

THE EFFECT OF THE SELF-EFFICIENCY LEVELS OF UNIVERSITY STUDENTS IN HEALTH DEPARTMENTS FOR THE ANATOMY COURSE ON EXAM ANXIETY

SAĞLIK BÖLÜMLERİNDEKİ ÜNİVERSİTE ÖĞRENCİLERİNİN ANATOMİ DERSİNE YÖNELİK ÖZ YETERLİLİK DÜZEYLERİNİN SINAV KAYGISINA ETKİSİ

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ABSTRACT

Having an understanding of anatomy in many clinical applications facilitates its implementation. It is important to understand the extent to which self-efficacy and test anxiety influence students' performance in order to establish if the objectives of the anatomy course has been met. This study was conducted to compare the views of the students about the anatomy course and to evaluate the influence of self-efficacy level on test anxiety. This descriptive study includes 384 students studying at the Faculty of Medicine, Faculty of Health Sciences and Vocational School of Health Services during the 2021-2022 academic year. In this study; a questionnaire form, the Perception of Self-Efficacy Scale for Anatomy Class and the Test Anxiety Scale were used. According to the findings of the analyses, the students' willingness to choose the department of anatomy, self-efficacy levels and their outlooks towards the anatomy course according to their education level were found to be statistically significant ($p < 0.05$). The self-efficacy perception levels of the students enrolled in the Faculty of Medicine were observed to be higher than those in the undergraduate group ($p < 0.05$). Meanwhile, a statistically significant difference was found between students' test anxiety levels, gender, nationality, and willingness to choose the department ($p < 0.05$). In general, a strong negative correlation exists between the self-efficacy of the students participating in the research and their test anxiety. The results of this study reflect the relationship between students' anatomy self-efficacy and test anxiety. In line with the forthcoming research on this subject, it is believed that making anatomy education more permanent will contribute to the future training of competent health workers and reduce levels of occupational anxiety.

Keywords: Anatomy, Self-Efficacy, Student, Test Anxiety, Questionnaire.

ÖZET

Klinik birçok uygulamada anatomi bilimine hâkim olmak uygulayan kişinin işini kolaylaştırır. Anatomi dersinin ne derece hedeflerine ulaştığını belirlemek için öğrencilerin performansını etkileyen öz yeterlilik düzeyi ve sınav kaygı düzeyinin anlaşılması önemlidir. Bu çalışma, öğrencilerin anatomi dersi ile ilgili görüşlerinin karşılaştırılması ve öz yeterlilik düzeyinin sınav kaygısına etkisini belirlemek amacıyla yapılmıştır. Çalışmamız tanımlayıcı tipte olup, evrenini 2021 - 2022 Eğitim - Öğretim yılında Tıp Fakültesi, Sağlık Bilimleri Fakültesi ve Sağlık Hizmetleri Meslek Yüksekokulunda eğitim gören toplam 384 öğrenci oluşturmaktadır. Bu çalışmada; Anket Formu, Anatomi Dersine Yönelik Öz Yeterlilik Algısı ve Sınav Kaygısı Ölçeği kullanılmıştır. Analizler sonucunda elde edilen bulgulara göre, öğrencilerin anatomi öz yeterlilik düzeyleri bölümü isteyerek seçmesine ve eğitim durumuna göre anatomi dersine karşı tutumu istatistiksel olarak anlamlı bulunmuştur ($p < 0.05$). Tıp Fakültesi öğrencilerinin öz-yeterlilik algısı düzeylerinin lisans grubundaki öğrencilere göre daha yüksek olduğu görülmüştür ($p < 0.05$). Diğer yandan öğrencilerin sınav kaygısı düzeyleri, cinsiyetine, uyruğuna ve bölümü isteyerek seçme durumları istatistiksel olarak anlamlı farklılık bulunmuştur ($p < 0.05$). Genel olarak araştırmaya katılan öğrencilerin öz-yeterlilikleri ile sınav kaygısı arasında yüksek düzeyde negatif bir ilişki bulunmaktadır. Bu çalışmanın sonuçları öğrencilerin anatomi öz-yeterlilikleri ile sınav kaygısı arasındaki ilişkiyi yansıtmaktadır. Bu konuda yapılacak araştırmalar doğrultusunda, anatomi eğitimini daha kalıcı hale getirerek, ileride iyi sağlık çalışanları yetişmesine katkı sağlayacağı ve mesleki kaygı düzeylerini düşürebileceği düşünülmektedir.

