

## Investigation of Hopelessness Level of Biology Students in Turkey's Universities with Regard To Socio-Demographic Variables

### Türkiye Üniversitelerindeki Biyoloji Öğrencilerinin Sosyo-Demografik Değişkenler Bakiminden Umutsuzluk Düzeylerinin İncelenmesi

Alptürk AKÇÖLTEKİN

Ardahan Üniversitesi, Beden Eğitimi ve Spor Yüksekokulu, Beden Eğitimi ve Spor Öğretmenliği, Ardahan, Türkiye

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#### Abstract

The main aim of this study is to investigate the hopelessness levels of students in the Department of Biology at universities in Turkey via socio-demographic variables. The participants of the study were consisted of 1464 biology students from 13 different universities and geographical regions of Turkey. Beck Hopelessness Scale was used to collect data on the students' hopelessness levels. T-test, ANOVA, Many Whitney U and Kruskall Wallis H tests were employed for data analysis. Results showed that the students participated in the study had a mild level of hopelessness. Regarding fluctuations in hopelessness levels in terms of demographic variables, the results showed statistically significant differences in terms of marital status, the contribution of undergraduate education to a worldwide employment, and pursuit of a postgraduate degree. No significant difference was observed between hopelessness levels and gender, age, class, parental bereavement, growth environment, family residential setting, work status, and prospective employment sector after graduation.

**Keywords:** beck hopelessness scale, biology education, demographic variables, hopelessness level, Turkey

#### Özet

Bu çalışmanın temel amacı Türkiye'de bulunan üniversitelerin Biyoloji bölümündeki öğrencilerin umutsuzluk düzeylerini sosyo-demografik değişkenler açısından incelemektir. Çalışmanın katılımcılarını Türkiye'nin farklı coğrafik bölgelerinde yer alan 13 üniversitenin biyoloji bölümünden 1464 öğrenci oluşturmaktadır. Verilerin toplanması aşamasında öğrencilerin umutsuzluk düzeylerini belirlemek için "Beck Umutsuzluk Ölçeği" kullanılmıştır. Toplanan verilerin analizinde, t-testi, ANOVA, Many Whitney- U test ve Kruskall Wallis H testlerinden yararlanılmıştır. Araştırmanın sonuçlarına göre; öğrencilerin hafif düzeyde umutsuzluğa sahip oldukları tespit edilmiştir. Öğrencilerin umutsuzluk düzeylerinin demografik değişkenlere göre değişimleri incelendiğinde ise; medeni durum, alınan eğitimin evrensel boyutta iş imkanı sağlayacağını düşünme ve alanı ile ilgili lisansüstü eğitim yapmayı düşünme

*değişkenleri açısından gruplar arasında istatistiki olarak anlamlı farklılık bulunduğu tespit edilmiştir. Cinsiyet, yaş, sınıf, ebeveynlerinin hayatta olup olmama durumu, yetişme ortamı, barınma ortamı, ailenin en uzun süre yaşadığı yer, herhangi bir işte çalışma ve mezun olduktan sonra çalışmayı düşündüğü sektör değişkenleri ile öğrencilerin umutsuzluk düzeyleri arasında ise istatistiki olarak anlamlı bir farklılık bulunmadığı görülmüştür.*

**Anahtar Kelimeler:** *beck umutsuzluk ölçeği, biyoloji eğitimi, demografik değişkenler, umutsuzluk düzeyi, Türkiye*

## 1. Introduction

In an ever-changing world, individuals are the most important constituent elements of a society that make development and production possible. Individuals with the qualifications and skills required by society bring about advancement. A well-organized society is characterized by individuals who keep up with technological advances, solve problems, are able to access information sources, and who are self-confident and self-efficacious. The expectations of an individual equipped with these attributes are very important. An individual's capabilities and contributions increase in line with the positivity of their thoughts about the future but decrease in parallel with their hopelessness level (Abela & Seligman, 2000; Poch et al. 2004). Acquisition of skills is only possible through education, the goal of which is to train creative, assertive, responsible, adaptive, inquisitive and able individuals. Education and educators play a significant role in training individuals to possess these attributes (Atalay, 1996). Education is composed of different disciplines, and it may be suggested that biology is the most important of all; because it serves the needs of humanity the most by helping people better understand themselves and their surrounding space.

