

Examining the Predictive Levels of Academic Self-Efficacy and Some Demographic Characteristics of Professional Anxiety of Physical Education and Sports Teacher Candidates

Gökhan Arıkan¹

¹ School of Physical Education and Sports, Harran University, Şanlıurfa, Turkey

Correspondence: Gökhan Arıkan, School of Physical Education and Sports, Harran University, Şanlıurfa, Turkey.
E-mail: arikangokhan@hotmail.com

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Abstract

This study aims to determine the levels of teacher and trainer candidates in the university education process, in line with the findings obtained in the dimensions of professional anxiety and self-efficacy and their sub-dimensions as a result of examining the professional anxiety and self-efficacy perceptions of teacher and trainer candidates. In this study in the screening model, the research group consisted of 311 trainer and physical education and sports teacher candidates, 135 women and 176 men, who studied at Harran University School of Physical Education and Sports in the fall semester 2017-2018. In line with the purpose of the study, the tests correlated to the teacher candidates' academic self-efficacy, the level of professional anxiety, some demographic characteristics of the teacher candidates, professional concerns, and academic self-efficacy were applied. The tools used for these tests are the "Teacher Candidate Anxiety Scale" adapted from Borich (1996) and developed by Saban, Korkmaz, and Akbaş (2004) and the "Academic self-efficacy scale" developed by Jerusalem and Schwarzer (1981). The adaptation, reliability, and validity study of the scale into Turkish was also applied by Yılmaz et al. (2007). Descriptive statistics and multiple regression analyses were performed on the data file formed by transferring the data collected within the scope of the study to the SPSS 22.0 program. Simultaneously, simple linear regression analyzes were conducted in which academic self-efficacy was accepted as the independent variable, and occupational anxiety was considered the dependent variable. In the study, the average score of teacher candidates' academic self-efficacy was determined as 21.44 high. Together, these variables explain 4% of the change in student-centered anxiety. Academic self-efficacy reveals 9% of the self-centered anxiety dimension, 6% of the task-centered anxiety dimension, and 5% of the student-centered anxiety dimension. It can be said that self-efficacy perceptions are predictors of professional anxiety levels for teacher candidates. It is believed that determining the reason for teacher candidates' low self-efficacy and anxiety scores in programs that train them in the education process and studies to be conducted on these reasons will positively affect the academic self-efficacy and professional anxiety levels of Physical Education and Sports Teacher candidates.

Keywords: self-efficacy, professional anxiety, physical education, teacher, sport

1. Introduction

Akpınar, Yıldız, and Ergin (2006), who combined the education system in three centers, determined these as students, teachers, and programs. When examined in terms of education, faculties in Turkey's universities provide education by their unique abilities to students who have obtained a specific score from the higher education entrance exam. Faculties select students by subjecting them to special talent exams on the dates they determine. Some faculties train trainers and teacher candidates in the field of physical education and sports. Most of the students of these faculties can see the reflections of the education they received after graduation. Even if students graduate with an academic degree, they will not achieve successful results without having knowledge and experience in the field, and without realizing it. However, the failure of successful, talented candidates to recognize or be aware of their gains may cause them to feel inadequate. It can be explained that this awareness is related to self-efficacy perception.

An individual's ability to perform his/her profession efficiently is also related to the belief that he/she can fulfill

the responsibilities of that profession and professional competence (Senemoğlu, 2009). Consequently, he described self-efficacy as “the decision of an individual about the ability to implement and achieve a job.” In their research, Koçak et al. (2019) stated that individuals experience problems in the professional field due to suspicion of knowledge and experience. They indicate that a high level of self-efficacy causes them to be more entrepreneurial, resilient, determined, willing, and least stressed. In contrast, low self-efficacy causes them to be more reluctant, weaker, and have lower performance. Besides, they express that the more they have self-efficacy, the more ready they will be for the profession.

Along with these, another personal situation that coaches and teacher candidates feel is occupational anxiety. When the Turkish Language Association dictionary was examined, anxiety was explained as “sorrow, worry, sadness or worried thinking: It is the feeling of tension that occurs with the feeling that something bad will happen most of the time and the reason for this feeling is unknown.”