Anahtar kelimeler: Anatomi, Anket, Öğrenci, Öz Yeterlilik, Sınav Kaygısı.

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Bu makaleye atıf yapmak için / Cite this article: Ece Y., Colak T. (2022). The Effect of the Self-Efficiency Levels of University Students in Health Departments for the Anatomy Course on Exam Anxiety. *Gevher Nesibe Journal of Medical & Health Sciences*, 7(21), 81-90. <http://doi.org/10.5281/zenodo.7389087>

INTRODUCTION

Anatomy, whose history predates that of medical treatment, is one of the most fundamental subjects of medical education. Vesalius also mentioned anatomy in his work called *Fabrica*, in which he defined anatomy as the primary foundation and input of all medical science (Demir, 2014). Anatomy is recognized as one of the most essential components of medical education (Farey, 2018; Haque, 2017; McLachlan, 2006). There are schools in Turkey which offer education in many distinct branches in the field of health. These include Faculties of Medicine, Faculties of Health Sciences and Vocational Schools of Health Services. In these educational institutions, anatomy lessons are offered alongside several other courses for the purpose of acquiring professional knowledge and skills (Demir, 2014). The anatomy course, the building block of medical science, serves as the basis for the courses that students should study in the following years (Abdullahi & Gannon, 2012; Mutluay & Açıkgöz, 2020). Anatomy, which has a great importance in the education of medicine and health sciences, is defined as the branch of science that studies the normal shape and structure of the human body, the organs that make up the body, and the structural and functional relations between these organs (Mutluay & Açıkgöz, 2020; Özcan & Vatansever (2018; Bolatlı, 2021). Anatomy is a hard-to-learn science comprised of Latin terms that must be repeated over and over again (Bolatlı, 2021). Due anatomical knowledge, communication between patients, doctors and healthcare professionals is improved during surgical procedures, emergency interventions, radiological procedures, and physical examinations (Demir, 2014; Çetkin et al. 2016). Health workers have an crucial role in improving the health of the population and promoting healthy living. For this reason, it is necessary to train health workers more effectively and efficiently, and to train health workers in this direction (Demir, 2014). Mastery of professional knowledge and skills in the field of basic medical sciences enables healthcare professionals to have high self-confidence in their profession and succeed in the procedures they will perform on patients (Erdem, 2020).

In order to determine whether the anatomy education process achieves its learning goals, it is necessary to understand the level of self-efficacy that affects the student's performance. Self-efficacy is defined as “the individual's perception that he or she can organize the necessary activities to be successful in a certain job” (Adal & Yavuz, 2017). Self-efficacy, which is one of the fundamental components of Bandura's social learning theory, is one of the basic concepts that she believes influence behavior. An individual's perception of self-efficacy is an crucial determinant in initiating and sustaining health-promoting behaviors (Lök et al., 2009). The success of students in education is affected by numerous mental, emotional and environmental factors. One of these factors is test anxiety (Maier et al., 2021; Koca & Dadandı, 2019). People experience anxiety when they believe they are unable to complete a task (Çetin & Ece, 2021). Exam anxiety, which is considered as a situation-specific type of anxiety, is viewed as an unpleasant and exciting situation experienced by an individual in an exam or evaluation setting (Adal & Yavuz, 2017; Koca & Dadandı, 2019; Yılmaz, 2018). Test anxiety is a common phenomenon in universities which has the potential to hinder students' academic performance (Bischofsberger et al., 2021).

The aim of this research is to examine the relationship between the self-efficacy perceptions of the university students in health departments towards the anatomy course and their test anxiety levels, as well as to determine students' self-efficacy and test anxiety levels in relation to variables such as curriculum, gender, age, nationality, willingness to choose the department they study, and weekly course hours.

MATERIALS AND METHODS

The questionnaires used in the study were given to the students studying at Sakarya University Faculty of Medicine, Faculty of Health Sciences, and Vocational School of Health Services and taking anatomy lessons during 2021-2022. The study was approved by the Sakarya University Non-Interventional Studies Ethics Committee. In order to increase the reliability of the questionnaire's feedback, the students were instructed not to include their names on the questionnaire. This descriptive study included a total of 384 participants, 125 (32.6%) from Sakarya University Faculty of Medicine, 83 (21.6%) from Health Sciences Faculty Midwifery Department, 176 (45.8%) from the Health Services Vocational School. It was sought to compare the students' views on the anatomy course, how it should be taught, and to determine the effect of self-efficacy levels on test anxiety and whether the allotted education period is sufficient.

