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AUTHORS: Türkkân ÖZTÜRK KAYGUSUZ,Ahmet ERENŞOY

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Tıp Fakültesi Son Sınıf Öğrencilerinin Umutsuzluk Düzeylerinin Belirlenmesi

Determination Of Hopelessness Levels Of Final Year Students Of The Faculty Of Medicine

Türkkan Öztürk Kaygusuz¹ (<https://orci.org/0000-0002-41515903>)

Ahmet Erensoy² (<https://orcid.org/0000-0001-6300-1105>)

¹Fırat University School of Medicine, Department of Medical Education, MD, Asst.Prof. Elazığ/ TURKEY

²Fırat University School of Medicine, Department of Medical Education, MD, PhD., Assoc.Prof. Elazığ/ TURKEY

Sorumlu Yazar: Dr. Öğretim Üyesi Türkkan Öztürk Kaygusuz

Fırat üniversitesi Tıp fakültesi TIP EĞİTİMİ Anabilim dalı Elazığ/ TÜRKİYE

Mailing address: Fırat University School of Medicine, Department of Medical Education, Elazığ/ TURKEY

Email: turkkan69@gmail.com Telefon: İş telefonu : 0(424) 237 0000 GSM: +905337474294

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ÖZET:

Giriş: Hem depresyonun özelliklerini hem de kaygıyı içeren umutsuzluğu, çevresel stresin tetiklediği düşünülmektedir. Umutsuzluk durumunda duygu bozuklukları, çaresizlik ve problemleri çözmede yetersizlikler ortaya çıkmaktadır. Bu çalışma, tıp fakültesi son sınıf öğrencilerinin umutsuzluk düzeylerini belirlemek, cinsiyet ve yaş değişkenlerine göre umutsuzluk düzeylerinde farklılık olup olmadığını tespit etmek için yapılmıştır.

Yöntem: Bu çalışmaya 60' ı (%48,4) erkek olmak üzere toplam 124 son sınıf öğrencisi alınmıştır. Beck'in Umutsuzluk Ölçek Puanı kullanılarak öğrencilerin umutsuzluk düzeyleri ve umutsuzluğun üç ana yönü olarak, gelecekle ilgili duygu ve beklenti, motivasyon kaybı ve gelecekle ilgili umut durumları değerlendirilmiştir.

Bulgular: Öğrencilerin Beck'in Umutsuzluk Ölçek Puanı ortalamaları 6,29 olarak bulunmuştur. Öğrencilerin %30,6'sında umutsuzluğun olmadığı, %48,4'ünde hafif umutsuzluk, %13,7'sinde orta seviyede umutsuzluk ve %7,3'ünde ileri derecede umutsuzluk bulunmuştur. Beck'in Umutsuzluk Ölçek Puanı ortalamaları açısından cinsiyet ve yaş grupları arasında istatistiksel olarak anlamlı bir fark saptanmamıştır.

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Tıp fakültesini insanlığa hizmet etmek için tercih eden öğrencilerde, bu amaçla tercih etmeyenlere göre Beck'in Umutsuzluk Ölçek Puanı ortalamaları anlamlı olarak daha düşük; iyi para kazanmak düşüncesi ile tercih edenlerde ve tıp fakültesini kendi isteği ile tercih etmeyenlerde Beck'in Umutsuzluk Ölçek Puanı ortalamaları anlamlı olarak daha yüksek bulunmuştur. Fakülteyi başkasının yönlendirmesi (etki altında kalma) ile tercih edenlerde BUP ortalaması 15 puanın üzerinde (şiddetli umutsuzluk) bulunmuştur. Öğrencilerin çoğunluğunun (%89) mesleki gelecek kaygısı taşımadıkları görüldükçe, gelecekte yeterli kazanç elde edememe kaygısı yaşayan öğrencilerde Beck'in Umutsuzluk Ölçek Puanı ortalamasının anlamlı olarak yüksek olduğu bulunmuştur.

Sonuç: Öğrencilerin genel olarak gelecek ile ilgili duygu ve beklentilerinin olumsuz olmadığı, motivasyon kaybının önemli sayılmayacak oranda az olduğu ve gelecek ile ilgili umutlarının ise oldukça yüksek olduğu tespit edilmiştir.

