# ORIGINAL ARTICLE KLINIK ARAŞTIRMA

# University students' states of having depressive symptoms and hopefulness about getting employed after graduation

Üniversite öğrencilerinin depresif belirtilere sahip olma durumları ve mezuniyet sonrası iş bulma konusunda umutlu olma durumları

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## **SUMMARY**

**Aim:** This cross-sectional study aimed to assess the prevalence of depressive symptoms and their levels of hope regarding employment after graduation among university students in Turkey, and the related factors of these.

Material and Methods: The research was conducted in 2018 at a state university in Turkey, involving 1,093 students from four different faculties: Dentistry, Architecture, Law, and Fine Arts. The dependent variables were the participants' levels of hope regarding employment and their scores on the Beck Depression Inventory (BDI). Independent variables included gender, age, faculty, economic status, health issues, smoking, alcohol consumption, academic achievement, and school satisfaction. Pearson chi-square test, t-test, and one-way ANOVA (with post hoc Tukey test) were used to evaluate relationships between dependent and independent variables.

**Results:** A significant portion of students in architecture and fine arts faculties reported experiencing depressive symptoms. Higher levels of depressive symptoms were observed among students who expressed no hope of finding employment after graduation. Inadequate financial support, dissatisfaction with body image, academic failure, and weak relationships with family and/or friends were associated with both job hopelessness and higher levels of depressive symptoms among university students. Interestingly, both the prevalence of job hopefulness and depressive symptoms were higher among first-year students compared to other academic levelsr.

**Conclusion:** The study reveals the widespread prevalence of job hopelessness and depressive symptoms among university students in Turkey. Targeted interventions, including career planning support and orientation programs, especially in the first year, could be beneficial in improving the mental well-being and future expectations of university students.

**Keywords:** Depressive symptom, employment, hope, students, university

# ÖZET

Amaç: Bu kesitsel araştırmada, Türkiye'deki üniversite öğrencileri arasında depresif belirtilerin yaygınlığını ve mezuniyet sonrası istihdama ilişkin umut düzeyini ve bunların ilişkili olabileceği faktörleri değerlendirmeyi amaclamıstır.

Materyal ve Metodlar: Araştırma, 2018 yılında Türkiye'deki bir devlet üniversitesinde gerçekleştirildi ve Diş Hekimliği, Mimarlık, Hukuk ve Güzel Sanatlar olmak üzere dört farklı fakülteden 1.093 öğrenci dahil edildi. Katılımcıların istihdama ilişkin umut düzeyleri ve Beck Depresyon Envanteri (BDE) puanları bağımlı değişkenlerdir. Cinsiyet, yaş, fakülte, ekonomik durum, sağlık sorunları, sigara içme, alkol tüketimi, akademik başarı ve okul memnuniyeti ise bağımsız değişkenlerdir. Bağımlı ve bağımsız değişkenler arasındaki ilişkileri değerlendirmek için Pearson ki-kare testi, t testi ve tek yönlü ANOVA (post hoc Tukey testi ile) testleri kullanılmıştır.

Bulgular: Mimarlık ve güzel sanatlar fakültelerindeki öğrencilerin önemli bir kısmı depresif belirtiler yaşadığını bildirdi. Mezun olduktan sonra iş bulma umudunun olmadığını ifade eden öğrencilerde daha yüksek düzeyde depresif belirtiler görüldü. Yetersiz harçlık, beden imajından memnuniyetsizlik, akademik başarısızlık ve aile ve/veya arkadaşlarla zayıf ilişkiler, üniversite öğrencileri arasında hem iş konusunda umutsuzluk hem de daha yüksek düzeyde depresif belirtilerle ilişkili bulunmuştur. İlginç bir şekilde, hem işe dair umutluluğun hem de depresif belirtilerin yaygınlığı birinci sınıf öğrencileri arasında diğer akademik seviyelere göre daha yüksekti.

Sonuç: Çalışmada, Türkiye'de üniversite öğrencileri arasında istihdama ilişkin umutsuzluğun ve depresif belirtilerin yaygın olduğu görülmüştür. İlk yıl boyunca kariyer planlama desteği ve oryantasyon eğitimi de dahil olmak üzere hedefe yönelik müdahaleler, üniversite öğrencilerinin zihinsel refahını ve gelecek beklentilerini iyileştirmede faydalı olabilir.