Anxiety arises from people not having the expected level of knowledge and equipment or not being able to transfer them even if they have them. The trainer-teacher candidates’ fears and concerns about performing the profession increase as anxiety is at or above the expected level. It leads to a decrease in their excitement and courage. Examining anxiety in three main dimensions, Fuller (1969) stated that Profession and Occupational Anxiety are self-centered, task-centered student-centered, anxiety dimensions.

While the individual constitutes the main element of self-centered concerns, the main component of task-centered problems is the individual’s teaching task. Students are the main component of student-centered concerns. A teacher candidate’s feelings and thoughts who have student-centered anxiety are more student-centered during and before the education and training process. People with self-centered concerns worry about continuing the teaching profession efficiently and successfully. For this reason, he/she may feel under pressure and stress. Task-centered anxiety is a typical situation in education; the person’s motivation to perform the profession in the best way can cause him/her to show sensitivity in teaching.

On the other hand, there is the anxiety of being an excellent teacher in a task-oriented teacher candidate. For this reason, he/she begins to investigate how he/she can apply both technological tools, in-class materials, and new teaching methods (Fuller, 1969).

In this case, a relationship between the candidates’ self-efficacy beliefs and their anxiety can be mentioned. For trainer-teacher candidates or coaches-teachers, a relationship between the trainer-teacher candidates’ beliefs in themselves and their concern while performing their profession can be assumed. In his research, Semerci stated that among the teacher’s characteristics, the general culture, field knowledge, and teaching profession knowledge and the teacher’s affective reactions that will feed them are also influential (Semerci & Semerci, 2004).

This study aims to determine teacher and trainer candidates’ deficiencies of these factors in the university education process in line with the findings obtained in the dimensions of professional anxiety and self-efficacy and their sub-dimensions as a result of studying the professional anxiety and self-efficacy perceptions of teacher and trainer candidates. In that case, necessity can be observed for individuals who will perform the coaching and teaching profession about being primarily interested in their chosen profession. They should have an optimum level of concern concerning their career, a constructive attitude towards the profession of coaching and teaching, and a belief in self-efficacy regarding the practices in the education and training process.

2. Method

2.1 Research Model

The research was created in a survey model to determine the academic self-efficacy and professional concerns of Physical Education and Sports Teacher (PEST) candidates. Research approaches aiming to describe a situation that existed in the past as it was covered in the literature as scanning models (Karasar, 2011).

2.2. Research Group

The research group consisted of 135 women (43.4%) and 176 men (56.6%), 311 trainers, physical education, and sports teacher candidates studying at Harran University School of Physical Education and Sports in the fall semester of 2017-2018.

The following questions will be investigated in this study.

- 1) What is the academic self-efficacy of the teacher candidates?
- 2) What is the professional anxiety level of the teacher candidates?
- 3) To what extent do teacher candidates’ demographic characteristics predict their professional anxiety?

4) To what extent does teacher candidates' academic self-efficacy predict their professional concerns?

2.3 Materials

1) Data Collection Tools

2) Occupational anxiety scale

The study data were obtained through applying the "Teacher Anxiety Scale" developed by Saban, Korkmaz, and Akbaş (2004), and adapted from (Borich, 1996) in the classroom environment in about 20 minutes. The participants were asked to answer the questions in the scale using the Likert-type five-point grading format (1 = Not Worried, 2 = Very Little Worried, 3 = Partially Worried, 4 = Very Worried, 5 = Extremely Worried). The Teacher Candidate Anxiety scale consists of three parts (self-centered anxieties (SCA), task-centered anxieties (TCA), and student-centered anxieties (SuCA), and 45 items. The number of items for each section in the "Teacher Candidate Anxiety Scale" used in the study is 15. Items measuring self-centered anxieties are as follows: 2, 4, 8, 9, 13, 14, 18, 20, 24, 26, 28, 30, 32, 35, and 44. The items measuring task-centered anxiety are as follows: 1, 3, 6, 7, 10, 11, 12, 16, 21, 25, 27, 31, 33, 40, and 42. And items that measure student-centered anxiety as another dimension are: 5, 15, 17, 19, 22, 23, 29, 34, 36, 37, 38, 39, 41, 43 and 45. The highest score that can be achieved for each dimension in the scale is 75. Therefore, the higher the score value a teacher candidate gets from a factor, the higher the teacher candidate's occupational anxieties about that factor.