Biology, which has currently come into prominence, primarily focuses on humanity. Biology education is among the most effective ways of enabling mankind to gain particular behavioral skills by translating information about the emergence, creation and organization of biological phenomena in nature into their lives (Yetkin, 1998). Biology learning and teaching are a cultural obligation across the entire world (Doğan et al. 2003). Biological problems constitute a remarkable part of daily life. Thanks to biology, today's students have no problem understanding a great many ongoing issues such as nutrition, health, and the environment (Baran et al. 2002). Biology has provided individuals with a better recognition of their anatomical and physiological make-up and mental and cognitive nature; thus acquiring the ability to find a proper place in the environment and society, to purge themselves of such feelings as animosity, anxiety, fear, loathing and hatred, to learn to love creatures, and be capable of finding solutions to health, nutritional and environmental problems (Yetkin, 1998).

Research carried out in Turkey has revealed that although Turkish students consider biology classes significant, valuable and beneficial, they do not overtly like classes and have great difficulty understanding the topics, therefore feeling unsuccessful. Undeniably, an individual's attitude towards a certain task negatively or positively

affects the execution of the task. A great deal of research has showed that students' academic achievement in biology classes greatly affects their attitude towards the course itself. Therefore, it is of utmost importance to change negative attitudes towards biology into a positive one (Gül & Yeşilyurt, 2010). It is certain that morale, faith, hope, and a calm state of mind promote achievement.

Today, biology graduates are becoming more and more anxious, full of doubts, and less hopeful about their future. It is known that they face difficulties finding jobs and therefore have to seek and accept employment in an unrelated area. Difficulties faced during the educational process and fear of unemployment most probably increase their anxiety and hopelessness levels. Social and economic problems, battling through the exhausting university entrance examination process, together with the prospect of unemployment, appear to adversely affect the psychological development and well-being of biology students. Research has proven that employment causes many beneficial psycho-sociological effects on human lives. Working keeps people active by making them plan their time and giving them a goal to achieve. Unemployment, which has taken on a global dimension and become one of the most crucial problems of the present day, is under scrutiny to assess how much it accounts for hopelessness. A working individual not only earns money but also gains self-esteem and self-respect. While working affects people positively, being unemployed, for a competent and enthusiastic individual may drive them to feel despair, hopelessness, loneliness, and depression.

One can readily find definitions of "hope" and "hopelessness" in the relevant literature. These two concepts are associated with the possibility of realization of an individual's expectations (Şahin, 2002). Miller (1985) associates "hope" with emotions, expectations and enthusiasm, considers it an integral part of human instinct, and states that it helps the individual exhibit their potential. Cheavens et al. (2006) emphasize the importance of hope in health and well-being, and define it as the positive expectation of achieving a goal. For Tümkaya (2005), "hopelessness" refers to negative expectation with less-than-zero possibility of achieving a goal. Greene (1989) defines "hopelessness" as the reflection of present negative expectations towards the future and anticipation that they will continue forever. The discerning features of hopelessness are a negative attitude towards life, pessimism, and fear of failure. As Pınar & Sabuncu (2004) put it, hopelessness exhibits symptoms such as lack of interest and energy, and depression. Briefly, hopelessness is pessimism about the future, and is the mediator between depression and suicidality (O'Connor et al. 2000). It is considered that university students may draw false conclusions from their experiences and failure to solve their problems which may drive them towards hopelessness (Şahin, 2009). Ideally, an individual should be free of fear, anxiety, and complexes, in other words, should be at peace with themselves. In this sense, biology education is considered to make an important contribution. The key to purgation from negative thoughts and feelings is to know one's own biology (Yetkin, 1998).

A review of the literature revealed that there are no published studies on the hopelessness levels of students receiving biology education in Turkey. Therefore, it was considered that investigation of this phenomenon would contribute to the relevant literature. The present study is the first to determine the hopelessness levels of students from the department of biology in different regions of Turkey and to investigate whether these hopelessness levels vary according to socio-demographic variables.