**Anahtar kelimeler:** Depresif semptomlar, iş bulma, öğrenci, umut, üniversite

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## INTRODUCTION

Depression is a significant global public health issue, particularly prevalent among individuals with mental health problems. According to the World Health Organization's 2017 report on "Depression and Other Common Mental Disorders," the worldwide prevalence of depression was estimated to be 4.4%, with higher rates observed in women (5.1%) compared to men (3.6%) (1). Among mental health disorders, depression is commonly observed in individuals in their 20s, often beginning after the age of 15, especially in adolescents, and increasing notably between the ages of 20 and 24 (1,2). Notably, university students are particularly vulnerable to experiencing depression, with studies reporting frequencies of depressive symptoms ranging from 24% to as high as 70-76% in some instances (3-9). Even in Türkiye, studies have revealed a prevalence of depressive symptoms in university students ranging from 22% to 38% (10-12).

The primary goal of university education is to provide students with knowledge and skills that will enable them to secure jobs upon graduation and achieve personal fulfillment. Consequently, stressors experienced by university students, such as academic pressures, success expectations, and post-graduation plans, are in alignment with the objectives of their education (13). Moreover, various other factors have been associated with depression in university students, including demanding academic workloads, health concerns, difficulties, and instances of abuse or mistreatment (14-17). Additionally, the challenges of adapting to a new environment, including a new city, lifestyle, friends, roommates, cultural differences, and perspectives, can also contribute to heightened stress levels among students.

Unemployment is a pressing issue in Türkiye, particularly concerning the increasing rates of youth unemployment. Recent data from the Turkish Statistics Institution in November 2020 revealed unemployment rates of 11.9% for individuals with less than a high school education, 15.3% for high school graduates, and 13.6% for university graduates. Employment rates were given as 38.5% for those with an education below high school, 41.1% for high school graduates and 65.2% for university graduates (18). Such high rates of unemployment among university graduates can exacerbate stress among university students.

Depression among students not only negatively impacts their academic performance and quality of life but can also lead to dangerous behaviors, such as alcohol and substance abuse, and even school dropout (19). Furthermore, depression is a significant risk factor for suicide (20), underscoring the importance of understanding the prevalence and contributing factors of

depression in university students.

Despite existing research on the depressive states of university students, there remains a scarcity of studies that investigate depression in conjunction with students' hopefulness regarding post-graduation employment opportunities. This study aims to compare the levels of depression and associated factors among students from four different faculties at a state university in Central Anatolia, Türkiye. Additionally, the study explores the relationship between students' hopefulness about finding employment after graduation and their experiences of depression.

# MATERIAL AND METHODS

This cross-sectional research was conducted at a State University located in Central Anatolia, Türkiye, between March and May in 2018. Four faculties offering education in distinct occupational fields were selected for the study, namely Dentistry, Architecture, Law, and Fine Arts. The total student population across these faculties was 3,186. To determine the required sample size, the frequency of depressive symptoms was considered to be 20%, based on previous research (4,8,21,22). Using a confidence level of 0.95, a power of 0.80, and a tolerance value of 0.05, the minimum sample size was calculated to be 528. Since the study utilized cluster sampling, it was planned to include at least 1,056 students to account for the design effect, which was taken as 2. Ultimately, 1,321 students were approached, out of which 1,227 voluntarily agreed to participate in the research. After excluding 34 incomplete survey responses, data from 1,093 students were ultimately considered for analysis.

The study obtained ethical approval from the Erciyes University Clinical Research Ethics Committee, and administrative permission was obtained from the deans of the selected faculties (approval number: 2017/304). Informed consent was obtained from all participating students after they were informed about the study. The researchers visited the students in their classes, explained the purpose of the study, and collected their informed consent before distributing the survey forms. The surveys were then filled out by the students under the supervision of the researchers.

The questionnaire form used in the study consisted of two parts. The first part included 30 questions concerning various characteristics of the students, such as their faculty, department, age, gender, economic status, smoking and alcohol use, and their hope for employment after graduation. The second part of the questionnaire comprised the Beck Depression Inventory (BDI), a 4-point Likert-type self-assessment scale consisting of 21 questions developed by Beck to assess the risk of depression and the level of depressive symptoms experienced by the participants (23). The Turkish validity

and reliability of the BDI were established by Hisli in 1989 (24). Each question was scored between 0 and 3 points. Scores that can be obtained from the scale range from 0 to 63, and it was determined that scores of 17 and above can be taken as the cut-off point that determines that the depression is above normal24. The Cronbach alpha coefficient of the scale was found to be 0.80 (24).

