VETERİNER HEKİMLER DERNEĞİ DERGİSİ

JOURNAL OF THE TURKISH VETERINARY MEDICAL SOCIETY

Araştırma Makalesi / Research Article

Structural determination of the relationship between trait anxiety and personal indecisiveness for undergraduates of the faculty of veterinary medicine: The case of Selçuk University

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ABSTRACT:

In this study, it was aimed to determine the relationship between trait anxiety and personal indecisiveness of undergraduate students of the Faculty of Veterinary Medicine. For this purpose, a questionnaire was applied to 244 undergraduate students at Selcuk University Faculty of Veterinary Medicine. Trait anxiety and personal indecisiveness scales were used for this questionnaire. The Cronbach's Alpha (α) coefficient was calculated as 0.798 for the trait anxiety scale and 0.929 for the personal indecisiveness scale. After the factors were determined by explanatory factor analysis, they were tested by confirmatory factor analysis to test the appropriateness of factor structures. Chi-square test, RMSEA, GFI and CFI fit indices were used in confirmatory factor analysis. For the results obtained from indices of fit, the chi-square test was calculated as 1.621, RMSEA 0.051, GFI 0.851, CFI 0.930. The model obtained according to the fit index values was found to fit well. As a result, there was a correlation between students' trait anxiety and personal indecisiveness. As a result of our findings, it was revealed that trait anxiety of students affected the decision-making processes. By carrying out similar studies annually within the universities, positive or negative aspects for the personal development of students can be determined, and it can be ensured that they become healthy physicians in the future. The results can give an idea to the managers about decisions concerning some improvements and developments in universities.

Veteriner fakültesi lisans öğrencileri için sürekli kaygı ve kişisel kararsızlık arasındaki ilişkinin yapısal olarak belirlenmesi: Selçuk Üniversitesi örneği

ÖZET:

Bu çalışmada Veteriner Fakültesi lisans öğrencilerinin sürekli kaygı ile kişisel kararsızlık arasındaki ilişkinin belirlenmesi amaçlanmıştır. Bu amaçla Selçuk Üniversitesi Veteriner Fakültesi'nde 244 lisans öğrencisine anket uygulanmıştır. Bu ankette sürekli kaygı ve kişisel kararsızlık ölçekleri kullanılmıştır. Cronbach Alpha (α) katsayısı sürekli kaygı ölçeği için 0.798, kişisel kararsızlık ölçeği için 0.929 olarak hesaplanmıştır. Faktörler açıklayıcı faktör analizi ile belirlendikten sonra faktör yapılarının uygunluğunu test etmek için doğrulayıcı faktör analizi ile test edilmiştir. Doğrulayıcı faktör analizinde ki-kare testi, RMSEA, GFI ve CFI uyum indeksleri kullanılmıştır. Uyum indekslerinden elde edilen sonuçlar için ki-kare testi 1.621, RMSEA 0.051, GFI 0.851, CFI 0.930 olarak hesaplanmıştır. Uyum indeksi değerlerine göre elde edilen modelin iyi uyum sağladığı görülmüştür. Sonuç olarak, öğrencilerin sürekli kaygısı ile kişisel kararsızlığı arasında bir ilişki vardı. Bulgularımız sonucunda öğrencilerin sürekli kaygılarının karar verme süreçlerini etkilediği ortaya çıkmıştır. Üniversiteler bünyesinde her yıl benzer çalışmalar yapılarak öğrencilerin kişisel gelişimlerine yönelik olumlu veya olumsuz yönleri tespit edilebilir ve ileride sağlıklı hekimler olmaları sağlanabilir. Sonuçlar, üniversitelerdeki bazı iyileştirme ve gelişmelere ilişkin kararlar konusunda yöneticilere fikir verebilir.

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1. Introduction

Anxiety is one of the basic emotions that affect our lives in many social, emotional and mental issues, from early ages when we start making certain decisions to the end of our lives. People may feel anxious when they experience a dangerous situation for various reasons (25). Anxiety is examined in two stages as state anxiety and trait anxiety. State anxiety is anxiety experienced when encountering an unwanted event. Trait anxiety is the type of anxiety that causes us to overreact for any reason. (24). While state anxiety is a temporary state, trait anxiety is a situation that causes a person to misdirect and feel uneasy throughout his life. According to the indications of Arslan (1), Addington (1995) stated that he argued the person did not know how to act in such a situation. This situation may cause the person to make the wrong decisions or to remain indecisive when they need to decide (18).

Indecisiveness is a situation of inability to decide between options or dissatisfaction with the decision made. This situation causes people to have difficulty and anxiety while making decisions. The indecisiveness is examined in two stages. Impetuous indecisiveness is a type of indecisiveness that a person gives to get rid of the options as soon as possible without examining them, and then tries to change them because of uncomfortable with this decision. Exploratory Indecisiveness is a type of indecisiveness that cannot be decided by examining all the options in detail (4).

University life is one of the most critical periods for forming and determining their future. During this period, students make crucial decisions for the rest of their life. Trait anxiety about essential issues such as job choice, friendships, plans and responsibilities related to the place they want to be can cause problems in the decisions of the person and significantly affect their future (11). Family is one of the major factors contributing to this situation. The pressure on the child because of the family's structure, expectations and perfectionist way of thinking play an important role in deciding. These are the most important factors affecting their anxiety level. Also, this pressure created by the family creates various problems for students, and the trait anxiety that occurs seriously affects the situation of the student psychologically (34).