3) Academic Self-Efficacy Scale

The academic self-efficacy scale developed by Jerusalem and Schwarzer (1981) has seven items. One item in the scale is coded negatively, and it is the seventh item: "I usually don't know how to deal with the issues I need to learn while preparing for exams." The other six items were positively coded. Thus, the scale consists of a single factor. The items in the scale are according to the 4-point Likert type (1: It does not suit me at all; 2: It fits me very little; 3: It fits me; 4: It fits me completely). The Cronbach Alpha value of the scale was 0.87. The adaptation, reliability, and validity study of the scale to Turkish was conducted by (Yılmaz et al. 2007). In the survey conducted with 672 university students' participation, a single factor structure emerged, and the Cronbach Alpha value was 0.79. The academic self-efficacy level was high ($\bar{x} = 20, 43$) according to the findings. This situation was interpreted as the students' self-efficacy beliefs about their learning related to their fields are high. Besides, it was interpreted as a prediction that students can be successful in their area. It was stated that the Academic Self-Efficacy Scale was valid and reliable to determine the self-efficacy level of university students regarding their academic education.

In this study, the reliability analysis of the academic self-efficacy scale was formed with the scores obtained from the teacher candidates, and the reliability coefficient (Cronbach Alpha) was .70.

The reliability analysis of the occupational anxiety scale, another scale in the study, was performed with the scores obtained from the teacher candidates and the reliability coefficient (Cronbach Alpha) was .89 for the self-centered anxiety dimension, .88 for the task-centered anxiety dimension and .88 for the student-centered anxieties.

2.4 Data Analysis

Descriptive statistics and multiple regression analyses were performed on the data file formed by transferring the data collected within the scope of the study to the SPSS 22.0 program. Firstly, descriptive statistics were performed to determine the academic self-efficacy and professional anxiety levels of teacher candidates and mean, and standard deviation values were ascertained. Then, the Pearson Correlation Analysis was performed to find the relationship and directions among the variables in the study to test the assumptions required to make multiple regression analyses. Normality analysis and analysis of normality of errors, which are among the other premises, were made, and it was found that both analyses showed normal distribution. In the multiple regression analysis, while the demographic variables (age, gender, grade level and license or not) of teacher candidates were defined as independent variables, self-centered anxieties, task-centered anxieties and student-centered anxieties were determined as dependent variables. In the multiple regression analysis carried on the third research question, no various linearity among the independent variables were observed, which is one of the first assumptions. It was achieved with the Variance Amplification Factor (VIF) <10 and Tolerance Value > 0.2 in all independent variables. Multiple regression analysis is "an analysis conducted to reveal the relationship among a dependent (predicted) variable, and a set of predictor variables associated with it" (Can, 2016, p. 273). For the fourth research question, simple linear regression analyzes were performed in which academic self-efficacy was taken as the independent variable. The self-centered anxieties, task-centered anxieties and student-centered anxieties, which are sub-dimensions of occupational anxiety, were taken as dependent variables.

3. Results

In this section, the findings obtained for research questions are covered.

The demographic characteristics of physical education and sports teacher (PEST) candidates are given in Table 1.

Table 1. Distribution of teacher candidates by demographic characteristics

	N	%
Gender		
Female	135	43,4
Male	176	56,6
Sports License		
Available	199	64
Not available	112	36
Age Range		
18-20	173	55,6
21-23	100	32,2
24-26	27	8,7
27-29	11	3,5
Grade Level		
1.sınıf	148	47,6
2.sınıf	129	41,5
3.sınıf	34	10,9
Total	311	100

As seen in Table 1, 135 (43.4%) female and 176 (56.6%) male students participated in the research. 199 (64%) of these students have athlete licenses, while 112 (36%) do not have any athletes license. While 55.6% of the students participating in the study are between the ages of 18-20, only 3.5% are between the ages of 27-29. Regarding the distribution by grade levels, 148 (47.6%) students are in the first grade, 129 (41.5%) students are in the second grade, and 34 (10.9%) students are in the third grade.