### **Research Questions**

- What are the biology students' levels of hopelessness?
- Is there a statistically significant relationship between the students' hopelessness levels and their gender?
- Is there a statistically significant relationship between the students' hopelessness levels and their age?
- Is there a statistically significant relationship between the students' hopelessness levels and year of study?
- Is there a statistically significant relationship between the students' hopelessness levels and their marital status?
- Is there a statistically significant relationship between their hopelessness levels and parental bereavement?
- Is there a statistically significant relationship between their hopelessness levels and their growth environment?
- Is there a statistically significant relationship between their hopelessness levels and place of accommodation during term time?
- Is there a statistically significant relationship between their hopelessness levels and their families' place of residence?
- Is there a statistically significant correlation between their hopelessness levels and their professional status, if working?
- Is there a statistically significant correlation between their hopelessness levels and thoughts about whether their biology education will help them find a job?
- Is there a statistically significant correlation between their hopelessness levels and the sector in which they plan to work?
- Is there a statistically significant relationship between their hopelessness levels and their plans to enter a postgraduate program?

## **2. Methodology**

### **Population and Sampling**

In the 2012-2013 academic year, the faculties of Arts and Sciences at universities

across Turkey had 62 active biology departments. The sampling of this study consisted of 1464 students from 13 biology departments in different geographical regions. Because the sampling accounted for 21% of the overall biology student population, it was considered that the sampling covered a large proportion of the population and the findings were therefore generalizable.

The layering technique was used in sample surveying. In this method, the population is divided into individual layers, from which sample is produced randomly or systematically by choosing required number of objects (Kaptan, 1998).

The distribution of participant universities and students by study year are presented in Table 1.

**Table 1. Distribution of Participating Universities and Students by Year**

No	Name of University, City-province	1st year	2nd year	3rd year	4th year	Total
01	Kafkas University, Kars			21	25	46
02	Erzincan University, Erzincan		18	21	17	56
03	Atatürk University, Erzurum	14	34	54	59	161
04	Anadolu University, Eskişehir	7	21	32	44	104
05	Hitit University, Çorum		12	40	24	76
06	Abant İzzet Baysal University, Bolu	66	37	41	36	180
07	Giresun University, Giresun			54	21	75
08	Bozok University, Yozgat		6	32	54	92
09	Mustafa Kemal University, Hatay	9	21	38	31	99
10	Erciyes University, Kayseri		57	55	18	130
11	Celal Bayar University, Manisa	3	56	65	43	167
12	Uludağ University, Bursa	27	19	81	35	162
13	Gazi University, Ankara	13	22	24	57	116
	Total	139	303	558	464	1464

### Research Model

The research was devised on the descriptive screening model, which is an appropriate design for research intended to describe a given phenomenon as it was in the past or is at present. General screening models are designed to describe the entire population or a representative portion thereof in order to draw generalizable conclusions about the population, which consists of many constituent elements (Karasar, 1999).

### Data Collection Tools

The present study intended to investigate the hopelessness levels of students in the Department of Biology at different universities in Turkey using socio-demographic data. The data collection tool comprised two parts; a demographic information form, developed by the researchers, and Beck Hopelessness Scale (henceforth BHS), devised by Beck et al. (1974). Durak & Palabıyıköğlü (1994) calculated the reliability

coefficient of this scale as 0.75. Because the lowest value (0.70) of Cronbach Alpha was adopted as the internal consistency coefficient (Nunally, 1978), it was decided that the scale was reliable. The scale was delivered only to volunteer students, who were asked to complete it within 15 minutes.

BHS, developed by Beck et al. (1974) measures the extent of pessimism about the future. It contains 20 items intended to collect data on the feelings and expectations of the takers about the future. It consists of true/false questions, and takers are asked to provide answers that fit them best. 11 of the items were coded as true and the remaining 9 as false. If the answer to items 2, 4, 7, 9, 11, 12, 14, 16, 17, 18, and 20 was "true", one point was assigned for each; if the answers to items 1, 2, 5, 6, 8, 10, 13, 15, and 19 were "false", then the marking would be one point each. A "0" point was assigned to adverse answers. After the scale was administered, the resultant scores were termed as "hopelessness scores". The scores ranged from 0 to 20. Higher scores refer to a higher level of hopelessness (Deveci et al. 2011). The scores are categorized in four groups; namely, 0-3 refers to no hopelessness, 4-8 to mild, 9-14 to moderate, and 15-20 to severe hopelessness.