The trait anxiety causes misunderstandings and emotional weariness. Çolak and Doğan (12) stated that controlling one's behaviours would provide control of sadness, and therefore, the condition of trait anxiety would also decrease. This allows the person to make more precise decisions by being less concerned about their decisions.

Anxiety is an emotion that also affects a student's success. In the research of Ergene (14), it was revealed that there is a positive linear relationship between anxiety and success. Aydın and Tiryaki (2) stated as a result of their study that the level of trait anxiety can be reduced by the positive regulation of education policies and education programs. At this point, it is also important to ensure that students can easily access health services and social facilities.

Bozkurt (6) found a positive correlation between depression and anxiety in a study conducted on university students. Accordingly, it is believed that students who experience excessive anxiety affect themselves and their environment negatively.

Urgancı and Güngan (33) stated in their study that for young students, having less future anxiety positively affected their decision-making, and they made more precise decisions. In other words, having future anxiety causes students to make more difficult decisions.

As a result, the study aims to find a meaningful relationship between these two situations by measuring the trait anxiety and personal indecisiveness of the students. Thanks to this interaction, it is aimed to make suggestions for university students to create better educational life and a healthy future.

2. Material and Methods

Research population:

The material of the study was composed of primary data obtained by online and face-to-face questionnaires for students between 1-5 classes at Selcuk University Faculty of Veterinary Medicine. In this study, personal indecisiveness questionnaire (App. A) was used as data collection tool and, trait anxiety questionnaire (App. B) was used to measure trait anxiety. Subsequently, a joint questionnaire was created for the trait anxiety and personal

indecisiveness scale for Veterinary faculty students (App. C). Interviews in the study started after the approval of the Ethics Committee.

The students were selected by stratified random sampling method (classes and gender are defined as layers) and a sufficient number of participants were determined to represent the population (17). The sample size was determined in the 95% confidence range. For this purpose, two new survey forms were created based on survey forms applied in previous studies in similar or close areas.

By using the stratified sampling calculation, the minimum numbers to be taken from departments and classes were determined. A minimum of 126 individuals was projected to be reached. The study was approved by the Local Ethics of Selcuk University, Faculty of Veterinary Medicine (Approval Number: 2020/4-2020/38).

Purpose of research:

The motivation of the study was determined as examining the relationships between trait anxiety and personal indecisiveness and its subscales in university students. For this purpose, the relationship between personal indecisiveness with trait anxiety, hastiness, direct trait anxiety, reversed trait anxiety; the relationship between impetuous indecisiveness with direct trait anxiety and conversely trait anxiety; the relationship between direct trait anxiety and reversed trait anxiety were studied.

Trait anxiety scale:

The trait anxiety scale, which is consists of a total of 20 expressions, was modified in Turkish by Öner and LeCompte (25) There were two types of expressions on this scale. These were direct and reverse expressions. Direct expressions reflect negative emotions, while reverse expressions reflect positive emotions. When scoring these types of expressions, the weight value of 1 turns into 4, and the weight value of 4 turns into 1. The total score ranges from 20 to 80, while the scale consists of 20 expressions. The participation of values that do not change in the scoring process automatically correct the responses to the reversed statements. The answer options on the scale were 4, and they were; 1- almost no time, 2- sometimes, 3 -often, 4- is almost always in the form. Status and trait anxiety scales are independent of each other.

First, measurement models of dimensions were evaluated in the study. Although the compliance values in the measurement models are within the desired limits, the modification indexes were examined due to the fact that the standardized path coefficients of 8 problems of this scale were below 0.5. As a result of these examinations, the relevant items were excluded from the analysis (10). Re-analysis was performed and other substances included in the scale were found to be significant. After this change, the previous and subsequent states were given in Table 3.

Personal indecisiveness scale:

Personal indecisiveness scale is a scale that describes the behaviours adopted by individuals while making decisions and consists of 18 statements. The scale was developed by Bacanlı (3) based on two criteria such as indecision, difficulties in decision making, the cause of indecision or the variables it is associated with. The personal indecisiveness scale has two subscales independent of each other, and it measures personal indecisiveness. These are called exploratory indecisiveness and impetuous indecisiveness. For this reason, it was suggested that the scores obtained from each of the subscales, not the whole scale, should be used in the research. A high score from a subscale indicates a high level of personal indecisiveness measured by that subscale. All items on the scale were arranged in the form of direct statements involving personal indecision, and the total score value ranges from 18 to 90. The impetuous indecisiveness sub-scale was consists of 10 items. These are items 1, 2, 5, 6, 9, 10, 13, 14, 17 and 18. There were 8 items in the exploratory indecisiveness subscale. These items were 3, 4, 78, 11, 12, 15 and 16. Options on the scale with a five-point Likert type; A-it is not appropriate, B-not exactly, C-a bit appropriate, D-appropriate, E-very appropriate in the form. A- 1; B- 2; C- 3; D- 4; E- 5 points were given in the scoring process. Also, the scale was called the 'personal decision scale' in order to prevent the responder from being affected (3).

Statistical analysis:

Factor analysis: Factor analysis is a multivariate statistical method used to obtain a small number of identifiable, meaningful variables from a large number of variables that measure the same structure. Factor analysis is divided into two main methods: explanatory factor analysis and confirmatory factor analysis (16).

Explanatory factor analysis: Explanatory factor analysis is a process of finding factors and generating theories based on the relationships between variables. Explanatory factor analysis has three main purposes. The first is to extract dimensions using the correlation or covariance matrix, the second is to decide dimensions, and the third is to determine which rotation technique is used to rotate the obtained dimensions (16).