Findings on the academic self-efficacy levels of PEST candidates are given in Table 2.

Table 2. Average and standard deviation values regarding academic self-efficacy

Scale	mean	sd
Academic Self-Efficacy	21.44	3.24

The findings obtained due to the analysis of the academic self-efficacy level of PEST candidates are given in Table 2. It can be assumed that teacher candidates' academic self-efficacy average score (\bar{x} :21.44) is high. The standard deviation value of the academic self-efficacy scores of the teacher candidates was taken as (S_x =3.24).

The findings of the occupational anxiety levels of PEST candidates are given in Table 3.

Table 3. Average and standard deviation values related to sub-dimensions of occupational anxiety

	mean \bar{x}	sd
Self-Centered Anxieties	60.65	11.32
Task-Centered Concerns	58.53	11.43
Student-Centered Concerns	60.08	11.34

The findings obtained by the analysis of the data about the self-centered anxiety, task-centered anxiety and student-centered anxiety, which are the sub-dimensions of the occupational anxiety of PEST candidates, are shown in Table 3. It can be said that they are too anxious in the self-centered anxieties dimension which is 15 items (\bar{x} :60.65), too anxious in the task-centered anxieties dimension which is 15 items (\bar{x} :58.53) and more

anxious in the incoming student-centered anxieties dimension which is 15 items (\bar{x} :60.08). While the dimension with the highest average of the teacher candidates is the self-centered anxieties dimension, the dimension with the lowest average is the task-centered anxieties dimension.

The correlation values among sub-dimensions of professional concerns, academic self-efficacy and demographic variables given in Table 4.

Table 4. Correlation values between sub-dimensions of occupational anxiety, academic self-efficacy and demographic variables

Variables	A	G	CS	L	SC	TC	STC
Age (A)	1						
Gender (G)	.231**	1					
Class (CS)	.264**	-.043*	1				
License (L)	.037	.154**	.149**	1			
Self-Centered Anxieties (SC)	-.019*	-.066*	.017*	.142*	1		
Task-Centered Concerns (TC)	-.035*	-.040*	.002*	.101*	.753**	1	
Student-Centered Concerns (STC)	-.045*	-.110*	-.002*	.009*	.772**	.727**	1

** $p < 0.01$ * $p < 0.05$.

The results of the Pearson Correlation analysis conducted to examine the relationships among variables are shown in Table 4. Therefore, the self-centered anxieties dimension has a low level of significant relationship with age in the negative direction ($r = -.019$, $p < 0.05$), a low level of significant relationship with gender in the negative direction ($r = -.066$, $p < 0.05$), a low level of positive correlation with the class ($r = .017$, $p < 0.05$), and a low level of positive correlation with undergraduate ($r = .142$, $p < 0.05$). The task-centered anxieties dimension has a low level of significant correlation with age ($r = .035$, $p < 0.05$). There is a low level of significant correlation with gender in the negative direction ($r = -.040$, $p < 0.05$), a low level of significant correlation with the class in the positive direction ($r = .002$, $p < 0.05$), and a low level of positive correlation with postgraduate ($r = .101$, $p < 0.05$). Student-centered anxieties dimension has a low level of negative correlation with age ($r = -.045$, $p < 0.05$), a low level of significant correlation with gender in the negative direction ($r = -.110$, $p < 0.05$), and a negative relationship with the class. There is a low level of significant relationship ($r = -.002$, $p < 0.05$), and a low level of positive correlation with postgraduate ($r = .009$, $p < 0.05$).

The results of multiple regression analysis related to some demographic variables predicting the occupational anxiety sub-dimensions of the PEST candidates are given in Table 5, 6 and Table 7.