Data Collection

For data collection; a questionnaire form, the Self-efficacy Perception Scale for Anatomy Class and the Test Anxiety Scale were used. Answering the questionnaire took approximately 15 minutes.

Survey Form

The survey consists of a total of 6 questions covering introductory features such as age, gender, educational status, nationality, willingness to choose the department they study, and weekly lesson hours.

Self-Efficacy Perception Scale for Anatomy Lesson

In Bahçeci's (2006) doctoral dissertation, the scale consisted of 35 items that were thought to affect students' self-efficacy regarding the anatomy course, and these were converted into an Equivalent 5-point Likert scale. The developed scale was evaluated by three experts, one of whom is a Turkologist and two of whom are field educators, for its structure, scope and language validity. Following the validity study, while the expressions of some items were changed, some items were removed completely and the draft scale was reduced to 30 items. The Cohen Kappa coefficient of the 30-item scale was calculated as 0.74. The remaining items were subjected to factor analysis. At the end of the analysis, items with an item load value of less than 0.40 and undifferentiated items (with a difference between load values of less than 0.10) were eliminated from the scale; 6 of them were negative and 20 were positive. A total of 26 items consisting of expressions was formed. The reliability coefficient of the scale was calculated as Cronbach's Alpha (α)=0.84 (18). In our study, 76 Cronbach's Alpha (α) were detected.

Exam Anxiety Scale

Item pool, the scale developed by Baltaş (1999), is in a five-point Likert type based on 50 anxiety statements. Reliability analysis was conducted with the participation of 206 undergraduate students studying in Nursing, Physical Education Teaching and Science Teaching. The data obtained from the application were subjected to factor analysis, and 12 items were removed from the scale because the item load value was lower than 0.40, and 4 items were undifferentiated (overlapping) items. The remaining 34 items were loaded as five sub-dimensions ranging from 0.41 to 0.74. The internal reliability coefficient of the scale was calculated as Cronbach's Alpha (α)=0.87 (Bahçeci, 2006). In our study, 90 Cronbach's Alpha (α) was detected.

Data Analysis

In the study, descriptive features are presented as numbers (n) and percentages (%). For the analysis of the data obtained, t-test for comparing the mean of two independent groups, one-way analysis of variance (ANOVA) and Pearson Product-Moment Correlation Coefficient statistical techniques were utilized. The statistical significance threshold in our study was recognized as $p < 0.05$.

RESULTS

In our study, in order to examine the relationship between the anatomy self-efficacy perceptions of students in health departments and their exam anxiety, the obtained data were analyzed with the techniques described in the method section, the findings were tabulated and comments were made according to the tables. Demographic characteristics of the participants are given in Table 1.

Table 1. Demographic Characteristics of the Participants

		N	%
Gender	Male	92	24.0
	Female	292	76.0
Nationality	T.R.	339	88.3
	Other	45	11.7
Weekly Lesson Hour	3 hour	258	67.2
	10 hour	126	32.8
Willingly Choosing the Department	Yes	317	82.6
	No	67	17.4

Educational Status	Associate degree	176	45.8
	Undergraduate	83	21.6
	Faculty of Medicine	125	32.6
Total		384	100

The mean age of the students included in the study was 19.45 years (18–24). In the sample group of the study, 76% of the 384 participants were female, 88.3% were Turkish citizens, 67.2% had 3 hours of the anatomy class per week, 82.6% chose the department they studied voluntarily, 45.8% had an Associate's Degree, 21.6% were undergraduates, and % 32.6 of them were Medical Faculty students. The participants' responses to the anatomy self-efficacy perception scale provide information about the anatomy self-efficacy perception level of the students.