Confirmatory factor analysis: Confirmatory factor analysis begins with establishing hypotheses that the correlations of variables with factors and factors with each other are defined, and they perform the analysis using a package program such as AMOS (28).

IBM SPSS Statistics for Windows (Version 25.0) and Amos (version 24.0) statistical package were used to evaluate the data. Descriptive statistics (mean, standard deviation, median value, minimum, maximum, number and percentage) were given for categorical and continuous variables in the study. Factor loadings for each question and appropriate sub-dimensions for the two scales were obtained. Reliability analysis was performed for the survey by using Cronbach's Alpha (α) coefficient. In addition, a suitable Structural Equation Model (SEM) was created for confirmatory factor analysis, the accuracy of this model was checked with the fit Index values, and finally, the relationship between the two scales were examined. $P < 0.05$ was considered statistically significant.

3. Results

The demographics of 244 students were given as number and percentage in Table 1. In the survey, the student's percentages were determined, 16.8% were first from class, 28.3% were from the second class, 23.8% were from third class, 18% were from fourth class, and 13.1% were from fifth class. Moreover, 36.5% of the students were boys and 63.5% were girls. The average age of the students was 21.73±1.92. 39.8% of the participants stayed in the dormitory. The parents of the participants were mostly graduated from primary or secondary school (60.2% and 46.7%).

Tablo 1: Demografik özellikler, (Aritmetik ort. ± Std. hata)

Table 1: Demographic informations, (Mean± Std. Error of Mean)

		n	**$\bar{x}$±SEM - (%)**
Age		244	21.73±1.92
Gender	Female	154	63.1%
	Male	90	36.9%
Class	1	41	16.8%
	2	69	28.3%
	3	58	23.8%
	4	44	18.0%
	5	32	13.1%
Total		**244**	100%

Explanatory and confirmatory factor analysis for trait anxiety scale:

Explanatory factor analysis results for the trait anxiety scale were given in Table 2.

Tablo 2: Sürekli kaygı ölçeği için ortak faktör varyansları ve faktör yükleri

***Table 2:** Common factor variances and factor loads for trait anxiety scales*

| Items	Factors	
	1st	2nd
9. I worry about trivial things.	**0.747**	
17. No way thoughts bother me.	**0.712**	
11. I take everything seriously and worry.	**0.651**	
18. I take my disappointments so seriously that I will never forget.	**0.620**	
20. The issues that have been on my mind recently make me nervous	**0.618**	
12. I generally lack self-confidence.	**0.573**	
5. I miss opportunities because I cannot make a quick decision.	**0.517**	
8. I feel that the difficulties have accumulated so much that I cannot overcome	**0.514**	
3. I usually cry easily.	**0.500**	
14. I avoid facing difficult and difficult situations.	**0.487**	
15. Usually, I feel sad.	0.471	
2. I usually get tired quickly.	0.462	
4. I want to be as happy as others.	0.264	
10. I am generally happy.		**0.845**
1. I am generally in a good mood.		**0.793**
16. I am generally satisfied with my life.		**0.786**
13. Generally, I feel safe.		**0.655**
6. I feel rested.		**0.638**
19. I am a sane and determined person.		0.375
7. I am generally calm, restrained and cool.		0.241
Self-values	4.235	3.689
Variance description rates %	21.177	18.431
Cronbach's Alpha (α)	0.835	0.776
Total described variance ratio = 39.608 Kaiser Meyer Olkin (KMO) = 0.845 Bartlett test value =1596.700 p=0.001** Total Cronbach's Alpha (α)= 0.857		

*p<0.05   **p<0.01

In the first stage, items 4th, 7th and 19th with factor loads below 0.40 items were excluded from the study. Although the 2nd, 5th, 8th, 12th and 15th items were high in the explanatory factor analysis, it was determined that they were not suitable for the model as a result of the confirmatory factor analysis. As a result, the 2nd, 4th, 5th, 7th, 8th, 12th, 15th and 19th questions were removed from the model. The model created for the confirmer factor analysis was given in Figure 1 and the pre-status and post-status compliance values for the model were presented in Table 3. The scale is seen perfect fit after the modification processes (χ^2=90.738, df=53).

Tablo 3: Modifikasyon için uyum indeksi değerleri

***Table 3:** Fit index values for modification*

Measure	Before modification	After modification
(χ^2/df)	2.759**	1.712**
RMSEA	0.085	0.054**
SRMR	0.074*	0.049**
IFI	0.799	0.958**
CFI	0.796	0.958*
GFI	0.832	0.943**
TLI	0.771	0.947**

Acceptable compliance *   good fit **
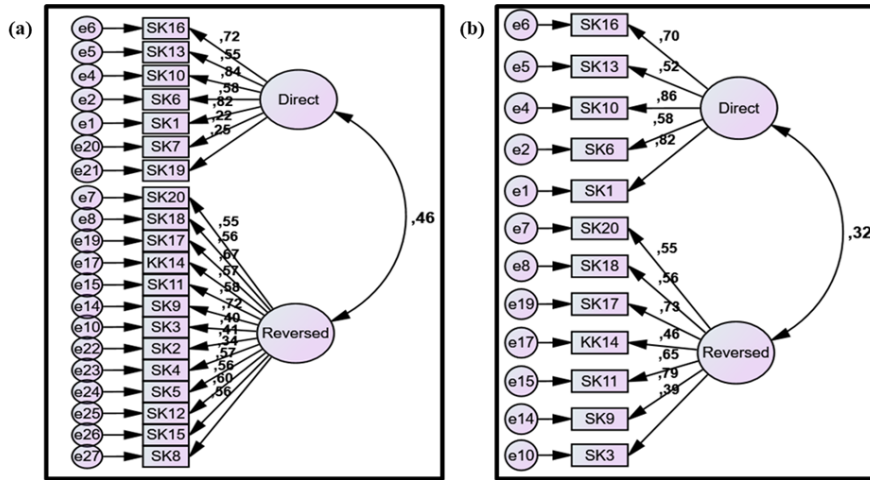
Şekil 1: Sürekli kaygı ölçeği için (a) modifikasyon öncesi, (b) modifikasyon sonrası oluşturulan doğrulayıcı faktör analizi modelleri

Figure 1: Confirmatory factor analysis models for the trait anxiety scale (a) before modification, (b) after modification.