Statistical analysis of the data was performed using SPSS version 21 (SPSS Inc., Chicago, IL, USA). Descriptive statistics, including frequency and percentage, mean value, standard deviation, and highest and lowest values, were calculated for the research data. The conformity of the data to a normal distribution was assessed using the Shapiro-Wilk test. Categorical data were analyzed using the Pearson Chi-square test, while quantitative data were analyzed using the unpaired t-test and one-way ANOVA test (post hoc Tukey). The statistical significance level was set at p<0.05. Participants were classified as "smoking" or "not smoking" based on the classification of the World Health Organization's Tobacco Use Monitoring and Control Directive (25).

# **RESULTS**

The study included a total of 1,093 university students, with an average age of  $20.55 \pm 2.58$  years. Among the participants, 62.7% (n=685) were women. The mean score on the Beck Depression Inventory (BDI) was found to be  $13.30\pm 8.91$ . Using a BDI cut-off point of 17 or above to indicate the presence of depressive symptoms, the frequency of depressive symptoms among the students was 31.3% (n=342). Additionally, 30.2% (n=330) of the students reported feeling hopeless about finding employment after graduation. Notably, students who expressed no hope for employment exhibited higher levels of depressive symptoms.

Table 1 presents a comparison of the students' hopefulness regarding employment after graduation and some of their characteristics. The rate of students with hope about employment was higher among those studying Dentistry and Law faculties compared to those in Architecture and, particularly, Fine Arts (Table 1). Furthermore, the rate of having hope for employment was higher among students who reported their family's economic status as good and their allowance as sufficient. Students who were currently not employed, had independently chosen their faculty of study, and demonstrated academic success also exhibited higher rates of hopefulness about employment. Conversely, the rate of having hope for employment was lower among students who were smokers, experienced health problems, were dissatisfied with their body appearance, and reported poor relationships with their family and friends (Table 1).

Table 2 presents a comparison of the students' BDI scores and some of their characteristics. BDI scores were found to be higher among students studying in the Faculty of Architecture, those who considered their pocket money to be insufficient, and those who experienced health problems in themselves or in their family members. Additionally, students who smoked or consumed alcohol and were dissatisfied with their body appearance showed higher BDI scores. On the other hand, lower BDI scores were observed in students who perceived their academic success as good, had independently chosen their faculty of study, were satisfied with their school, described their relationships with family and friends as good, and expressed hopefulness about employment (Table 2).

# DISCUSSION

In this study, university students' states of having depressive symptoms and being hopeful about employment after graduation and their related factors were evaluated.

The findings revealed that 31.3% of the students experienced depressive symptoms. This percentage was higher than a previous study conducted at the same university in 2010, where the frequency of depressive symptoms was 21.2% (26). The increase in the rate of depressive symptoms over time or the inclusion of different faculties in the current study might have contributed to this difference (26). Moreover, a metaanalysis study with medical university students found a lower frequency of depressive symptoms (24.4%) compared to our study (6). Medical students were not included in our study but Oral et al. also found lower frequency of depressive symptoms in medical faculty students (22.7%) at the same university in the same year (10). In Türkiye, medicine is the first choice of most of students and their family because they start working as government service obligations as soon as they graduated so they do not have to worry about employment. In other two studies from Pakistan and Sarajevo depressive symptoms among university students were also high (42.6%, and 30.1%) like ours' (5,27). In a study conducted in Korea, the rate of having depressive symptoms was found to be lower among university students (13.4%) (28). The differences in depression rates between studies could be attributed to variations in socio-economic and cultural factors among different countries. Additionally, the composition of faculties and academic grades in the study cohort could have influenced the results.