ABSTRACT:

Background: Hopelessness, which includes both the characteristics of depression and anxiety, is thought to be triggered by environmental stress. In case of hopelessness, emotional disorders, despair and inability to solve problems arise. This study was conducted to determine the level of hopelessness of the final year students in medical school and to determine whether there is a difference in the levels of hopelessness according to gender and age variables.

Methods: A total of 124 medical faculty last year students, 60 of them (48.4%) male, were included in this study. Using the Beck's Hopelessness Scale Score, the hopelessness levels of the students and the three major aspects

of hopelessness, i.e. feelings and expectations about the future, loss of motivation and hopes about the future were evaluated.

Findings: The mean Beck's Hopelessness Scale Score of the students was 6.29. 30.6% of the students had no hopelessness, 48.4% had mild hopelessness, 13.7% had moderate hopelessness and 7.3% had severe hopelessness. No statistically significant difference was found between gender and age groups. For the students who preferred medical school to serve humanity, the mean Beck's Hopelessness Scale Score were significantly lower than those who did not prefer for this purpose; Beck's Hopelessness Scale Score means were found to be significantly higher for those who preferred to earn more money. While the majority of the students (89%) did not have any professional future concerns, it was found that the Beck's Hopelessness Scale Score mean was significantly higher in students who were concerned about not being able to earn enough in the future.

Conclusion: It was found that the students' feelings and expectations about the future were not negative, the loss of motivation was not significant and the hopes about the future were quite high.

BACKGROUND

Hopelessness is the expectations of the individual that a pleasing situation will not occur or will result negatively and that the individual does not have enough features to change this situation. Although hope is a positive emotional state, hopelessness is a feeling that prevents individuals's ability due to negative thoughts (1). Beck (1) describes hopelessness as a situation in which a person is looking at himself and the outside world negatively. Hopelessness, which includes both the characteristics of depression

and anxiety, is thought to be triggered by environmental stress. In case of hopelessness, emotional disorders, despair and inability to solve problems arise (2).

Hopelessness levels vary from one society to another. Hopelessness levels can be evaluated with Beck's Hopelessness Scale scores (BHS) (1). The BHS mean was reported to be 4.4 (SD 3.0) in Ireland and 8.6 (SD 3.9) in Japan (3,4). Edwards and Holden (5) reported that in Canada among university students the BHS mean was 2.5 (SD 2.9) among female; and 3.0 (SD 3.0) in males. BHS mean values in the different questionnaire conducted among university students in Turkey were reported by Girgin (6) as 3,16 (SD 3,37) and by Zeyrek et al. (7) as 4.22 (SD 4.33). While publications about the level of hopelessness among medical faculty final year students, who can be considered as physicians, are not found in the foreign literature, the publications on this subject are very few in our country. The BHS mean was reported by Ergin et al. (8) as 5.4 (SD 4.1) among the sixth grade students of the medical school and by Budakoğlu et al. (9) as 4,9 (SD 4,3) among the first 3 grade students of the medical school.

There are reports that people with severe hopelessness especially those with a BHS of 15 or more are highly susceptible to depression and suicidal ideation (1,10). It was shown that hopelessness is significantly higher among students of medical faculty with suicidal ideation (11). It was reported that medical school students entered the faculty with good mental health but because of the difficulty of medical education, they experienced higher rates of anxiety, hopelessness, stress, depression, fatigue, burnout and mental disorders compared to other university students, and their mental health deteriorated during their education (12,13).

It was emphasized by the Association of American Medical Colleges that the health and well-being of medical students should be

ensured. In this context, it is inevitable that the psychosocial status of students should be analyzed (14,15). Very little is known about the socio-psychological conditions and future prospects of the students as medical education proceeds through intensive curricula (12). This study was carried out to determine the level of hopelessness and related conditions of the last year medical students who will graduate in the near future.

Materials and methods

This cross-sectional- descriptive study was conducted among the final year students of the medicine faculty upon receiving the approval of the Ethical Committee for Non-Interventional Research (dated 31.05.2018 and meeting decision number. 10/01). It was planned to reach all senior students, however due to rejection to participate or being unable to reach, only 124 (75%) of the 166 students were included in the study. A questionnaire consisting of two parts was applied to students who agree to participate in the study by face-to-face interview technique. In the first part of the questionnaire, 31 questions intended for learning the students' demographic characteristics, reasons of choosing medical faculty, past educational characteristics and expectations of post-graduate work were asked. In the second part of the questionnaire, the Hopelessness Scale developed by Beck et al. comprising of 20 questions was conducted. The internal consistency coefficient of this scale was reported to be 0.93 by Beck et al. (16) and 0.86 by Durham (17).