The results of the explanatory factor analysis applied after removing the questions were given in Table 4. The factor loads of questions in the first dimension ranged from 0.786 to 0.437 and the factor loads of questions in the second dimension ranged from 0.871 to 0.633. The Cronbach's Alpha (α) coefficient was calculated as 0.798, and it can be assessed as an appropriate level for a reliable measurement tool.

Tablo 4: Sürekli kaygı ölçeği modifikasyon sonrası ortak faktör varyansları ve faktör yükleri

Table 4: Common factor variances and factor loadings after trait anxiety scale modification.

Items	Factors	
	1st	2nd
9. I worry about trivial things.	0.786	
17. No way thoughts bother me.	0.759	
11. I take everything seriously and worry.	0.700	
18. I take my disappointments so seriously that I will never forget.	0.651	
20. The issues that have been on my mind recently make me nervous	0.642	
3. I usually cry easily.	0.506	
14. I avoid facing difficult and difficult situations.	0.437	
10. I am generally happy.		0.871
1. I am generally in a good mood.		0.820
16. I am generally satisfied with my life.		0.787
6. I feel rested.		0.680
13. Generally, I feel safe.		0.633
Self-values	3.021	2.996
Variance description rates %	25.172	24.963
Cronbach's Alpha (α)	0.753	0.784
Total Described Variance Ratio = 50.135 Kaiser Meyer Olkin (KMO) = 0.827 Bartlett test value =894.590 p=0.001** Total Cronbach's Alpha (α)= 0.798		

*p<0.05   **p<0.01

Explanatory and confirmatory factor analysis for personal indecisiveness scale:

Explanatory factor analysis results related to personal indecisiveness scale were given in Table 5. The factor loads of questions in the first dimension ranged from 0.781 to 0.531, and the factor loads of questions in the second dimension ranged from 0.826 to 0.583. Additionally, Cronbach's Alpha (α) was 0.929 and the it was evaluated as a reliable measurement tool.

Tablo 5: Kişisel kararsızlık ölçeği için ortak faktör varyansları ve faktör yükleri

Table 5: *Common factor variances and factor loads for personal indecisiveness scales*

Items	Factors	
	1st	2nd
1. I have great difficulty when I have to make an impetuous indecisiveness.	0.781	
2. I think for hours while making decisions even about simple things.	0.763	
9. I get nervous when I have to make an impetuous indecisiveness.	0.756	
18. I consider myself an indecisive person.	0.720	
14. When I have to make a decision within a certain time frame, I cannot finalize my decision.	0.706	
10. While deciding, I cannot determine which option is the most suitable for me.	0.705	
5. I often cannot finalize my decisions for fear of making mistakes.	0.657	
17. I think for hours, even when making a decision similar to the one I have made before.	0.639	
13. I have difficulty deciding which of the things I should do first.	0.537	
6. When making decisions, I collect information and research about all the options, but I still cannot decide which option is best for me.	0.531	
8. Instead of thinking carefully about my decision, I make a impetuous indecisiveness, then I usually give up my decision.		0.826
7. I make an impetuous indecisiveness for fear of missing opportunities, then I give up my decision.		0.789
11. I make an impetuous indecisiveness because I want to get rid of it as soon as possible, then I usually give up my decision.		0.736
15. As I find it troublesome to research all the options while making a decision, I choose the one that I like best at that moment, then I give up my decision.		0.670
12. I make my decisions quickly and give up quickly.		0.668
3. While making my decision, I make an impetuous indecisiveness because I cannot be patient to exploratory the issue and gather information about it, then I give up my decision.		0.658
4. I consider myself a hasty person.		0.602
16. While making a decision, I choose the option with which I can get quick results, and when I cannot find what I was hoping for, I immediately give up my decision.		0.583
Self-values	5.298	8.870
Variance description rates %	29.437	27.056
Cronbach's Alpha (α)	0.907	0.882
Total described variance ratio = 56.490 Kaiser Meyer Olkin (KMO) = 0.929 Bartlett test value =2533.440 p=0.001** Total Cronbach's Alpha (α)= 0.929		

*p<0.05   **p<0.01

Confirmatory factor analysis:

Structural equation model (SEM): Since the goodness of fit values for first analysis of the model created were not within the desired limits, necessary corrections and combinations were made by taking the improvement indices into consideration. After improvements were made that theoretically could be installed and made the highest contribution to the model as a correction value, as seen in Figure 2. They were made with combinations in the form of associating the lower dimensions with each other, taking into account the harmony indices of the lower dimensions of the variables.

In the model obtained (χ^2=633.991, df=391) there were a total of four (exploratory indecisiveness, impetuous indecisiveness, direct trait anxiety, inverted trait anxiety) subscales of trait anxiety and personal indecisiveness. Chi-square / degree of freedom (χ^2/df), Root Mean Square Error of Approximation (RMSEA), Goodness of Fit Index (GFI), Standardized Root Mean Square Error (Standardized Root Mean Square Residual, SRMR), Comparative Fit Index (CFI), Incremental Fit Index (IFI), fit indices showed that the model was fit at an acceptable level; the results are given in Table 6.