Significant differences in the frequency of depressive symptoms were observed among students studying in different faculties, with architecture and fine arts students exhibiting higher levels of depressive symptoms compared to dentistry and law students. Faculties where depressive

Table 1. Comparison of Students' Hopefulness Statement for Employment and Some Characteristics

Characteristics		Total		Students' hopefulness statement for employment			
Characteristics		n	%*	Hopeful %	Hopeless %	p/x <sup>2</sup> **	
Gender	Male	408	37.3	68.9	31.1	p=3.25	
	Female	685	62.7	70.4	29.6	$x^2$ :0.60	
	Dentistry	200	18.3	88.5	11.5		
Franks	Law	428	39.2	77.3	22.7	p<0.001	
Faculty	Architecture	345	31.6	56.2	43.8	x <sup>2</sup> :95.33	
	Fine Arts	120	11.0	50.8	49.2		
Grade	Grade 1	315	28.8	77.5	22.5		
	Grade 2	339	31.0	67.3	32.7		
	Grade 3	269	24.6	62.8	37.2	p=0.001 x <sup>2</sup> :16.33	
	Grade 4	170	15.6	71.8	28.2	X:16.33	
	No	98	9.0	61.2	38.8		
Self-reported economic status of the	Good	508	46.5	72.0	28.0	p=0.003	
students' family	Moderate	553	50.6	69.3	30.7	$x^2:11.59$	
students runniy	Poor	32	2.9	43.8	56.3	X .11.55	
Adequacy of the student's pocket money	Adequate	709	64.9	75.2	24.8	p<0.001	
	inadequate	384	35.1	59.9	40.1	x <sup>2</sup> :27.59	
Current employment status	Employed	68	6.2	67.6	32.4	p=0.390	
	Unemployed	1025	93.8	70.0	30.0	$x^2:0.16$	
Student's having any health problem	Yes	68	6.2	57.4	42.6	p=0.017	
	No	1025	93.8	70.6	29.4	$x^2:5.33$	
Having any health problem in a family	Yes	164	15.0	69.5	30.5	p=0.498	
member Smoking	No	929	85.0	69.9	30.1	x <sup>2</sup> :0.01	
	Yes	213	19.5	63.4	36.6	p=0.023	
	No Yes	880 108	80.5	71.4	28.6 31.5	$x^2:5.18$	
Alcohol consumption	No	985	9.9 90.1	68.5 69.9	30.1	p=0.759 x <sup>2</sup> :0.095	
	Satisfied	669	61.2	75.2	24.8	p<0.001	
Rody image	Not Satisfied	424	38.8	61.3	38.7	x <sup>2</sup> :23.67	
Body image	Good	464	42.5	79.1	20.9		
Academic success	Moderate	489	44.7	66.1	33.9	p<0.001	
	Bad	140	12.8	52.1	47.9	$x^2$ :42.98	
Self-independent preference about the	Yes	839	76.8	74.9	25.1	p<0.001	
faculty to get educated	No	254	23.2	53.1	46.9	x <sup>2</sup> :43.56	
, •	Satisfied	686	62.8	82.7	17.3	p<0.001	
Satisfaction with school	<b>Not Satisfied</b>	407	37.2	48.2	51.8	x <sup>2</sup> :144.22	
Relationship with the family	Good	908	83.1	73.8	26.2	n<0.001	
	Moderate	150	13.7	52.7	47.3	p<0.001 x <sup>2</sup> :42.49	
	Bad	35	3.2	40.0	60.0	X .42.43	
Relationship with the friends	Good	927	84.8	73.6	26.4	p<0.001	
	Moderate	141	12.9	51.8	48.2	x <sup>2</sup> :44.94	
	Bad	25	2.3	32.0	68.0		
Having depressive symptoms	Yes	342	31.3	60.8	39.2	p<0.001	
	No	751	68.7	73.9	26.1	x <sup>2</sup> :19.09	

<sup>\*</sup> Column Percentage \*\* Pearson Chi Square

10

Table 2. Comparison of Students' BDI scores. Frequency of having depressive symptoms and Some Characteristics