Beck's Hopelessness Scale includes questions indicating the feelings and thoughts related to the future and each question is scored as 0 (zero) or 1 (one). The questions in the scale are answered in the correct-incorrect form and the scale reflects the negative expectations. In the scale, for 11 questions (questions 2, 4, 7, 9, 11, 12, 14, 16, 17, 18, 20) YES option and for the remaining 9 (1, 3, 5, 6, 8, 10, 13, 15, 19) NO

option gets 1 point, contrary answers receive zero point. The arithmetic sum of the points obtained as a result of the answers given to these questions is accepted as Beck's Hopelessness Scale Score (BHS). The scores that can be taken from the scale vary between 0-20. The high scores determine the severity of hopelessness. According to the scores obtained from the scale, the severity of hopelessness determined as minimum (0-3 points); mild (4-8 points); moderate (9-14); and severe (15-20 points) hopelessness (16). Most researchers suggest that the cut-off value of BHS's predictive power should be taken as 9 and above as an indicator of suicidal intention (1,18).

Beck's Hopelessness Scale measures the three major aspects of hopelessness, including feelings and expectations about the future, loss of motivation and hope for the future. With questions 1, 3, 7, 11 and 18 in the scale, the sub-dimension of feelings and expectations about the future; with questions 2, 4, 9, 12, 14, 16, 17 and 20 the sub-dimension of motivation loss related to the future; and with questions 5, 6, 8, 10, 13, 15 and 19, the sub-dimension of hope for the future are measured (16).

The Turkish version of Beck's Hopelessness Scale has been used in our study. The validity and reliability study of the Turkish version of the scale was performed by Seber et al. and Cronbach's alpha value was 0.86; the correlation coefficient for point invariance was reported as $r = 0.73$ (19). Regarding the internal consistency coefficient of our study, Cronbach's alpha value was found as 0.84, and Kuder-Richardson reliability value (KR21) was 0.82.

SPSS 22.0 packaged software was used to analyze the data collected as a result of the questionnaire. For categorical variables, frequency distribution, percentage and Pearson's Chi-Square analysis; for intra-group comparisons of the hopelessness score, depending on the normality and homogeneity of variance assumptions, Student t-test and Mann-

Whitney U-test were used, and in the presence of 3 or more subgroups, one-way analysis of variance (ANOVA) and Kruskal Wallis tests were utilised. P value less than 0.05 was considered significant.

Findings

In our study, the gender of the students were 64 (51.6%) female and 60 (48.4%) male. The mean age of the students was 24,76 (SD 1,79) (lowest 22 - highest 36). It was determined that 60.9% of the students were between the ages of 24-25 and 85.5% of them chose the medical faculty of their own accord. The mean BHS score of all students was 6.29 (SD 4.42), 6.52 (SD 4.8) for female and 6.05 (SD 3.9) for male and the difference between them was not significant ($p = 0.56$). It was found that 38 (30.6%) of the students had minimal, 60 (48.4%) had mild, 17 (13.7%) had moderate, and 9 (7.3%) had severe hopelessness. There was no statistically significant difference between hopelessness levels of female and male ($P = 0.214$) (Table 1).

According to the demographic characteristics of the students, the mean of BHS and related conditions are given in Table 2. Although there was no significant difference between the age groups and the levels of hopelessness ($p = 0.113$), moderate hopelessness (8 and above) was found in the 28 and older age group ($p = 0.412$). It was found that the majority of students (89%) did not have any occupational future anxiety, and there was no significant difference in terms of BHS mean between these and those who were concerned about the future ($p = 0.44$). However, the BHS mean of the students who were concerned about not being able to earn enough in the future was found to be statistically significantly higher than those who were not ($P = 0.000$) (Table 2). 67.2% of the students stated that they were preparing for specialty exam in medicine (TUS), and there was no significant difference in terms of BUP means between those who did not prepare for TUS ($P = 0.457$).