### Data Analysis

The obtained data were analyzed via Statistical Package for the Social Sciences (henceforth SPSS) 15.0. In the analysis of data in regard to sub-problems 1, 10, 11 and 12, independent t-test was used. Many Whitney-U test, on the other hand, was applied to sub-problems 4, 5, 6, 7 and 9 in that the data related to these sub-problems are non-parametric. ANOVA and Kruskal Wallis H-tests were used for the analysis of sub-problems 2-3 and 8, respectively. Consequently, the data obtained were interpreted at  $p < 0.05$  significance level.

## 3. Results

Data concerning whether the hopelessness levels of the students varied according to socio-demographic variables are presented in the tables. Data on research question 1 concerning the overall hopelessness level of the students are shown in Table 2.

**Table 2. Minimum and Maximum Scores From BHS**

	N	Min.	Max.	X	Ss
Mean Scores of Hopelessness	1464	,00	20,00	5,66	4,19

It was inferred from Table 2 that the mean score of the participant students is ( $X=5,66$ ), which refers to a mild level of hopelessness. Data on research question 2 (correlation between hopelessness level and gender) are presented in Table 3.

**Table 3. t-Test Results by Gender**

Gender	N	X	Ss	t	df	p
Female	1058	5,57	4,165	-1,310	1462	,190
Male	406	5,89	4,274			

Table 3 shows that the hopelessness level of the male participants ( $X=5,89$ ) is higher than that of female participants ( $X=5,57$ ) in consideration of the correlation between hopelessness level and gender. However, no statistically significant difference was observed between the groups ( $p>0.05$ ). Table 4 contains data on the relationship between hopelessness level and age (research question 3).

**Table 4. ANOVA Results by Age**

Variable	N	X	Ss	F	p
17-21	1324	5,72	4,226		
22-26	97	5,24	3,848	1,341	,262
27 +	43	4,88	4,001		
Total	1464	5,66	4,197		

In consideration of the correlation between hopelessness level and the age of participants, it was found that the hopelessness mean of the students aged 17-21 was higher than that of students aged 22-26 and 27 and over. However, this difference was discovered to have caused no statistically significant difference in the hopelessness levels of the groups ( $p>0.05$ ). Table 5 includes the scores concerning the correlation between hopelessness level and study year of the participants in relation to research question 4.

**Table 5. ANOVA Test Results by Study Year**

Year	N	X	Ss	F	p
1	139	5,33	4,284		
2	303	6,00	4,283		
3	558	5,57	4,155	1,014	,385
4	464	5,65	4,163		
Total	1464	5,66	4,194		

In consideration of the data in Table 5, the mean score of first-year students was observed to be lower than that of higher classes. It was observed that the hopelessness mean scores of the students increased from lower to higher years. The highest mean score of hopelessness was found in the second-year students. These results indicate that there is no statistically significant relationship between study year and hopelessness level ( $p>0.05$ ). Table 6 presents the data on the relation between hopelessness level and marital status (research question 5).

**Table 6. Many Whitney- U Test Results by Marital Status.**

Marital Status	N	Sum of Ranks	Mean Rank	U	Z	p
Single	1417	1046324,50	738,41	24927,500	-2,951	,003
Married	47	26055,50	554,37			

The Many Whitney- U test results shown in Table 6 yielded a statistically significant difference between single and married students ( $U=24927,500$ ;  $p<0.05$ ) in terms of hopelessness point averages. Data on research question 6 (correlation of hopelessness level and parental bereavement) are given in Table 7.