Variables		BDI mear	Frequency of having depressive symptoms			
Tallables		Avg. ± sd	р	Yes (%)	No (%)	p***
Gender	Female	13.51±8.76	0.202*	32.1	67.9	p=0.45
	Male	12.94±9.16	p=0.302*	29.9	70.1	$x^2:0.5$
	Dentistry	12.79±8.55ª		27.0	73.0	
Faculty	Law	11.94±7.93 <sup>a</sup>	p<0.001**	24.1	75.9	p<0.001
	Architecture	15.29±9.69b		42.3	57.7	x2:31.70
	Fine Arts	13.28±9.55a.b		32.5	67.5	
Grade	Grade 1	14.42±9.47		36.5	63.5	
	Grade 2	12.87±9.26	p=0.054**	29.2	70.8	p=0.031 x <sup>2</sup> :8.88
	Grade 3	13.09±8.39	p=0.054	32.3	67.7	X2:8.88
	Grade 4	12.39±7.76		24.1	75.9	
Self-reported economic status of the family	Good	13.06±9.04		30.3	69.7	n=0.460
	Moderate	13.41±8.77	p=0.416**	31.6	68.4	p=0.460 x <sup>2</sup> :1.55
	Poor	15.11±9.41		40.6	59.4	X-:1.55
Adequacy of the students' pocket money	Adequate	12.66±8.70	p=0.001*	27.9	72.1	p=0.001
	Inadequate	14.48±9.20		37.5	62.5	$x^2:10.61$
Current employment status	Yes	13.79±9.32	p=0.637*	36.8	63.2	p=0.315
current employment status	No	13.26±8.89	p=0.037	30.9	69.1	$x^2:1.01$
Student's having any health	Yes	15.95±10.61	p=0.012*	35.4	64.6	p=0.222
problem	No	13.12±8.77		30.6	69.4	$x^2:1.49$
Having any health problem in a family member	Yes	14.90±10.09	p=0.011*	42.6	57.4	p=0.037
	No	13.01±8.66		30.5	69.5	$x^2:4.35$
Smoking	Yes	15.49±9.77	p<0.001*	41.8	58.2	p<0.001
	No	12.77±8.62	p 40.001	28.7	71.3	$x^2:13.55$
Alcohol consumption	Yes	15.36±10.12	p=0.011*	41.7	58.3	p=0.014
	No	13.07±8.75	p 0.011	30.2	69.8	$x^2:6.00$
Body image	Satisfied	12.36±8.86	p<0.001*	27.5	72.5	p<0.001
	Not Satisfied	14.78±8.81	p 10.002	37.3	62.7	$x^2:11.50$
Academic success	Good	12.43±9.00°		27.6	72.4	p=0.024
	Moderate	13.81±8.72 <sup>b</sup>	p=0.018**	32.5	67.5	x <sup>2</sup> :7.46
	Bad	14.38±9.09 <sup>b</sup>		39.3	60.7	
Self-independent preference	Yes	12.98±8.74	p=0.034*	30.0	70.0	p=0.104
about the faculty to get	No	14.34±9.42		35.4	64.6	x <sup>2</sup> :2.64
educated						
Satisfaction with school	Satisfied	11.92±8.43	p<0.001*	25.2	47.8	p<0.001
	Not Satisfied	15.88±9.94		41.5	58.5	$x^2:31.58$
Relationship with the family  Relationship with the friends	Good	12.78±8.66 <sup>a</sup>		28.4	71.6	p<0.001
	Moderate	15.63±9.31 <sup>b</sup>	p<0.001**	44.7	55.3	x <sup>2</sup> :20.83
	Bad	16.78±11.24 <sup>b</sup>		48.6	51.4	
	Good	13.05±8.76 <sup>a</sup>	0.035**	29.7	70.3	p=0.001
	Moderate	15.09±9.38 <sup>b</sup>	p=0.035**	44.0	56.0	x <sup>2</sup> :13.16
	Bad	12.36±11.02°		20.0	80.0	
Employment Hope	Hopeful	12.40±8.46	p<0.001*	27.3	72.7	p<0.001
	Hopeless	15.37±9.58	•	40.6	59.4	x <sup>2</sup> :19.08

<sup>\*</sup> Column Percentage
\* Student's T Test \*\* One Way Anova|(post hoc Tukey) \*\*\* Pearson Chi Square
a. b: The difference between groups that do not have the same letter in each column is significant)

symptoms were more prevalent also showed lower rates of students with hopefulness about finding a job after graduation. In other studies, conducted in Türkiye, it has been revealed that the anxiety of finding job after graduation was common among university students and this emotion had impact on their mental health. Ergüt stated that "hope of finding a job" was an important determinant of "being hopeful for the future" among university students (29). Özçelik and Öztuna also revealed a positive, moderately significant relationship between Health Vocational School students' "hopelessness scale scores" and "general unemployment concerns" (30). Karakuş claimed that university students' thoughts of "not being able to find a job after graduation" had a significant effect on university students' depression (31). Students' hopes of finding employment varied according to their faculties, which in turn affected their levels of depressive symptoms. Additionally, several common factors were found to be associated with both depressive symptoms hopelessness about employment, including inadequate pocket money, smoking, body dissatisfaction, academic failure, and poor relationships with family and friends.

