, their attitudes towards graduate education are positive and their academic motivations are high in the same direction. In other words, it can be said that the preservice teacher who goes to school in a motivated way wants to continue this in the next education level.

Recommendations

According to the results of the research, the reasons for the decrease in students' attitudes towards graduate education as academic qualifications increase can be examined in detail and faculty members can be informed. Additionally, educational activities can be carried out at school to increase the academic motivation of 4th-grade students. The reasons for male teacher candidates' lack of motivation can be investigated.

Similar studies with larger samples can be conducted in other regions of Turkey. Teacher candidates' attitudes towards postgraduate education and academic motivation levels can be tested using different variables. Finally, this study is quantitative. Qualitative research can be conducted on attitudes towards postgraduate education and academic motivations.

This research is limited because it was conducted with the participation of teacher candidates in 7 departments at Atatürk University Kazım Karabekir Faculty of Education, is limited to certain variables and is a quantitative study. This research is limited due to the participation of teacher candidates in 7 departments at Atatürk University Kazım Karabekir Faculty of Education.

Note

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