**Table 7. Many Whitney- U Test Results Concerning Parental Bereavement.**

Status	N	Sum of Ranks	Mean Rank	U	Z	p
Yes	163	117327,00	719,80	103961,000	-,409	,683
No	1301	955053,00	734,09			

The Many Whitney- U test results (Table 7) revealed the lack of statistically significant difference in the hopelessness point averages of students who are bereft of either of their parents ( $U=103961,000$ ;  $p>0.05$ ). Research question 7 investigated the correlation between hopelessness level and growth environment (Table 8).

**Table 8. Many Whitney-U Test Results Concerning Growth Environment**

Growth Environment	N	Sum of Ranks	Mean Rank	U	Z	p
With family	1400	1023393,50	731,00	42693,500	-,640	,522
In a dormitory	64	48986,50	765,41			

Many Whitney-U test results indicated in Table 8 pointed again to the absence of a statistically significant difference in the environment where students grew up with or away from their family in a dormitory and hopelessness point averages ( $U=42693$ ;  $p>0.05$ ). Table 9 shows data on hopelessness level according to place of residence while at university (research question 8).

**Table 9. Many Whitney-U Test Results Relating to Accommodation at University**

Residence	N	Sum of Ranks	Mean Rank	U	Z	p
House/Flat	1021	745926,00	730,58	224195,000	-,265	,791
Dormitory	443	326454,00	736,92			

The results obtained from Many Whitney-U test demonstrated in Table 9 are indicative for the fact that there is not a statistically significant difference in terms of the place of residence of the university students and their hopelessness point averages ( $U=224195,000$ ;  $p>0.05$ ). Data on the correlation between hopelessness levels and the type of settlement where the participants' families lived for the longest period (research question 9) are presented in Table 10.



**Table 10. Kruskal Wallis H-Test Results by Family Residence**

Settlement	N	Mean Rank	sd	X <sup>2</sup>	p	Diffirent
Village	150	765,94				
Town	287	741,72	2	1,410	,494	-
City	1027	725,04				
Total	1464					

According to statistical data obtained from Kruskal Wallis H-test analyses, there is not a statistically significant difference between hopelessness point averages of students and their families' home of longest residence ( $X^2=1,410$ ;  $p>0.05$ ). Table 11 shows data on the correlation between hopelessness level and work status of the students (research question 10).

**Table 11. Many Whitney-U Test Results by Work Status**

Work Status	N	Sum of Ranks	Mean Rank	U	Z	p
Employed part-time	202	140831,50	697,19	120328,500	-1,285	,199
Not employed	1262	931548,50	738,15			

The Many Whitney-U test results given in Table 11 illustrates the lack of a statistically significant difference between students who were working, even part-time, or those without a job and their hopelessness point averages ( $U: 120328, 500$ ;  $p>0.05$ ). Table 12 presents data related to the research question 11, which investigated the correlation between the hopelessness level of the students and their thoughts about the effects of the learnt courses on their employment prospects.

**Table 12. t-Test Results on Students' Thoughts About Effect of Learnt Courses on Employment**

Employment After Graduation	N	X	Ss	t	df	p
Yes	621	4,29	3,281	-11,148	1462	,000
No	843	6,67	4,503			

As Table 12 indicates, the mean score of participants who thought that the education offered in their respective biology department was unlikely to help them find a job was calculated as ( $X=4,29$ ), while those who held the opposite view is ( $X=6,67$ ). This finding indicated a statistically significant difference ( $p<0.05$ ). Data pertaining to the hopelessness levels of students and the sector in which they expect to be employed after graduation (research question 12) are presented in Table 13.

**Table 13. t-Test Results on Sector Where Students Expect to be Employed After Graduation**

Sector	N	X	Ss	t	df	p
Public	877	5,56	4,194	-1,088	1462	,277
Private	542	5,81	4,179			

Table 13 shows that the participants who expected to find a job in the private sector after graduation had a higher level of hopelessness ( $X=5,81$ ) than those who expected to be employed in the public sector ( $X=5,56$ ). However, this finding yielded no statistically significant difference in the hopelessness scores of both groups ( $p>0.05$ ). Within the context of research question 13, the correlation between hopelessness levels of the participants and whether they planned to attend a postgraduate program was analyzed and the resultant data are presented in Table 14.