Table 5. Multiple regression analysis related to the variables (demographic features) to predict self-centered anxiety dimension

Predictive Variables	<i>B</i>	<i>SH</i>	β	<i>t</i>	<i>p</i>
Constant	58.665	1.332	-	44.037	.00
Age	4.667	1.353	0.193	3.449	.00**
Gender	-2.298	1.279	-0.101	-1.796	.07
Class	-1.961	1.299	-0.085	-1.509	.13
Sport Licence	4.066	1.333	0.173	3.050	.00*
<i>N</i> =311	<i>R</i> = 0.26	<i>R</i> ² = 0.06			
<i>F</i> _(4,306) = 5.526	<i>p</i> = .00	* $p < 0.05$	** $p < 0.001$		

As a result of the multiple regression analysis performed to determine the extent to which variables such as age, gender, class level and undergraduate status, which are thought to affect the self-centered anxiety dimension, predict the self-centered anxiety dimension, the variables as mentioned above are showing a relationship ($R = 0.26$, $R^2 = 0.06$) ($F_{(4,306)} = 5.526$, $p < 0.001$). Together, these variables explain 6% of the change in the self-centered anxiety dimension. According to the standardized regression coefficients, the relative importance order of the predictor variables on the self-centered anxiety dimension is age (β : 0.193), undergraduate status (β : 0.173), gender (β : -0.101) and grade level (β : -0.085). When the significance tests of the regression coefficients are considered, it is recognized that only age and undergraduate status among the predictive variables are significant

predictors on the self-centered anxiety dimension.

Table 6. Multiple regression analysis of task-centered anxiety dimension predictor variables (demographic features)

Predictive Variables	<i>B</i>	<i>SH</i>	β	<i>t</i>	<i>p</i>
Constant	56.889	1.360	-	41.818	.00
Age	4.289	1.382	0.175	3.104	.00**
Gender	-1.546	1.307	-0.067	-1.183	.23
Class	-1.831	1.327	-0.079	-1.380	.16
Sport Licence	2.969	1.361	0.125	2.181	.03*
<i>N</i> =311	<i>R</i> = 0.21	<i>R</i> ² = 0.04			
<i>F</i> _(4,306) = 3.688	<i>p</i> = .00	* <i>p</i> <0.05	** <i>p</i> <0.001		

As a result of the multiple regression analysis performed to determine the extent to which variables such as age, gender, class level and undergraduate status, which are thought to affect task-centered anxiety dimension, predict task-centered anxiety dimension, the variables mentioned above were significant with task-centered anxiety dimension showed a relationship ($R=0.21$, $R^2=0.04$) ($F_{(4,306)}=3.688$, $p<0.001$). Together, these variables explain 4% of the change in task-centered anxiety. According to the standardized regression coefficients, the relative importance order of the predictor variables on the task-centered anxiety dimension is age ($\beta:0.175$), undergraduate status ($\beta:0.125$), class ($\beta:-0.079$) and gender ($\beta:-0.067$). When the significance tests of the regression coefficients are considered, it is recognized that only age and undergraduate status among the predictive variables are significant predictors on the task-centered anxiety dimension.

Table 7. Multiple regression analysis for predictive variables (demographic features) of student-centered anxiety dimension

Predictive Variables	<i>B</i>	<i>SH</i>	β	<i>t</i>	<i>p</i>
Constant	60.605	1.350	-	44.884	.00
Age	4.058	1.372	0.167	2.959	.00**
Gender	-2.840	1.297	-0.124	-2.190	.02*
Class	-2.092	1.317	-0.091	-1.588	.11
Sport Licence	1.018	1.351	0.043	0.753	.45
<i>N</i> =311	<i>R</i> = 0.21	<i>R</i> ² = 0.04			
<i>F</i> _(4,306) = 3.534	<i>p</i> = .00	* <i>p</i> <0.05	** <i>p</i> <0.001		