Table 2. T-test Analysis of Self-Efficacy Perception According to Gender

	Gender	N	$\bar{x} \pm Sd$	t	p
Self-Efficacy	Male	92	2.96±.503	-1.574	.116
	Female	292	3.05±.451		
A sense of confidence in knowledge in anatomy	Male	92	3.00±.475	-1.489	.137
	Female	292	3.09±.508		
To be aware of the application skill in anatomy	Male	92	2.96±.804	-.759	.448
	Female	292	3.02±.586		
Transforming theoretical knowledge into a life skill in anatomy	Male	92	2.90±.633	-1.349	.178
	Female	292	3.00±.649		

* p<.05

Examining Table 2 is reveals no statistically significant difference between the general average of the students' self-efficacy scale and the gender variable ($p>0.05$). As a result of the t test conducted between all sub-dimensions of the self-efficacy scale of the students participating in the research and the gender variable; no statistically significant difference was found ($p>0.05$). The participants' responses to the test anxiety scale provide information about the test anxiety levels of the students.

Table 3. T-test Analysis of Exam Anxiety by Gender

	Gender	N	$\bar{x} \pm Sd$	t	p
Exam Anxiety	Male	92	3.01±.692	-2.262	.025
	Female	292	3.20±.665		
Opinion of Others	Male	92	2.87±.914	-3.736	.000
	Female	292	3.28±.935		
Your Opinion	Male	92	2.54±.943	.296	.767
	Female	292	2.51±.900		
Worries about the Future	Male	92	3.48±.911	-.228	.820
	Female	292	3.50±.784		
Concerns about preparing and General Exam Anxiety	Male	92	3.42±.704	-1.784	.075
	Female	292	3.57±.704		
Mental and Bodily Reactions	Male	92	3.59±.749	-.809	.419
	Female	292	3.66±.766		

* p<.05

Examining Table 3 is reveals a statistically significant relationship between the general averages of the test anxiety scale of the students within the scope of the study and the gender variable ($t= -2.262$, $p<0.05$). It was observed that female participants had higher test anxiety than male participants. It has been determined that there is a significant difference between the opinions of others in the test anxiety scale of the participants and the gender variable ($t= -3.736$, $p<0.05$).

Table 4. T-test Analysis of Self-Efficacy Perception by Nationality

	Nationality	N	$\bar{x} \pm Sd$	t	p
Self-Efficacy	T.C.	339	3.02±.479	-6.00	.549
	Other	45	3.07±.348		
A sense of confidence in knowledge in anatomy	T.C.	339	3.07±.513	.418	.676
	Other	45	3.04±.410		
To be aware of the application skill in anatomy	T.C.	339	2.98±.661	-2.683	.009
	Other	45	3.19±.461		
Transforming theoretical knowledge into a life skill in anatomy	T.C.	339	2.98±.661	-.038	.964
	Other	45	2.98±.525		

* p< .0

Examining Table 4 reveals no statistically significant difference between the general average scores of the students' self-efficacy scale and the nationality variable ($p>0.05$). As a result of the t test conducted between all sub-dimensions of the self-efficacy scale of the participants and the nationality variable; no statistically significant difference was found ($p>0.05$).

Table 5. T-test Analysis of Exam Anxiety by Nationality

	Nationality	N	$\bar{x} \pm Sd$	t	p
Exam Anxiety	T.R.	339	3.11±.674	-3.513	.000
	Other	45	3.48±.603		
Opinion of Others	T.R.	339	3.14±.965	-3.158	.002
	Other	45	3.51±.708		
Your Opinion	T.R.	339	2.43±.887	-5.500	.000
	Other	45	3.19±.792		
Worries about the Future	T.R.	339	3.48±.829	-1.032	.303
	Other	45	3.61±.697		
Concerns about preparing and General Exam Anxiety	T.R.	339	3.53±.700	-.400	.690
	Other	45	3.57±.760		
Mental and Bodily Reactions	T.R.	339	3.63±.759	-1.019	.309
	Other	45	3.75±.786		

* p< .05

Examining Table 5 reveals a statistically significant difference between the general averages of the test anxiety scale and the nationality variable ($t= -3.513$, $p<0.05$). According to the table, there is a significant difference between the sub-dimension of the opinion of others and themselves on the test anxiety scale and the nationality variable ($t= -3.158$, $t=-5,500$ $p<0.05$). Based on these findings, it can be said that exam anxiety is higher in foreign students than in Turkish students. According to the table, no significant difference was found between the anxiety about the exam, worries about preparing for the test anxiety scale, and the general test anxiety, mental and physical reactions sub-dimension, and the nationality variable. ($p>0.05$).