**Table 14. t-Test Result on Participants' Expectations About Postgraduate Education**

Post-grad	N	X	Ss	t	df	p
Yes	999	5,42	4,096	-3,220	1462	,001
No	465	6,18	4,366			

As shown in Table 14, the hopelessness levels of the participants who planned to pursue a postgraduate degree were found to be lower ( $X= 5,42$ ) than those who did not ( $X=6,18$ ), indicating a statistically significant difference between the groups ( $p<0.05$ ).

#### 4. Discussion

The present study investigated whether the hopelessness levels of biology students from different universities in different geographical regions of Turkey varied according to demographic variables. The overall hopelessness level of the students was found to be "mild"; in other words, it was discovered that the biology students were not pessimistic about the future at all. (Şahin, 2009) carried out a study on the hopelessness levels of students in faculties of education and also came to the conclusion that they had a mild level of hopelessness; a result which overlaps with the results of the present study. In consideration of the effect(s) of demographical variables on hopelessness levels, no statistically significant difference was discovered between hopelessness levels and gender, age, year of study, parental bereavement, growth environment, type of university accommodation, place of the longest family residence, work status, and expected sector of employment. A review of the relevant literature (Şahin, 2009; Duman et al. 2009; Ersoy et al. 2010; Doğan, 2012; Şengül & Güner, 2012) on the hopelessness level of undergraduate students revealed that the study year of the students had no significant effect on their hopelessness levels, which substantiates the findings obtained in the current study.

In the studies that Kırımoğlu (2010), Ersoy et al. (2010) and Şengül & Güner

(2012) conducted to investigate the effect of gender on hopelessness; they revealed that gender did not exert any effect on hopelessness, which is similar to the findings of the present study. Lucan et al. (2011) and Tekin & Filiz (2008) found in their study on the students at a School of Sport & Physical Education that there was no statistically significant relationship between gender and hopelessness. Aras (2011) also revealed no significant relationship between gender and hopelessness levels among undergraduate students in a music department. In the research they conducted on high school students, Tmkaya et al. (2011) found no statistically significant correlation between gender and hopelessness level. Similarly, Oğuztrk et al. (2011) discovered no statistically significant relationship between gender and hopelessness. In the study by Dereli & Kabataş (2009) to investigate hopelessness levels of second-year (last year) students at a School of Health Services, they ascertained that there was no statistically significant relation between gender and hopelessness. The relevant literature demonstrates that studies conducted in different fields and on different classes indicated no statistically significant relationship between hopelessness and gender.

In consideration of the correlation between students' hopelessness levels and the location where their family had lived for the longest period of time, it was shown that the place of residence had no statistically significant effect on hopelessness. Ersoy et al. (2010) also found out no significant relation between place of longest residence and hopelessness levels of pre-service teachers, which substantiates results obtained in the present study.

A significant relationship was discovered between marital status and hopelessness levels of participants. The principal cause of the correlation was found to be bachelor students, who had a high level of anxiety about marriage, and regarded it as a critical turning point in life.

Moreover, a significant difference was discovered in answers to the question "Do you think that the education you receive in your department will help you find a job?" It was revealed that this difference resulted from negative answers to this particular question. It can be concluded that students considered the education received in the biology department did not adequately qualify them find a job.

Analysis of the item "Do you plan to pursue a postgraduate degree in your field?" indicated a statistically significant difference between groups, which is considered to result from those students who wanted to attend a postgraduate program. Akçltekin & Dođan (2012) carried out a study on the hopelessness levels of primary school teachers, and found that teachers who had a postgraduate degree had a lower level of hopelessness than those who did not. This finding is similar to the one elicited in the present study. It was found that the students' desire to attend a postgraduate program gave them a purpose by setting a goal, thus lowering their hopelessness level.

## 5. Conclusion

A majority of the biology students in the faculties of Arts and Sciences in Turkey were covered by the study. The findings suggested that the participants had a mild level of hopelessness. Some remarkable results were obtained from analyses of the effects of socio-demographic variables on their hopelessness levels. The findings indicated that married participants had a lower level of hopelessness in comparison to single students, and most of the students thought that the education they received in the department was insufficient to qualify them to obtain a suitable job. The presumed ineffectualness of the education offered in the department caused the hopelessness level of students to increase, thus driving them towards lack of hope. The fact of biology students wanting to pursue a postgraduate degree in their respective field was found to have positive effect on and lower their hopelessness levels because such a commitment is thought to give them purpose. To conclude, it can be speculated that among the probable causes of the hopelessness was the lack of a high quality education and of goals to follow and achieve in their respective field.