Tablo 6: Yapısal eşitlik modeline ait istatistiksel değerler

Table 6: *Statistical values of the structural equation model*

Measure	Good-fit	Acceptable-fit	Model fit index values
(χ^2/df)	≤ 3	$\leq 4\text{-}5$	1.621**
RMSEA	≤ 0.05	0.06-0.08	0.051**
SRMR	≤ 0.05	0.06-0.08	0.065*
IFI	≥ 0.95	0.94-0.90	0.931*
CFI	≥ 0.97	≥ 0.95	0.930*
GFI	≥ 0.90	0.89-0.85	0.851*
TLI	≥ 0.95	0.94-0.90	0.922*

*Acceptable compliance *   *good fit ***
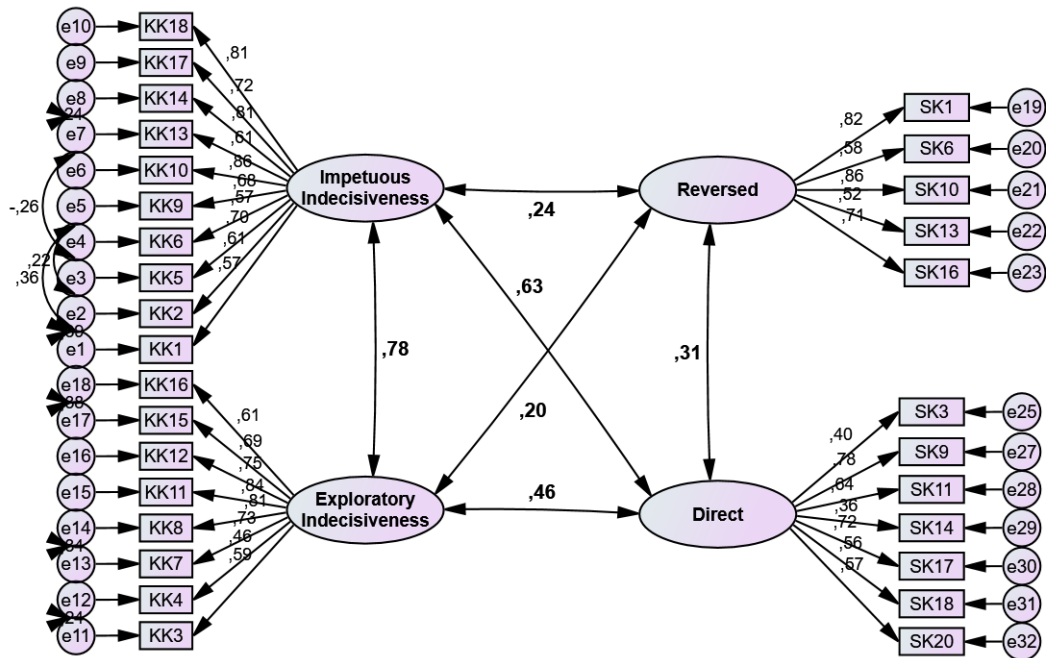
Şekil 2: Sürekli kaygı ve kişisel kararsızlığa ait dört alt ölçek arasında etkileşime yönelik YEM modeli

Figure 2: SEM model for interaction between four subscales of trait anxiety and personal indecisiveness

The relationships that emerged as a result of the analysis after the improvements were obtained and given in Table 7. Statistically significant and positively directional relationships were found between the sub-dimensions of trait anxiety and the sub-dimensions of personal indecisiveness (p<0.05).

Tablo 7: Modifikasyon indekslerine göre yapılan düzeltmeler sonrası oluşan yapısal eşitlik modeli regresyon ağırlıkları

Table 7: Structural equation model regression weights formed after corrections made according to modification indices

			Estimates standardized (β)	Estimates (β)	Standard error	Critical value	p
Impetuous indecisiveness	<->	Exploratory indecisiveness	0.782	0.350	0.060	5.812	0.001**
Impetuous indecisiveness	<->	Reversed trait anxiety	0.242	0.135	0.043	3.118	0.002**
Exploratory indecisiveness	<->	Direct trait anxiety	0.459	0.124	0.031	3.950	0.001**
Direct trait anxiety	<->	Reversed trait anxiety	0.311	0.105	0.032	3.326	0.001**
Exploratory indecisiveness	<->	Reversed trait anxiety	0.204	0.107	0.040	2.652	0.008**
Impetuous indecisiveness	<->	Direct trait anxiety	0.626	0.181	0.041	4.392	0.001**

*p<0.05   **p<0.01

4. Discussion and Conclusion

The KMO test tests whether the distribution is sufficient for factor analysis and the range of it is between 0.80 and 0.90. (29). Therefore, it can be said that the KMO value in this study was at an acceptable level. The Barlett test result was 894.590 (p<0.05) for the trait anxiety scale after modification and 2533.440 (p<0.05) for the personal indecisiveness scale. In this study, there was no limit on the number of factors, and factors with an eigenvalue greater than 1.50 were included in the scale. Factors with an eigenvalue of 1 or greater than 1 were considered as important factors in factor analysis (9). Considering that variance rates varying between 40% and 60% are considered ideal in factor analysis (27), it is said that the amount of variance obtained in this study was sufficient. According to these results, it was seen that the data set is suitable for factor analysis.