As a result of the multiple regression analysis performed to determine the extent to which variables such as age, gender, class level and undergraduate status, which are thought to affect student-centered anxiety dimension, predict student-centered anxiety dimension, the variables mentioned above were significant with student-centered anxiety dimension showed a relationship ($R=0.21$, $R^2=0.04$) ($F_{(4,306)}=3.534$, $p<0.001$). Together, these variables explain 4% of the change in student-centered anxiety. According to the standardized regression coefficients, the relative importance order of the predictor variables on the student-centered anxiety dimension is age ($\beta:0.167$), gender ($\beta:-0.124$), grade ($\beta:-0.091$) and undergraduate status ($\beta:0.043$). When the significance tests of the regression coefficients are considered, it is recognized that only age and gender variables among the predictive variables are significant predictors of the student-centered anxiety dimension.

The results of simple linear regression analysis related to the academic self-efficacy variable predicting the professional anxiety sub-dimensions of the PEST candidates are given in Tables 8, 9 and Table 10.

Table 8. Simple linear regression analysis of the predictive variable (academic self-efficacy) of self-centered anxiety dimension

Predictive Variables	<i>B</i>	<i>SH</i>	β	<i>t</i>	<i>p</i>
Constant	38.193	4.105	-	9.304	.00
Self-Efficacy	1.047	0.189	0.300	5.534	.00**
<i>N</i> =311	<i>R</i> = 0.30	<i>R</i> ² = 0.09			
<i>F</i> _(1,309) = 30.620	<i>p</i> = .00	* <i>p</i> <0.05	** <i>p</i> <0.001		

As a result of the simple linear regression analysis to determine to what extent academic self-efficacy predicted the self-centered anxiety dimension, academic self-efficacy was a significant predictor of the self-centered anxiety dimension ($R = 0.30$, $R^2 = 0.09$, $F_{(1,309)} = 30.620$, $p < .001$). Academic self-efficacy explains 9% of the self-centered anxiety dimension.

Table 9. Simple linear regression analysis of the predictive variable (academic self-efficacy) of task-centered anxiety dimension

Predictive Variables	<i>B</i>	<i>SH</i>	β	<i>t</i>	<i>p</i>
Constant	38.877	4.195	-	9.267	.00
Self-Efficacy	0.917	0.193	0.260	4.738	.00**
<i>N</i> =311	<i>R</i> = 0.26	<i>R</i> ² = 0.06			
<i>F</i> _(1,309) = 22.453	<i>p</i> = .00	* <i>p</i> <0.05	** <i>p</i> <0.001		

As a result of the simple linear regression analysis applied to determine to what extent academic self-efficacy predicted task-centered anxiety dimension, academic self-efficacy was a significant predictor of task-centered anxiety ($R = 0.26$, $R^2 = 0.06$, $F_{(1,309)} = 22.453$, $p < .001$). Academic self-efficacy explains 6% of task-centered anxiety.

Table 10. Simple linear regression analysis of the predictor variable (academic self-efficacy) of student-centered anxiety dimension

Predictive Variables	<i>B</i>	<i>SH</i>	β	<i>t</i>	<i>p</i>
Constant	43.288	4.199	-	10.309	.00
Self-Efficacy	0.783	0.194	0.224	4.046	.00**
<i>N</i> =311	<i>R</i> = 0.22	<i>R</i> ² = 0.05			
<i>F</i> _(1,309) = 16.372	<i>p</i> = .00	* <i>p</i> <0.05	** <i>p</i> <0.001		

As a result of the simple linear regression analysis to determine to what extent academic self-efficacy predicted the self-centered anxiety dimension, academic self-efficacy was a significant predictor of the self-centered anxiety dimension ($R = 0.22$, $R^2 = 0.05$, $F_{(1,309)} = 16.372$, $p < .001$). Academic self-efficacy explains 5% of the student-centered anxiety dimension.

4. Discussion and Conclusion

In all institutions and organizations, the most valuable resource is human (Mavi & Coşkun, 2017). In this respect, it is necessary to know the professional anxiety and self-efficacy perceptions of individuals in order to train a qualified teacher. In this part of the study, by determining the academic self-efficacy and professional anxiety levels of PEST candidates, the relationship between academic self-efficacy and occupational anxiety dimensions, some demographic characteristics and the power to predict professional anxiety, academic self-efficacy and professional anxiety was discovered. Information concerning the findings, results, discussions and recommendations regarding these data was given.