77.9% think TUS is difficult, but there was no statistically significant difference in terms of BUP means between students who think TUS is not a difficult exam ($p = 0.705$). 39% of the students stated that they had anxiety to pass TUS, and there was no significant difference in terms of BUP means between those who did not have anxiety to pass TUS ($p = 0.509$).

The reasons why the students have preferred medical school are given in Table 3. The BHS means of those who have preferred medical school for the purpose of making good money in the future, of those who have not preferred for the purpose of serving humanity and those who have not preferred medical school of their own accord were found to be significantly higher ($p = 0.003$, $p = 0.01$, $p = 0.006$). The BHS mean of those who preferred the faculty by others' direction (being under influence) was found to be more than 15 points (Table 3).

The BHS mean was 1.47 (SD 1.5) for the feelings and expectations about the future sub-dimension of hopelessness; 2.35 (SD 1.8) for the motivation loss sub-dimension and 2.45 (SD 1.8) for the sub-dimension of hope for the future. There was no significant difference in terms of these parameters between male and female students ($P = 0.07$, $p = 0.82$, $p = 0.73$). There was no significant difference in the sub-dimensions of hopelessness according to the age groups of the students; it was found that the feelings and expectations about the future in general were not negative, the loss of motivation was low enough to be considered as insignificant and the prospects for the future were quite high ($P > 0.005$) (Table 4).

Of the 20 questions in the BHS's questions, only in the first question, which is 'I look forward to the future with hope and enthusiasm', a significant difference between females [BHS mean 0.56 (SD 0.5)] and males [BHS mean 0.37 (SD 0.4)] has been observed ($p = 0.02$).

Discussion

It is known that in school of medicine final year students have idealistic thoughts and attitudes as they are included in clinical environment both as a student and a medical doctor. Taking part in the diagnosis and treatment of patients and understanding the facts that they will have all the responsibility after graduation have an high effect on these thoughts. It is stated that students experience various mental problems due to the possibility of not realizing these idealistic ideas (20). Psychological changes such as depression, hopelessness, suicidal ideation, neuroticism, and anxiety disorders are seen in the failure to satisfy the expectations because of the higher rate of perfectionist personality structure in medical school students. It has been reported that the sense of perfectionism is related to hopelessness and hopelessness is twice as much in those who have excessive evaluation anxiety (13). In addition, it is emphasized that in medical education, the situation of hopelessness negatively affects the academic achievement (13,21). Pompili et al.(22) have reported that the rate of quitting jobs was higher among physicians with higher hopelessness.

In our study, we explored whether hopelessness was present in the final year students by using the BHS. It was determined that the mean BHS of our students is 6.29 (SD 4.42) and 30.6% have no hopelessness, 48.4% have mild hopelessness, 13.7% have moderate hopelessness and 7.3% have severe hopelessness. In different studies, lower BHS means have been determined with respect to our research. It was reported that the students in the first three classes of school of medicine had a BHS mean between 4.32 (SD 3.94) - 5.34 (SD 4.68) and the final year students' BHS mean was 5.4 (SD 4.1) (8, 9, 23, 24). Ergin et al. (8) conducted the BHS among the first three and sixth grade students and assistants of school of medicine, and found that there was no significant difference between the first three grade students of the medical school

and the sixth grade students, but the assistants were significantly more hopeless than the sixth grade students.

In our study, hopelessness levels of students were examined according to their gender and no significant difference was found between male and female students ($p = 0.56$). Budakoğlu et al.(9) also reported that the level of hopelessness did not change according to gender, similar to our results. Wilson et al. (25) stated that among the non-medical university students, the BHS mean was 3.27 (SD 3.21), these rates did not vary by gender, and students with high BHS means asked for less help from family, friends or professionals. In Turkey, in a study conducted among 1821 students from different non-medical faculties, BHS mean of all students was found as 4.96 (SD 4.13), and different from our study the hopelessness level of male students was reported to be significantly higher than the females (26).

Pompili et al. (14) reported that mean BHS among 312 non-medical university students was 4.9 (SD 3.4) and there was no difference between males and females. In the same study, for subscale score mean values, it was reported that the score for feeling and expectation for the future was 1 (SD 1.3), the score for motivation loss was 1 (SD 1.3), and the score for future hope was 2.1 (SD 1.4), and it was also reported that only in the feelings and expectations about the future sub-dimension of the scale males were significantly more hopeless.