Table 6. T-test Analysis of Self-Efficacy Perception According to Weekly Class Hours

	Weekly Class Hours	N	$\bar{x} \pm Sd$	t	p
Self-Efficacy	3 hour	258	3.05±.441	1.379	.169
	10 hour	126	2.98±.510		
A sense of confidence in knowledge in anatomy	3 hour	258	3.11±.473	2.272	.024
	10 hour	126	2.98±.548		
To be aware of the application skill in anatomy	3 hour	258	3.01±.593	.176	.860
	10 hour	126	3.00±.741		
Transforming theoretical knowledge into a life skill in anatomy	3 hour	258	3.00±.640	.979	.328
	10 hour	126	2.93±.658		

* p< .05

Examining Table 6 is revealed no statistically significant difference in terms of the general average scores of the students' self-efficacy scale and the weekly course hour variable ($p>0.05$). As a result of the t test conducted between all sub-dimensions of the self-efficacy scale of the participants and the weekly course hours variable; there was no statistically significant difference ($p>0.05$). In the light of these findings, the self-efficacy perception levels of the participants do not show a significant difference according to the weekly course hours.

Table 7. T-test Analysis of Exam Anxiety by Weekly Class Hours

	Weekly Class Hours	N	$\bar{x} \pm Sd$	t	p
Exam Anxiety	3 hour	258	3.18±.704	1.031	.303
	10 hour	126	3.10±.613		
Opinion of Others	3 hour	258	3.24±.988	1.902	.058
	10 hour	126	3.06±.840		
Your Opinion	3 hour	258	2.50±.936	-.539	.590
	10 hour	126	2.55±.855		
Worries about the Future	3 hour	258	3.49±.814	.060	.952
	10 hour	126	3.49±.820		
Concerns about preparing and General Exam Anxiety	3 hour	258	3.56±.705	.945	.345
	10 hour	126	3.48±.708		
Mental and Bodily Reactions	3 hour	258	3.66±.785	.639	.523
	10 hour	126	3.61±.715		

* $p < .05$

Examining Table 7 reveals no statistically significant difference between the general average scores of the test anxiety scale of the students within the scope of the study and the weekly course hour variable ($p>0.05$). As a result of the t test conducted between all sub-dimensions of the test anxiety scale of the students participating in the research and the weekly course hour variable, no statistically significant difference was found ($p>0.05$).

Table 8. T-test Analysis of Self-Efficacy Perception According to Willingly Choosing Department

	Willingly Choosing the Department	N	$\bar{x} \pm Sd$	t	p
Self-Efficacy	Yes	317	3.07±.457	3.843	.000
	No	67	2.83±.457		
A sense of confidence in knowledge in anatomy	Yes	317	3.08±.503	1.083	.279
	No	67	3.00±.492		
To be aware of the application skill in anatomy	Yes	317	3.06±.636	3.660	.000
	No	67	2.75±.621		
Transforming theoretical knowledge into a life skill in anatomy	Yes	317	3.05±.626	4.693	.000
	No	67	2.65±.642		

* $p < .05$

Examining Table 8 is examined reveals a statistically significant difference between the general average scores of the students' self-efficacy scale and the variable of choosing their department willingly ($t=3.843$, $p<0.05$). As a result of the t test conducted between the sub-dimensions of being aware of the application skills of the students participating in the research in the subject of anatomy and transforming theoretical anatomical knowledge into a life skill, and the variable of choosing the department willingly; a statistically significant difference was found ($t=3.660$, $t=4.693$, $p<0.05$). According to the table, no significant difference was found between the self-efficacy scale and the sub-dimension of confidence in anatomical knowledge and the student's willingness to choose the department ($p>0.05$).

Table 9. T-test Analysis of Exam Anxiety by Willingly Choosing the Department

	Willingly Choosing the Department	N	$\bar{x} \pm Sd$	t	p
Exam Anxiety	Yes	317	3.11±.663	-2.414	.016
	No	67	3.33±.712		
Opinion of Others	Yes	317	3.15±.939	-1.305	.193
	No	67	3.32±.967		
Your Opinion	Yes	317	2.46±.886	-2.746	.006
	No	67	2.79±.973		
Worries about the Future	Yes	317	3.45±.773	-2.301	.022
	No	67	3.70±.968		
Concerns about preparing and General Exam Anxiety	Yes	317	3.50±.701	-1.770	.078
	No	67	3.67±.720		
Mental and Bodily Reactions	Yes	317	3.62±.749	-1.414	.158
	No	67	3.76±.816		

* p< .05

Examining Table 9 reveals a statistically significant difference between the general averages of the test anxiety scale of the students within the scope of the research and the variable of willingly choosing the department (t= -2.414, p<0.05). According to the table, it has been determined that there is a significant difference between the self-view and worries about the future sub-dimension of the test anxiety scale and the variable of choosing the department voluntarily (t= -2.746, t=-2.301, p<0.05). No significant difference was found between the opinions of others, worries about preparation and test anxiety, mental and physical reactions sub-dimensions of the test anxiety scale in the table, and choosing the department voluntarily. (p >0.05).