One of the important indicators of whether a factor analysis can be performed on a data set was that the significance of the correlation between variables is sufficient. Kaiser Meyer Olkin (KMO) measure was taken into consideration in the evaluation of this competence (23). This value should be above 0.60 in order to be suitable for factor analysis (22). In our study, this value was found 0.827 for the trait anxiety scale and 0.929 for the personal indecisiveness scale. Tekindal et al. (30) in a study he conducted in the veterinary faculty, the KMO value was 0.70 and the Bartlett test is found to be 1012.414.

The reliability coefficient was found to be 0.789 for the trait anxiety scale used in the study and 0.929 for the personal indecisiveness scale. For personal indecisiveness, the reliability coefficient was found to be 0.920 in the study conducted by Bacanlı (3). Dönmezoğlu (13) found this value as 0.899 in his study, and the reliability coefficient for the trait anxiety scale was found to be 0.872 in the study conducted by Büyüköztürk (8). It was found 0.895 (21) in a study conducted for primary school students, 0.920 (15) in a study for high school students, and 0.810 in a study conducted for primary school students (19). These results support our results.

When these values were examined, in studies to be conducted for trait anxiety and personal indecisiveness scales, first explanatory then confirmatory factor analysis should be performed. These scales may differ for each sample group.

University education is can be seen as the last stage of education for an individual. Uçar and Uysal (32) found in their study that there was a negative relationship between students' trait anxiety and their perception of competence

and lifelong learning tendency. As students' anxiety levels increase, their willingness to learn, their openness to development, and their academic and social competence decrease. For this reason, it is thought that the contribution of similar scientific studies such as the causes of anxiety, strategies for coping with anxiety, and the elimination of the trait anxiety factor can contribute to students' learning and thus increasing the lifelong learning tendency. It is observed that variables such as academic competence, social competence and trait anxiety are effective in planning the future.

In his master's thesis, Öz (26) found a negative relationship between the anxiety level of the person and the state of enjoying their work and, concluded that the high anxiety levels of the students affect their work negatively.

University life brings serious problems that need to be overcome. The decisions made to overcome these problems are very important. Tuncel et al. (31) found negative moderate significance between the impetuous indecision sub-dimension of personal indecisiveness and the value and value/usefulness sub-dimensions of critical thinking motivation in their study for prospective teachers; they also found negative and low-level significant relationships between other sub-dimensions. Furthermore, there is a negative low-level significant relationship between the exploratory indecisiveness sub-dimension of personal indecisiveness and all sub-dimensions of critical thinking motivation. It is noteworthy that problem-solving and decision-making processes are commonly mentioned in definitions related to thinking skills.

In this study, firstly, the personal indecision and permanent anxiety levels of university students were revealed. Then, by using these results, valid and reliable scales were developed to determine the levels of anxiety and uncertainty experienced by students. The results of the analysis to test the validity and reliability of the scales show that the prepared measurement tool was suitable for measuring. In line with these results, it is thought that it can be used by teachers and researchers to obtain information and collect data in determining the effectiveness of the trait anxiety scale on decision-making. Our research findings showed that students ' ongoing concerns affect their decision-making.

This study aims to contribute to the literature on the determination of the relationship between trait anxiety and personal indecisiveness.

Based on the findings from the research, it is possible to make the following recommendations.

This study was conducted with Konya Selçuk University undergraduate students, and it can be applied in different universities and with larger sample sizes in order to obtain more reliable results. In addition to undergraduate students, new research can be conducted by selecting from the high school, graduate or doctorate students of the sample group. In order to support the personality development of university students, it may be very beneficial for students to receive more regular support from Psychological Counseling and Guidance Services. A significant relationship was found between the sub-dimensions of university students' level of personal indecisiveness. This result may bring to mind the question of what factors cause students to experience indecision. Therefore, the individual implementation of the guidance services to be made may help in solving the problems. The fact that researchers focus more deeply on the issue of indecision in their study and conduct multidimensional research may allow the quality of the obtained scientific data to increase. Studies can be conducted by using various variables to influence the decisions students make due to the trait anxiety they have during their university life.

Conflict of Interest

The author declared no conflict of interest.

Funding

No funding.

Authors' Contributions

Idea / concept: Mert DEMİRSÖZ, Mustafa Agah TEKİNDAL, Harun YONAR
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Ethical Approval

The study is approved by the Local Ethics of Selcuk University, Faculty of Veterinary Medicine (Approval Number: 2020/4-2020/38).

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App (A)

Personal indecisiveness scale

Explanation: There are 18 items on this scale that describe the behavior a person adopts when making decisions. Read these statements and mark the option that suits you by placing (+).

	Items	It's not appropriate	Not exactly	A bit convenient	Appropriate	Very Appropriate
1	I have a lot of difficulty when I have to make impetuous indecisiveness.	( )	( )	( )	( )	( )
2	I think for hours when I'm making decisions about simple things.	( )	( )	( )	( )	( )
3	As I cannot be patient to exploratory and gather information about the matter, I make an impetuous indecisiveness, and then I give up my decision.	( )	( )	( )	( )	( )
4	I consider myself a hasty person.	( )	( )	( )	( )	( )
5	Most of the time I can't make my decisions for fear of making mistakes.	( )	( )	( )	( )	( )
6	I gather information and research all options when making decisions, but I still can't decide which option suits me best.	( )	( )	( )	( )	( )
7	I make impetuous indecisiveness for fear of missing opportunities, then I give up.	( )	( )	( )	( )	( )
8	I make a quick decision instead of thinking it through, and then I usually give up my decision.	( )	( )	( )	( )	( )
9	I get nervous when I have to make impetuous indecisiveness.	( )	( )	( )	( )	( )
10	I can't decide which is the best option for me.	( )	( )	( )	( )	( )
11	I make a quick decision because I want to make my decision and get out of it, and then I usually give up my decision.	( )	( )	( )	( )	( )
12	I make my decisions quickly and I give up quickly.	( )	( )	( )	( )	( )
13	Among the things I have to do, I have a hard time deciding which one to do first.	( )	( )	( )	( )	( )
14	I can't make a decision when I have to make a decision within a certain time frame.	( )	( )	( )	( )	( )
15	I choose the one I like the most at that moment, and then I give up.	( )	( )	( )	( )	( )
16	When I make a decision, I choose the option where I can get results quickly, and when I don't get what I hoped for, I give up my decision immediately.	( )	( )	( )	( )	( )
17	I think for hours, even when I'm making a decision similar to the one I've made before.	( )	( )	( )	( )	( )
18	I consider myself an ambivalent person.	( )	( )	( )	( )	( )