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## 6. References

- Abela, J.R.Z. & Seligman, M.E.P. (2000). The hopelessness theory of depression: a test of the diathesis-stress component in the inter-personal and achievement domains. *Cognitive Therapy and Research*, 24(4), 361-378.
- Akçöltekin, A. & Doğan, S. (2012). Sınıf öğretmenlerinin umutsuzluk düzeylerinin farklı değişkenler açısından incelenmesi. *Journal of Academic Social Science*, 5(7), 49-59.
- Aras, A. (2011). Müzik bölümü lisans öğrencilerin umutsuzluk düzeylerinin belirlenmesi: Hacettepe Üniversitesi ankara devlet konservatuvarı örneği. *Gazi Eğitim Fakültesi Dergisi* 2(31), 509-524.
- Atalay, M.S. (1996). Bilgi Toplumu Öğretmenlerinin Sorunları Sempozyum 96, Modern Öğretmen Yetiştirmede Gelişme ve İlerlemeler. 30 Eylül-4 Ekim 1996, 603-608.
- Baran, Ş., Doğan, S. & Yalçın, M. (2002). The levels of university biology students making connection between the knowledge gained during their educations and daily life. *Erzincan Eğitim Fakültesi Dergisi*, 4, 89-96.
- Beck, A.T., Weßsman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: the hopelessness scale. *Journal of Consulting and Clinical Psychology*, 42, 862- 865.
- Cheavens, J, S, Feldman, D, B., Woodward J. T, & Snyder, C. R. (2006). Hope in cognitive psychotherapies: on working with client strengths. *Journal of Cognitive Psychotherapy: An International Quarterly*, 20(2), 135-145.
- Dereli, F. & Kabataş, S. (2009). Sağlık yüksekokulu son sınıf öğrencilerinin iş bulma endişeleri ve umutsuzluk düzeylerinin belirlenmesi. *Yeni Tıp Dergisi*, 26, 31-36.