Table 10 displays the results of the ANOVA test, which was conducted to determine whether differences exist between students' levels of education and self-efficacy perceptions.

Table 10. ANOVA Test for Perception of Self-Efficacy by Educational Status

	Educational Status	N	$\bar{x} \pm Sd$	f	p	Difference
Self-Efficacy	Associate degree(a)	176	3.01±.452	2.882	.005	c-b
	Undergraduate(b)	83	3.13±.408			
	Faculty of Medicine(c)	125	2.97±.509			
A sense of confidence in knowledge in anatomy	Associate degree(a)	176	3.06±.434	5.138	.006	c-b
	Undergraduate(b)	83	3.21±.533			
	Faculty of Medicine(c)	125	2.98±.550			
To be aware of the application skill in anatomy	Associate degree(a)	176	2.97±.625	1.473	.230	
	Undergraduate(b)	83	3.11±.508			
	Faculty of Medicine(c)	125	2.99±.740			
Transforming theoretical knowledge into a life skill in anatomy	Associate degree(a)	176	3.00±.661	.674	.510	
	Undergraduate(b)	83	3.01±.602			
	Faculty of Medicine(c)	125	2.92±.654			

* p< .05

Examining Table 10 reveals a significant difference between the scores of the participants regarding the perception of self-efficacy and their education level (p <0.05). According to the table, there is a significant difference between the students of the Faculty of Medicine and the students of the undergraduate department in the level of confidence in their anatomical knowledge (p <0.05). When these findings are evaluated in general, it can be stated that the self-efficacy perception levels of the students in the Faculty of Medicine group are higher than those in the undergraduate group. According to the table, no significant difference was found between associate degree students and medical and undergraduate students in terms of self-efficacy.

Table 11. ANOVA Test for Exam Anxiety According to Educational Status

	Educational Status	N	$\bar{x} \pm Sd$	f	p	Difference
Exam Anxiety	Associate degree(a)	176	3.14±.717	1.756	.174	
	Undergraduate(b)	83	3.27±.673			
	Faculty of Medicine(c)	125	3.09±.609			
Opinion of Others	Associate degree(a)	176	3.19±.971	2.734	.066	
	Undergraduate(b)	83	3.36±1.02			
	Faculty of Medicine(c)	125	3.05±.835			
Your Opinion	Associate degree(a)	176	2.45±.992	.892	.411	
	Undergraduate(b)	83	2.61±.800			
	Faculty of Medicine(c)	125	2.55±.854			
Worries about the Future	Associate degree(a)	176	3.43±.830	1.648	.194	
	Undergraduate(b)	83	3.63±.765			
	Faculty of Medicine(c)	125	3.48±.821			
Concerns about preparing and General Exam Anxiety	Associate degree(a)	176	3.59±.707	1.114	.329	
	Undergraduate(b)	83	3.49±.697			
	Faculty of Medicine(c)	125	3.48±.710			
Mental and Bodily Reactions	Associate degree(a)	176	3.66±.809	.272	.762	
	Undergraduate(b)	83	3.66±.734			
	Faculty of Medicine(c)	125	3.60±.715			

* p < .05

According to Table 11, no significant difference was found between the level of test anxiety and educational status ($p > 0.05$). Evaluating this table is evaluated as a whole, it can be concluded that the test anxiety levels of Associate, Undergraduate and Medical Faculty students are the same.

Table 12. Pearson Product Moments Correlation Test

		Exam Anxiety
Self-Efficacy	r	-.019
	p	.704

According to the Pearson correlation analysis presented in Table 12, it has been determined that there is a high level of negative inverse relationship between the self-efficacy and test anxiety of the participants ($r = -.019$; $p > .05$).