Size and materials in the created scale: Impetuous indecisiveness; 1-2-5-6-9-10-13-14-17-18, exploratory indecisiveness; 3-4-7-8-11-12-15-16, are numbered items.

App (B)

Trait anxiety scale

Below are some expressions that people use to describe their own feelings. Read each statement, then state how you feel at that moment by marking the appropriate one from the spaces on the right side of the statements. There are no right or wrong answers. Mark the answer that shows how you feel instantly without spending too much time on any statement.

	Items	In almost no time	Some times	A lot of time	Almost always
1	I am generally in a good mood.	( )	( )	( )	( )
2	I usually get tired quickly.	( )	( )	( )	( )
3	I usually cry easily.	( )	( )	( )	( )
4	I want to be as happy as others.	( )	( )	( )	( )
5	I miss opportunities because I cannot make a quick decision.	( )	( )	( )	( )
6	I feel rested.	( )	( )	( )	( )
7	I am generally calm, restrained and cool.	( )	( )	( )	( )
8	I feel that the difficulties have accumulated so much that I cannot overcome	( )	( )	( )	( )
9	I worry about trivial things.	( )	( )	( )	( )
10	I am generally happy.	( )	( )	( )	( )
11	I take everything seriously and worry.	( )	( )	( )	( )
12	I generally lack self-confidence.	( )	( )	( )	( )
13	Generally, I feel safe.	( )	( )	( )	( )
14	I avoid facing difficult and difficult situations.	( )	( )	( )	( )
15	Usually I feel sad.	( )	( )	( )	( )
16	I am generally satisfied with my life.	( )	( )	( )	( )
17	No way thoughts bother me.	( )	( )	( )	( )
18	I take my disappointments so seriously that I will never forget.	( )	( )	( )	( )
19	I am a sane and determined person. I am a sane and determined person.	( )	( )	( )	( )
20	20. The issues that have been on my mind recently make me nervous	( )	( )	( )	( )

Size and materials in the created scale: Direct Trait Anxiety; 2-3-4-5-8-9-11-12-14-15-17-18-20, Reversed Trait Anxiety; 1-6-7-10-13-16-19, are numbered items.

App (C)

Trait anxiety and personal indecisiveness Scales for students of faculty of veterinary medicine

	Items: Personal indecisiveness scale	It's not appropriate	Not exactly	A bit convenient	Appropriate	Very appropriate
1	I have a lot of difficulty when I have to make impetuous indecisiveness.	( )	( )	( )	( )	( )
2	I think for hours when I'm making decisions about simple things.	( )	( )	( )	( )	( )
3	As I cannot be patient to exploratory and gather information about the matter, I make a impetuous indecisiveness, and then I give up my decision.	( )	( )	( )	( )	( )
4	I consider myself a hasty person.	( )	( )	( )	( )	( )
5	Most of the time I can't make my decisions for fear of making mistakes.	( )	( )	( )	( )	( )
6	I gather information and research all options when making decisions, but I still can't decide which option suits me best.	( )	( )	( )	( )	( )
7	I make impetuous indecisiveness for fear of missing opportunities, then I give up.	( )	( )	( )	( )	( )
8	I make a quick decision instead of thinking it through, and then I usually give up my decision.	( )	( )	( )	( )	( )
9	I get nervous when I have to make impetuous indecisiveness.	( )	( )	( )	( )	( )
10	I can't decide which is the best option for me.	( )	( )	( )	( )	( )
11	I make a quick decision because I want to make my decision and get out of it, and then I usually give up my decision.	( )	( )	( )	( )	( )
12	I make my decisions quickly and I give up quickly.	( )	( )	( )	( )	( )
13	Among the things I have to do, I have a hard time deciding which one to do first.	( )	( )	( )	( )	( )
14	I can't make a decision when I have to make a decision within a certain time frame.	( )	( )	( )	( )	( )
15	I choose the one I like the most at that moment, and then I give up.	( )	( )	( )	( )	( )
16	When I make a decision, I choose the option where I can get results quickly, and when I don't get what I hoped for, I give up my decision immediately.	( )	( )	( )	( )	( )
17	I think for hours, even when I'm making a decision similar to the one I've made before.	( )	( )	( )	( )	( )
18	I consider myself an ambivalent person.	( )	( )	( )	( )	( )