There was no relationship between students' gender and depression scores at the research. Džubur et al, Şanlier et al and Suleiman et al also stated no difference between students' depression situations according to their gender (27,32,33). There were also studies in the literature claiming that depression was more common in women (34,35). The variations in depression rates at gender between studies could be attributed to the use of different evaluation methods and study populations.

Interestingly, first-year students had higher rates of hopefulness about finding a job, but they also exhibited higher levels of depressive symptoms. Similar to the study, the frequency of depressive symptoms was higher in first grade students in the study of Lu Li et al (36). This might be attributed to the challenges faced by first-year students, including adapting to a new environment, a different education system from high school, living away from family, and dealing with economic difficulties alone, leading to increased depressive symptoms.

Furthermore, lower BDI scores were observed in students who did not have any health problems in themselves or their family, did not smoke or consume alcohol, and were satisfied with their body appearance. Günay et al, noticed that depressive symptoms were found to be significantly lower in students who were satisfied with their body appearance and who did not have any health problem (26). Oral et al stated depressive symptoms were higher in students' who used to smoke, consumed alcohol, were not satisfied with their body appearance and had a health problem (10). Having a health problem in themselves or family members can increase the stress level on students. The relationship between depression and dissatisfaction

with body appearance was shown also in a study conducted with adolescents in Brazil (37). The presence of health problems in themselves or family members could elevate students' stress levels.

Depressive symptoms were significantly lower in those who had good academic success, preferred the department they studied by their own prefer and were satisfied with their school. Similarly, Ngin et al found that depressive symptoms were lower in Cambodia students who expressed their academic success as good (38). There were studies in the literature that showed a significant relationship between academic failure and depression (28,32,37). The students who chose their department independently and expressed academic success reported lower depression scores, indicating that taking ownership of their educational choices and interests positively affected their mental well-being.

There were many studies in the literature that showed the economic status of students' families, and their academic success were related with their depressive symptoms (29,30), but unfortunately, there were not many studies that showed the relationship between the students' hopes for employment and their families' economic status or their academic success. It was quite normal and expected that individuals who got educated and grown-up without economic concerns, did not have anxiety about employment. In our study, those whose family's economic situation was bad, and their allowance was insufficient had less hope for employment. In addition, students whose parents were dead had less hope about employment. Social and financial support from parents could play a significant role in reducing employment anxiety among students.

Students who had serious health problems and were dissatisfied with their appearance also expressed less hope about employment, possibly due to reduced self-confidence in their ability to secure a job.

As expected, students' hopes for employment were higher in those who described their academic success as good, those who choosed the department they studied by their own prefer, and those who were satisfied with their school. In addition, students who stated that their relations with their family and/or friends were bad had lower hopes for employment. Similarly, in a study with senior university students, hopelessness was lower in those with good academic success and students who voluntarily attended the department they studied (31). Students who had good relations with their family and friends can also be considered as individuals with good communication skills, and good communication is also valuable in job applications and interviews.

BDI scores were also significantly lower in those who stated their relationship with their family and friends as good.

Individuals with good communication skills are probably also good at stress management.

## CONCLUSIONS

In conclusion, this study sheds light on the prevalence and related factors of depressive symptoms and hopefulness about employment among university students in Central Anatolia, Türkiye. It is noteworthy that students studying in faculties of architecture and fine arts exhibit higher levels of depressive symptoms and lower hopes of finding employment after graduation. Factors such as inadequate pocket money, smoking, body dissatisfaction, academic failure, and poor relationships with family and/or friends were found to be linked to both hopelessness about employment and the prevalence of depressive symptoms among university students.

Given these findings, it would be beneficial to implement career planning support programs for students during their university years. Social support initiatives aimed at enhancing students' communication skills and introducing future career opportunities could also be valuable. Specific attention should be given to students who experience negative emotions concurrently, such as those with poor relationships with family and friends and dissatisfaction with their appearance, as these factors might exacerbate each other. Designing tailored social and psychological support programs for such students could be particularly beneficial.

To gain a deeper understanding of the reasons for higher rates of depression in different faculties, more detailed studies should be conducted. Moreover, orientation

programs targeting first-year students and providing financial support for those experiencing economic difficulties could be implemented to improve their wellbeing and reduce depressive symptoms.

It is essential to acknowledge the limitation of the study, as it was conducted in only four faculties within a single university. Therefore, caution should be exercised when generalizing the findings to the entire country or all faculties within the university. Future research should encompass a broader range of faculties and universities to obtain more comprehensive insights into the mental health and employment prospects of university students in Türkiye.