- Deveci, S.E., Ulutaşdemir, N. & Açık, Y. (2011). Bir mesleki eğitim merkezi öğrencilerinde umutsuzluk düzeyi ve etkileyen faktörler. *Dicle Tıp Dergisi*, 38 (3), 312-317.
- Doğan, P. (2012). Resim öğretmenleri adaylarının umutsuzluk düzeylerinin incelenmesi. *M.Ü. Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi*, 36, 115-127.
- Doğan, S., Sezek, F., Yalçın, M., Kıvrak, E., Usta, Y. & Ataman, A.Y. (2003). Attitudes towards laboratory activities in the Atatürk University biology students. *Erzincan Eğitim Fakültesi Dergisi*, 5, 1-26.
- Duman, S., Taşğın, Ö. & Özdağ, S. (2009). Beden eğitimi ve spor yüksekokulu spor yöneticiliği bölümünde okuyan öğrencilerin umutsuzluk düzeylerinin incelenmesi. *Selçuk Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi*, 11(3), 27-32.
- Durak, A. & Palabıyıkoglu, R. (1994). Beck umutsuzluk ölçeğinin geçerlilik çalışması. *Kriz Dergisi*, 2(2), 311-319.
- Ersoy, E., Küçükkaragöz, H., Deniz, H. & Karataş, E. (2010). Öğretmen adaylarının umutsuzluk düzeylerinin bazı değişkenlere göre belirlenmesi, *e-Journal of New World Sciences Academy*, (5), 4. s. 1534-1542.
- Greene, S.M. (1989). The relationship between depression and hopelessness. *British Journal of Psychiatry*, 154,650-659.
- Gül, Ş. & Yeşilyurt, S. (2010). Secondary education students' attitudes towards biology and biology lesson (pilot study). *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*, 10, 28-47.
- Kaptan, S. (1998). Bilimsel araştırma ve istatistik teknikleri (Geliştirilmiş 11. Baskı). Ankara: Tekişik Yay.
- Karasar, N. (1999). Bilimsel araştırma yöntemleri (11. Baskı), *Nobel Yayın Evi*. Ankara.
- Kırımoglu, H. (2010). Türkiye'deki beden eğitimi ve spor yüksek okulu son sınıf öğrencilerinin istihdam sorunu açısından umutsuzluk düzeylerinin incelenmesi, *Kastamonu Eğitimi Dergisi*, (18), 1, s.37-46.
- Nunally, J.C. (1978). *Psychometric Theory* (2nd. Ed). *New York: McGraw Hill*.
- O'Conner, R.C., Connery, H. & Cheyne, W.M. (2000). Hopelessness: the role of depression, future directed thinking and cognitive vulnerability. *Psychology, Health and Medicine*, 5(2), 155-162.
- Oğuztürk, Ö., Akça, F. & Şahin. G. (2011). Üniversite öğrencilerinde umutsuzluk düzeyi ile problem çözme becerileri arasındaki ilişkinin bazı değişkenler üzerinden incelenmesi. *Klinik Psikiyatri*, 14, 173-184.
- Pınar, P. & Sabuncu, N. (2004). Long-termtraumatic stress responses of survivors of the august 1999 earthquake in Turkey, *Journal of Loss and Trauma*, vol. 9, s. 257-268.
- Poch, F.V., Villar, E., Caapros, B., Jaun, J., Conella., M. & Perez., I. (2004). Feelings of Hopelessness in a Spanish University Population. *Soc. Psychiatry Epidemiol*, 39:326-334.
- Romero, M. (1989). Hope and outcome anticipation, *Dissertation Abstract International* Vol.50, 5, 1258-A.
- Şahin, C. (2009). Eğitim fakültelerinde öğrenim gören öğrencilerin umutsuzluk düzeyleri, selçuk üniversitesi. *Ahmet Keleşoğlu Eğitim Fakültesi Dergisi*, (27), 271-286.

- Şahin, A. (2002). İlahiyat fakültesi öğrencilerinin umutsuzluk düzeyi üzerine bir araştırma. *Selçuk Üniversitesi İlahiyat Fakültesi Dergisi*, 13, 143-157.
- Şengül, S. & Güner, P. (2012). İlköğretim matematik öğretmenliği programına devam eden öğretmen adaylarının umutsuzluk düzeylerinin incelenmesi. Niğde Üniversitesi X. *Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi*. s. 433.
- Tekin, M. & Filiz, K. (2008). Beden eğitimi ve spor yüksekokullarının antrenörlük eğitimi ve spor yöneticiliği bölümlerinde öğrenim gören öğrencilerin umutsuzluk ve boyun eğici davranış düzeylerinin çeşitli değişkenlere göre incelenmesi. *Sportmetre Beden Eğitimi ve Spor Bilimleri Dergisi*, (1) VI. 27-37.
- Tümkiye, S. (2005). Ailesi yanında ve yetiştirme yurdunda kalan ergenlerin umutsuzluk düzeylerinin karşılaştırılması. *Türk Eğitim Bilimleri Dergisi*, 3(4), 445-459.
- Tümkiye, S., Çelik, M. & Ayberk, B. (2011). Lise öğrencilerinde boyun eğici davranışlar, otomatik düşünceler: umutsuzluk ve yaşam doyumu incelenmesi. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 2(20), 77-94.
- Ulucan, H., Kılınç, M., Kaya, K. & Türkçapar, Ü. (2011) Beden eğitimi spor yüksekokullarında öğrenimine devam eden öğrencilerin umutsuzluk ve yaşam doyum düzeylerinin incelenmesi. *Selçuk Üniversitesi Beden Eğitimi ve Spor Bilim Dergisi*, (3) 13. 349-356.
- Yetkin, Y. (1998). Biyoloji eğitimi ile sağlanan davranış değişikliklerinin insanın yücelişi ve dünya barışına katkısı. *Tr. J. Biology*, 22, 347-367.