Although there was no significant difference between the age groups in terms of hopelessness scores, moderate hopelessness (above 8) was found in the 28 and older age group. Lester et al (27) reported findings parallel to our study.

20% of the students were moderately and severely hopeless and had a BHS value of 9 and above. Similarly, Poch et al. (28) reported that 13.9% of 1277 university students who did not study medicine had moderate or severe hopelessness, students with high levels of

hopelessness were not satisfied with various aspects of university life and spent less time on extracurricular activities, and they were less likely to take their exams.

It was determined that 7,3% of the students had severe hopelessness. In their studies Poch et al. (28) reported severe hopelessness in 1.5% of the students. In our study, it was interpreted that the high level of hopelessness may be caused by both the country conditions and the difficulty of medical education.

Final year students of medical faculty did not have any occupational anxiety in the future and that the anxiety status was not different between those who had high BHS means and those who had not ($P = 0.44$). Erözkan et al (29) reported that anxiety levels were significantly high among the final year students of different universities who were having hopelessness, and they have emphasized that the existence of this anxiety was due to the uncertainties expected in finding jobs after graduation. In our study, the fact that the students don't have any anxiety about post-graduation, was attributed to the fact that doctors in our country do not face difficulties in finding a job after graduation.

77.9% of the students stated that TUS is a difficult exam, 67.2% of them have preparations for TUS and 39% are concerned about passing TUS. However, there was no significant difference between hopelessness levels of those who had anxiety to pass TUS and those who did not. It was thought that other factors other than TUS affect students' hopelessness levels. In the studies carried out in our country, it was reported that the majority of the students of school of medicine absolutely want to receive specialty training after graduation, and therefore they have anxiety of not being able to prepare for TUS and to pass (8,9,23). A literature review, which reported the levels of hopelessness caused by school of medicine students' anxiety of not passing TUS, was not found in our country.

BHS mean was significantly higher among

students who did not prefer medical faculty of their own accord ($p = 0.006$) (Table 3). In support of our study, Budakoğlu et al. (9) reported that among the students of school of medicine, students who were dissatisfied with their choices of profession were significantly more lonely, anxious and hopeless than the other students.

Hopelessness is present in many mental disorders, and exists in high rates in people having depression and suicidal ideation. It has been reported that the probability of committing suicide is 8 times higher for people with BHS 9 or higher (1). Aish et al. (30) reported that BHS score being above 15 was an important predictive factor for suicide. In our study, the rate of severe hopelessness (BHS 15 and above) was found as 7.3%, however this was considered a limitation since there were no questions asked to determine the suicidal thoughts and tendencies of the students.

The questionnaire in our study have been prepared by the researchers by making a literature research. The lack of generalization of the findings obtained through the correlation of these questions with the Beck hopelessness scale to the students in all other medical faculties is the limitation of our study.

Conclusion

As a result, since the level of hopelessness is predictive of some mental disorders, it is important to know the extent of negative emotions and expectations of medical students about the future. We think that mental health services should be strengthened within the university in order to prevent the increase of hopelessness levels of students and that medical education programs should be structured in a way that supports students psychologically and prepares them for future professional conditions. In addition to this, we believe that more extensive studies on hopelessness and related factors are needed to be performed

among medical students, and that our study will shed light on other future studies on this subject.

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Table 1. Hopelessness levels of final year students according to gender and age

The Severity of Hopelessness (n= 124)					
	Minimum (0-3 Points)	Mild (4-8 Points)	Moderate (9-14 Points)	Severe (15-20 Points)	P
Gender	0,214				
Female (n=64)	17(%26,6)	35 (%5,7)	6 (%9,4)	6 (%9,4)	
Male (n=60)	21(%35,0)	25 (%41,7)	11 (%18,3)	3 (%5,0)	
Age(Years)	0.113				
22-23 (n=17)	2 (%11,8)	12 (%70,6)	1 (%5,9)	2 (%11,8)	
24-25 (n=86)	28 (%32,6)	43 (%5,0)	11 (%12,8)	4 (%4,7)	
26-27 (n=16)	6 (%37,5)	5 (%31,3)	3 (%18,8)	2 (%12,5)	
28+ (n=5)	38 (%30,6)	0 (%0,0)	2 (%40,0)	9 (%7,3)	

Table 2. BHS⁺ Means according to the Demographic Characteristics of the Final Year Students