	Items: Trait anxiety scale	In almost no time	Some times	A lot of time	Almost always
19	I am generally in a good mood.	( )	( )	( )	( )
20	I usually cry easily.	( )	( )	( )	( )
21	I feel rested.	( )	( )	( )	( )
22	I worry about trivial things.	( )	( )	( )	( )
23	I am generally happy.	( )	( )	( )	( )
24	I take everything seriously and worry.	( )	( )	( )	( )
25	Generally, I feel safe.	( )	( )	( )	( )
26	I avoid facing difficult and difficult situations.	( )	( )	( )	( )
27	I am generally satisfied with my life.	( )	( )	( )	( )
28	No way thoughts bother me.	( )	( )	( )	( )
29	I take my disappointments so seriously that I will never forget.	( )	( )	( )	( )
30	The issues that have been on my mind recently make me nervous	( )	( )	( )	( )

Size and materials in the created scale: Impetuous indecisiveness; 1-2-6-9-10-13-14-17-18, exploratory indecisiveness; 3-4-7-8-11-12-15-16, are numbered items. Direct trait anxiety; 20-22-24-26-28-29-30, reversed trait anxiety; 19-21-23-25-27, are numbered items.

Veteriner fakültesi öğrencilerin için kişisel kararsızlık ve sürekli kaygı ölçekleri Türkçe versiyonu

(Turkish version of Trait anxiety and personal indecisiveness Scales for students of faculty of veterinary medicine)

	Soular: Kişisel kararsızlık ölçeği	Hiç uygun değil	Pek uygun değil	Biraz uygun	Uygun	Tamamıyla uygun
1	Acele karar vermem gerektiğinde çok güçlük çekerim.	( )	( )	( )	( )	( )
2	Basit şeyler hakkında bile karar verirken saatlerce düşünürüm.	( )	( )	( )	( )	( )
3	Karar verirken konuyu araştırmaya ve hakkında bilgi toplamaya sabredemediğim için acele karar veririm, sonra kararımdan vazgeçerim.	( )	( )	( )	( )	( )
4	Kendimi aceleci bir kişi olarak görürüm.	( )	( )	( )	( )	( )
5	Hata yaparım korkusuyla çoğu zaman kararlarımı kesinleştiremem.	( )	( )	( )	( )	( )
6	Karar verirken tüm seçenekler hakkında bilgi toplarım ve araştırma yaparım, fakat yine de bana en uygun seçeneğin hangisi olduğuna karar veremem.	( )	( )	( )	( )	( )
7	Fırsatları kaçırırım korkusuyla acele karar veririm, sonra kararımdan vazgeçerim.	( )	( )	( )	( )	( )
8	Karar verirken iyice düşünmek yerine acele karar veririm, sonra genellikle kararımdan vazgeçerim.	( )	( )	( )	( )	( )
9	Acele karar vermem gerektiğinde telaşlanırım.	( )	( )	( )	( )	( )
10	Karar verirken bana göre en uygun seçeneğin hangisi olduğunu bir türlü belirleyemem.	( )	( )	( )	( )	( )
11	Bir an önce kararımı verip kurtulmak istediğim için acele karar veririm, sonra genellikle kararımdan vazgeçerim.	( )	( )	( )	( )	( )
12	Kararlarımı çabuk verip çabuk ta vazgeçerim.	( )	( )	( )	( )	( )
13	Yapmam gereken işler arasında hangisini önce yapacağıma karar vermekte güçlük çekerim.	( )	( )	( )	( )	( )
14	Belli bir zaman dilimi içinde karar vermem gerektiğinde kararımı kesinleştiremem.	( )	( )	( )	( )	( )
15	Karar verirken tüm seçenekler hakkında araştırma yapmak bana zahmetli geldiğinden o anda en çok hoşuma gideni seçerim, sonra kararımdan vazgeçerim.	( )	( )	( )	( )	( )
16	Karar verirken çabuk sonuç alabileceğim seçeneği seçerim, umduğumu bulamadığımda da kararımdan hemen vazgeçerim.	( )	( )	( )	( )	( )
17	Daha önce verdiğim kararlara benzer bir karar verirken bile saatlerce düşünürüm.	( )	( )	( )	( )	( )
18	Kendimi kararsız bir kişi olarak görüyorum.	( )	( )	( )	( )	( )

	Sorular: Sürekli kaygı ölçeği	Hemen hemen hiçbir zaman	Bazen	Çok zaman	Hemen her zaman
19	Genellikle keyfim yerindedir.	( )	( )	( )	( )
20	Genellikle kolay ağlarım.	( )	( )	( )	( )
21	Kendimi dinlenmiş hissediyorum.	( )	( )	( )	( )
22	Önemsiz şeyler hakkında endişelenirim.	( )	( )	( )	( )
23	Genellikle mutluyum.	( )	( )	( )	( )
24	Her şeyi ciddiye alır ve endişelenirim.	( )	( )	( )	( )
25	Genellikle kendimi emniyette hissederim.	( )	( )	( )	( )
26	Sıkıntılı ve güçlü durumlarla karşılaşmaktan kaçınırım.	( )	( )	( )	( )
27	Genellikle hayatımdan memnunum.	( )	( )	( )	( )
28	Olur, olmaz düşünceler beni rahatsız eder.	( )	( )	( )	( )
29	Hayal kırıklıklarını öylesine ciddiye alırım ki hiç unutamam.	( )	( )	( )	( )
30	Son zamanlarda kafama takılan konular beni tedirgin ediyor.	( )	( )	( )	( )

Oluşturulan ölçek için faktörler ve sorular Aceleci Kararsızlık; 1-2-6-9-10-13-14-17-18, Araştırmacı kararsızlık; 3-4-7-8-11-12-15-16. Direk sürekli kaygı; 20-22-24-26-28-29-30, Tersine dönmüş sürekli kaygı; 19-21-23-25-27.