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# REFERENCES

- 1. WHO. Depression and Other Common Mental Disorders Global Health Estimates. https://apps.who.int/iris/bitstream/handle/10665/25461 0/WHO-MSD-MER-2017.2-eng.pdf Accessed 10 July 2021. 2. Kessler RC, Angermeyer M, Anthony JC, Graaf RD,
- Gasquet I, Girolamo GD, et al. Lifetime prevalence and ageof-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. World Psychiatry. 2007;6(3):168.
- 3. Ibrahim AK, Kelly SJ, Adams CE, Glazebrook C. A systematic review of studies of depression prevalence in university students. Journal of Psychiatric Research. 2013;47(3):391-400.
- 4. Rotenstein LS, Ramos MA, Torre M, Segal JB, Peluso MJ, Guille C, et al. Prevalence of Depression, Depressive Symptoms, and Suicidal Ideation Among Medical Students: A Systematic Review and Meta-Analysis. JAMA. 2016; 316(21):2214-36.
- 5. Khan MN, Akhtar P, Ijaz S, Waqas A. Prevalence of depressive symptoms among university students in Pakistan: a systematic review and meta-analysis. Frontiers in public health, 2021;968.
- 6. Akhtar M, Herwig BK, Faize FA. Depression and Anxiety among International Medical Students in Germany: The Predictive Role of Coping Styles. J Pak Med Assoc. 2019;69(02):5.
- 7. Zhou W, Pu J, Zhong X, Yang W, Teng T, Fan L, et al. Overlap of burnout-depression symptoms among Chinese neurology graduate students in a national cross-sectional study. BMC Med Educ. 2021;21(1):83.
- 8. Mao Y, Zhang N, Liu J, Zhu B, He R, Wang X. A systematic review of depression and anxiety in medical students in China. BMC Med Educ.2019;19(1):327.
- 9. Khan MS, Mahmood S, Badshah A, Ali SU, Jamal Y. Prevalence of Depression, Anxiety and their associated factors among medical stu-dents in Karachi, Pakistan. J Pak Med Assoc. 2006;56(12):4.
- 10. Oral B, Borlu A, Ener D, Günay O. Depressive Symptom Level and Associated Factors of Medical Faculty 1ST and 6TH Grade Students. ESTUDAM Public Health Journal. 2021;6(1):46-59.
- 11. Ulaş B, Tatlıbadem B, Nazik F, Sönmez M, Uncu F. Frequency of Depression and Associated Factors in University Students. Celal Bayar University-Health Sciences Institute Journal. 2015;2(3):71-5.
- 12. Açıkgöz A, Dayı A, Binbay T. Prevalence of depression among female university students and associated factors. Cukurova Medical Journal. 2017;43(1):131-40.
- 13. Beiter R, Nash R, McCrady M, Rhoades D, Linscomb M, Clarahan M et al. The prevalence and correlates of depression, anxiety, and stress in a sample of college students. Journal of Affective Disorders. 2015;173:90-6.
- 14. Elani HW, Allison PJ, Kumar RA, Mancini L, Lambrou A, Bedos C. A Systematic Review of Stress in Dental Students. Journal of Dental Education. 2014;78(2):226-42.
- 15. Borst JM, Frings-Dresen MHW, Sluiter JK. Prevalence