According to the analysis findings of the data about the occupational anxiety sub-dimensions of PEST candidates, self-centered anxiety, task-centered anxiety and student-centered anxiety, in the self-centered anxiety dimension, it can be assumed that they are highly anxious in terms of the scores they got from task-centered anxieties and student-centered anxieties. The dimension with the highest mean of PEST candidates is the self-centered anxieties dimension, while the dimension with the lowest average is the task-centered anxieties dimension.

In Turkey's conditions, the faculties of both physical education and sports teaching and coaching education have a high number of graduates, in addition to these, the existence of a highly competitive examination system may cause students studying in this field to feel anxiety about the future.

Trainer-teacher candidates are generally informed about the conditions of the training-teaching profession and what awaits them in line with the knowledge, skills and experiences they have gained during university education. However, students worry about their success in the profession, both before and after their appointment. In this case, it can be interpreted more generally that the level of anxiety (task-self-centered concerns) of the new trainer and teacher candidates that they will be able to fulfill their training or teaching duties at the desired level is higher than the student center.

When the significance tests of the regression coefficients are examined, it is recognized that only age and undergraduate status are significant predictors on the self-centered, student-centered, task-centered anxiety dimension. Academic self-efficacy reveals 9% of the self-centered anxiety dimension, 6% of the task-centered anxiety dimension, and 5% of the student-centered anxiety dimension. As a result of the multiple regression analysis performed to determine the extent to which variables, such as age, gender, grade level and undergraduate status, which are thought to affect the student-centered anxiety dimension, predicted the student-centered anxiety dimension, it was discovered that the student-centered anxiety dimension significantly exhibited a relationship. Together, these variables explain 4% of the change in student-centered anxiety. In this research, the average score of academic self-efficacy of teacher candidates was determined to be 21.44 high. Eroglu and Yildirim (2018), concluded that PEST candidates had an average score of 20.92 on the academic self-efficacy scale. In the study, it was discovered that PEST candidates' self-efficacy levels did not show a significant difference in terms of gender and class variables. Another study discovered that there was no significant difference in academic self-efficacy levels of students according to gender, department and grade variables (Donmuş et al., 2017; Eroğlu, Yıldırım, & Şahan, 2017; Tasdemir, 2019). In the survey, it was determined that the self-efficacy levels of the PEST candidates did not show a significant difference due to the age variable, but the higher the age level, the higher the self-efficacy scores.

Witte (2002) explained the failure to take measures to increase students' self-efficacy as a deficiency in terms of education on behalf of university students. In another study highlighting the significance of self-efficacy, they stated that the level of self-efficacy should be high to cope with the difficulties faced during university education (Braun & Gusy, 2006). Self-efficacy is higher when individuals frame their past achievements in a positive way (Chen & Usher, 2013). The higher the level of self-efficacy, the more willingness, effort and resistance in that individual. Also, self-efficacy levels affect individuals' thinking styles, problem-solving skills and psychological dimensions. Individuals with low self-efficacy think that events are more difficult or complicated than they appear. They approach events from a narrow perspective and are incapable of solving the problems encountered. Still, individuals with higher self-efficacy feel more secure and more robust in the sense of comfort in difficult and complicated jobs and events (Korkmaz, 2002). In the study, the academic self-efficacy scores of female teacher candidates were higher than the academic self-efficacy scores of male teacher candidates. Studies have revealed that teachers' self-efficacy beliefs are essential for educational activities (Çapri & Çelikkaleli, 2008). Highly competent teachers create suitable environments where students can demonstrate their skills, while teachers with low proficiency negatively affect students' beliefs in their cognitive abilities and skills (Gibson & Dembo, 1984; Cohn & Rosmiller, 1987; Woolfolk & Hoy, 1990; Woolfolk, Rosoff, & Hoy, 1990). People with high self-efficacy are more resistant and stronger against difficulties and more robust against stress and depression. In contrast, people with low self-efficacy have the characteristics of depression, stress, anxiety, and avoidance behavior. According to social cognitive theory, self-efficacy perception affects the level of anxiety in people (Bandura, 1988; Hefferon & Boniwell, 2011; Maddux, 2002). Self-efficacy beliefs, which are an assessment of the professional concerns resulting from the individual's concerns about how he/she displays his/her skills and abilities, should be regarded as a whole (Dadandı, Kalyon, & Yazıcı, 2016). In his study, Polat (2017) discovered a positive and significant relationship among the dimension of academic self-efficacy and lower failure perception of trait anxiety and academic achievement. As a result of the regression analysis, it was concluded that two factors explain about 10% of the change in academic achievement. Ünlü and Erbaş (2018) emphasized that this result achieved in their study was similar to the effects of some reviews in the literature. In their studies, they stated that gender is a significant variable on occupational anxiety. Also, the occupational anxiety levels of female and male physical education teacher candidates do not differ since both groups come from similar social, cultural backgrounds and have equal educational opportunities. The same study tested the predictivity of academic self-efficacy on the professional anxiety levels of physical education teacher candidates. He stated that PEST candidates' academic self-efficacy is a meaningful and essential predictor on their