DISCUSSION

According to the research, individuals with a high perception of self-efficacy exert more effort to achieve a task, do not immediately give up when faced with negativities, and act persistently, constructively and patiently (Adal & Yavuz, 2017). There are studies that demonstrate the self-efficacy belief scale's applicability in the field of education (Taşdemir, 2018; Çolak 2016; Çolak et al., 2016). This study examined the relationship between the anatomy self-efficacy perceptions of students in health departments and their test anxiety levels and the students' self-efficacy and test anxiety levels were determined according to variables such as gender, nationality, weekly course hours, willingness to choose the department, and educational status.

In this study, the relationship between the anatomy self-efficacy perceptions of students in health departments and their test anxiety levels was examined and the students' self-efficacy and test anxiety levels were determined according to variables such as gender, nationality, weekly course hours, willingness to choose the department, and educational status (Lök et al., 2009).

Considering the self-efficacy and gender variable in our study, it was found that there was no significant difference in the self-efficacy perception levels of participants according to gender. Exam anxiety and the importance of others' opinions were found to be higher in women than in men, when evaluated in terms of gender. In the light of this finding, it can be said that the anatomy self-efficacy perception levels of male and female participants do not differ and that gender is not an important variable in terms of anatomy self-efficacy perception. In the analysis conducted within the scope of our study, it was found that men and women had the same level of self-efficacy in anatomy lessons.

In Bischofsberger et al.'s study, the prevalence rates of the "emotional", "anxiety", "intervention" and "lack of confidence" components of anatomy test anxiety in first-year medical students were determined and the general and subscale mean scores were compared. Approximately 50% of the study participants showed significant test anxiety in at least one component during the observation period (Bischofsberger et al., 2021).

In their studies that investigated the relationship between test anxiety, self-efficacy and mental images in university students, Maier et al. demonstrated that test anxiety was positively related to mental image interference (IFES) and negatively related to self-efficacy (Maier et al., 2021).

In their study in which they investigated the relationship between test anxiety in medical school students and students in different departments, Cipra et al. stated that female students had higher test anxiety than their male counterparts (Cipra & Müller-Hilke, 2019). In our study, it was observed that test anxiety and the importance of others' opinions were more prevalent in women than in men. Self-perception, worries about the future, worries about preparation and general test anxiety, mental and physical reaction levels did not show a significant difference according to gender.

In their study, Demir et al. deemed this request important when evaluating the subject of whether the students came voluntarily made their department preferences (Demir, 2014).

In our study, we found that there was no significant difference when the participants were evaluated in terms of their willingness to choose their department, their self-efficacy perception levels and their level of confidence in anatomical knowledge. We discovered that there was a significant difference between the level of being aware of the practical skills in anatomy and transforming the theoretical anatomical knowledge into a life skill, as the participants willingly chose the department.

In our study, it was found that each nationality's self-efficacy in anatomy courses was at the same level. In terms of exam anxiety, the opinions of others' and one's own opinions were found to be more significant for foreign students than in Turkish students.

In our study, no significant difference was found in the self-efficacy perception and test anxiety levels of the participants according to the weekly course hours.

In their study in which they examined the Anatomy Self-Efficacy Belief levels of undergraduate and associate degree students, Acar et al. reported no significant difference (Acar vd., 2017).

When the findings of our study are evaluated in general, it can be said that the self-efficacy perception levels of the students of the Faculty of Medicine are higher than those of undergraduate students. We found that there was no significant difference between self-efficacy levels in associate degree students and medical and undergraduate students. We observed that the test anxiety levels of associate, undergraduate and medical faculty students are the same. We can attribute this result to the more superficial expression of anatomical education given at the Associate Degree level compared to that of the Medicine and Undergraduate Levels.

CONCLUSION

As a result, our study revealed a significant negative correlation between the self-efficacy of students in health departments and their test anxiety. In line with forthcoming research on this subject, it is believed that making anatomy education more permanent will contribute to the future training of competent health workers and reduce levels of occupational anxiety.

Acknowledgement

Thank you to all students who volunteered to participate in our research.

Author Contributions

Plan, design: TÇ, YE; Material, methods and data collection: TÇ, YE; Data analysis and comments: TÇ, YE; Writing and corrections: TÇ, YE

Conflict of interest

The authors report no actual or potential conflicts of interest.

Funding

This study did not receive any specific grant or funding.

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