14

- and incidence of mental health problems among Dutch medical students and the study-related and personal risk factors: a longitudinal study. International Journal of Adolescent Medicine and Health. 2016;28(4):349-55.
- 16. Wege N, Muth T, Li J, Angerer P. Mental health among currently enrolled medical students in Germany. Public Health. 2016;132:92-100.
- 17. Cook AF, Arora VM, Rasinski KA, Curlin FA, Yoon JD. The Prevalence of Medical Student Mistreatment and Its Association With Burnout. Academic Medicine. 2014;89(5):749-54.
- 18. TUIK. Labor Statistics. November 2020. https://data.tuik.gov.tr/Bulten/Index?p=Isgucu-
- Istatistikleri-Kasim-2020-37480 Accessed 10 March 2021 19. Pillay N, Ramlall S, Burns JK. Spirituality. Depression and quality of life in medical students in KwaZulu-Natal. S Afr J Psych. 2016;22(1):6.
- 20. Garlow SJ, Rosenberg J, Moore JD, Haas AP, Koestner B, Hendin H, et al. Depression, desperation, and suicidal ideation in college students: results from the American Foundation for Suicide Prevention College Screening Project at Emory University. Depress Anxiety. 2008;25(6):482-8.
- 21. Akhtar P, Ma L, Waqas A, Naveed S, Li Y, Rahman A, et al. Prevalence of depression among university students in low and middle income countries (LMICs): a systematic review and meta-analysis. Journal of Affective Disorders. 2020;274:911-9.
- 22. Sarokhani D, Delpisheh A, Veisani Y, Sarokhani MT, Manesh RE, Sayehmiri K. Prevalence of Depression among University Students: A Systematic Review and Meta-Analysis Study. Depression Research and Treatment.2013;1-7.
- 23. Beck AT. An Inventory for Measuring Depression. Arch Gen Psychiatry. 1961;4(6):561.
- 24. Hisli N. A reliability and validity study of Beck Depression Inventory in a university student sample. J. Psychol. 1989;7(23):3-13.
- 25. World Health Organization, editör. Guidelines for controlling and monitoring the tobacco epidemic. Geneva: World Health Organization; 1998. https://apps.who.int/iris/bitstream/handle/10665/42049/9241545089eng.pdf?sequence=8&isAllowed=y76-78 s. Accessed 10 March 2021
- 26. Gunay O, Akpinar F, Poyrazoglu S. Aslaner H. Prevalence of depression among Turkish University Students and related factors. Turkish Journal of Public Health. 2011;9(3):133-43.
- 27. Dzubur A, Abdulahovic D, Kurspahic-Mujcic A, Dzubur A, Loga-Zec S, Skrijelj V. Depressive Symptoms Among Sarajevo University Students: Prevalence and Socio-Demographic Correlations. Acta medica academica. 2018;47(2).
- 28. Seo EH, Kim SG, Kim SH, Kim JH, Park JH, Yoon HJ. Happiness Associated with Depressive Symptoms Among University Students: a cross-sectional study in Korea. Annals of general psychiatry. 2018;17(1):1-9.
- 29. Ergüt Ö. Investigation of the Relationship Between

- University Students' Hopelessness Level with Job Experience and Job Finding Expectations at Grade Level. Journal of Suleyman Demirel University Institute of Social Sciences. 2020;38:232-52.
- 30. Özçelik KK, Öztuna B. Unemployment Anxiety and Hopelessness Towards Unemployment in University Students: A Research on Students of Dokuz Eylül University Vocational Health School. Journal of Yaşar University. 2020;15(60):953-70.
- 31. Karakuş Ö. Depression and Hopelessness Levels of University Students According to Their Opinions on Finding Employment or Falling out of Labor Force in Türkiye. Universal Journal of Educational Research. 2018;6(1):190-4
- 32. Şanlier N, Türközü D. Toka O. Body image, Food Addiction, Depression, and Body Mass Index in University Students. Ecology of Food and Nutrition. 2016;55(6):491-507
- 33. Suleiman AK, Ismadi NFI, Choudhry FR, Munawar K, Hameed MA. Determinant Factors of Depression: A Survey Among University Students. Malaysian Journal of Public Health Medicine. 2017;17(3):97-103.
- 34. Ghazali SR, Azhar A. Depressive Symptoms, Gender, and Ethnicity: An Exploratory Study among Cross Ethnic Adolescents in Sarawak, Malaysia. Malaysian Journal of Youth Studies. 2015;13;141-52.
- 35. Aldabal BK, Koura MR, Alsowielem LS. Magnitude of depression problem among rimary care consumers in Saudi Arabia. Int J Med Sci Public Health. 2015;4:(2):205.
- 36. Li L, Lok GKI, Mei S-L, Cui X-L, An F-R, Li L, et al. Prevalence of depression and its relationship with quality of life among university students in Macau, Hong Kong and mainland China. Sci Rep. 2020;10(1):15798.
- 37. Soares Filho LC, Batista RFL, Cardoso VC, Simões VMF, Santos AM, Coelho SJDDAC et al. Body Image Dissatisfaction and Symptoms of Depression Disorder in Adolescents. Braz J Med Biol Res. 2021;54.
- 38. Ngin C, Pal K, Tuot S, Chhoun P, Yi R, Yi S. Social and Behavioural Factors Associated with Depressive Symptoms Among University Students in Cambodia: a cross-sectional study. BMJ Open. 2018;8(9).