professional anxieties. Namlı et al. (2018) discovered that the anxiety levels of male students towards gender were higher than that of female students. It was concluded that there was a significant difference in the general self-efficacy levels of university students according to their gender and that the widespread self-efficacy belief was higher in university boys than girls (Hırlak et al., 2017). Still, he pointed out that different results were observed in other studies.

Donmuş et al. (2017) determined that teacher candidates' academic self-efficacy significantly predicted their professional anxiety. These results are related to this study. In another study concerning the subject, a difference according to the academic achievement of teacher candidates according to their professional anxiety levels was stated (Sadıkoğlu et al., 2018). Pehlevan, Muştu, and Çepikkurt (2017) found a negative correlation between self-efficacy and professional anxiety in their study on the sample of physical education teacher candidates.

In their study, Kafkas et al. (2010) discovered that there was a significant difference in the self-efficacy status of teacher candidates, in terms of ensuring student participation, in the dimensions of teaching strategies and total scores according to the variable of licensed sports status. When the studies are considered, the results of the reviews on age, gender, class, department, undergraduate sports status or faculty variables differ. According to the researchers, they stated that these differences were caused by students from diverse social and cultural characteristics; that is, the university structure.

In the study, it was seen that the academic self-efficacy and professional anxiety levels of the PEST candidates were at a medium level. At the same time, there was no significant difference in terms of occupational anxiety levels in the examination by gender; the academic self-efficacy of male physical education teacher candidates was high. Besides, a high level of significant relationship was observed among academic self-efficacy and vocational, and academic self-efficacy was a substantial and significant predictor of professional anxiety. It has been observed that the academic self-efficacy levels of PEST candidates are essential on their anxiety towards physical education teaching.

Yıldırım (2015) indicated that teachers should have the competence belief demanded by the teaching profession in fulfilling their duties and responsibilities as well as having a good education. The fact that anxiety conditions are common among university students as a disorder and the increase in this situation prevents students from using their skills competently and causes a decrease in the quality of their education (Vitasari et al., 2010).

Participation of trainer and PEST candidates in application areas or projects related to the professional field and related courses, social and cultural activities, as well as scientific activities, such as student congresses, and reducing their academic self-efficacy and professional anxieties will also provide the increase of academic success. Also, it is believed that studies to be conducted by determining the reason for the low level of self-efficacy and anxiety scores of teacher candidates during the education process will positively affect the academic self-efficacy and professional anxiety levels of PEST candidates.

It is essential to increase the professional belief of PEST candidates and to reduce their anxiety disorders, to be ready for the post after graduation, to be able to use their professional competencies and to transfer what they have learned.

Besides, determining or predicting the level of professional anxiety and self-efficacy beliefs, studies to keep these factors at a high level in candidates are recommended during the learning process.

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