Demographic and Personal Characteristics			
	n (%)	BHS Mean	P
Age			0.412
22-23	17 (%13,7)	7,35 ± 4,4	
24-25	86 (%69,4)	5,90 ± 4,2	
26-27	16 (%12,9)	6,63 ± 5,2	
28 ⁺	5 (%4,0)	8,40 ± 5,5	
Gender			0.56
Female	64 (%51,6)	6,52 ± 4,8	
Male	60 (%48,4)	6,05 ± 3,9	
Place of residence during education⁺⁺			
Dorm (yes)	23 (%19,0)	6,43 ± 5,1	0.86
At home, alone (yes)	15 (%12,0)	5,67 ± 3,3	0.56
At home, with friends (yes)	55 (%44,0)	6,07 ± 4,0	0.62
With family (yes)	55 (%44,0)	6,00 ± 4,5	0.51
With relatives (yes)	3 (%2,0)	4,67± 4,4	0.52
Education time			0.280
6 Years	104 (%84,0)	6,02 ± 4,2	
7 Years	12 (%10,0)	8,00 ± 4,0	
8 ⁺ Years	8 (% 6,0)	7,25 ± 6,7	
Allowance (Turkish Liras)			0.207
0-500	28 (%22,6)	7,57 ± 5,3	
501-1000	70 (%56,5)	6,01 ± 4,2	
1001 ⁺	26 (%21,0)	5,65 ± 3,4	
Scholarship status			0.405
Yes	57 (%46,0)	5,93 ± 4,3	
No	67 (%54,0)	6,60 ± 4,5	
Status of preparing for a specialty examination in medicine			0.609
Not preparing	38 (%31,0)	6,74 ± 4,9	
Preparing by oneself	38 (%31,0)	5,40 ± 3,5	
Attending private teaching institution	71 (%57,0)	6,24 ± 4,2	
Is practical training in field education sufficient?			0,15
Yes	27 (%22,0)	5,22 ± 3,5	

No	97 (%78,0)	6,59 ± 4,6
Is theoretical training adequate in field education?		0,08
Yes	34 (%27,0)	5,18 ±3,5
No	90 (%73,0)	6,71±4,6
Is there any concern for professional future?		0,44
Yes	14 (%11,0)	5,43±3,5
No	110 (%89,0)	6,40 ± 4,5
Is there any concern about passing a specialty exam in medicine?		0,50
Yes	48 (%39,0)	5,96 ± 4,6
No	76 (%61,0)	6,50 ± 4,2
Is there anxiety about being alone with the patient?		0,10
Yes	32 (%26,0)	7,37 ± 4,2
No	92 (%74,0)	5,91 ± 4,4
Is there any concern about not being able to earn enough income?		0,000*
Yes	9 (%7,0)	11,22 ± 5,8
No	115 (%93,0)	5,90 ± 4,08
Is there any concern for professional prestige?		0,13
Yes	56 (%45,0)	6,95 ± 4,7
No	68 (%55,0)	5,75 ± 4,0
Is there a place of duty concern?		0,46
Yes	34 (%27,0)	6,76 ± 4,7
No	90 (%73,0)	6,11± 4,3
BHS ⁺⁺ : Beck's Hopelessness Scale scores		

++ They have stayed in different places during the education.

Table 3. BHS+ means according to reasons of preferring medical school

The reason for preferring the medical faculty	n (%)	BHS Mean	P
Serving humanity			0.01*
Yes	51 (41,0)	5,16 ± 2,6	
No	73 (59,0)	7,08 ± 5,2	
Family and social pressure			0.51
Yes	15 (12,0)	7,00 ± 5,6	
No	109 (88,0)	6,19 ± 4,2	
Highly prestigious profession			0.72
Yes	33 (27,0)	6,06 ± 4,1	
No	91 (73,0)	6,37 ± 4,5	
Making good money			0.003*
Yes	15 (12,0)	9,47 ± 5,5	
No	109 (88,0)	5,85 ± 4,0	
Job guarantee			0.45
Yes	38 (31,0)	5,84 ± 4,1	
No	86 (69,0)	6,49 ± 4,5	
Sufficiently high score (univ. entrance exam)			0.056
Yes	15 (12,0)	8,33 ± 5,0	
No	109 (88,0)	6,01 ± 4,2	
Preferring medical school			0.06*
Of own accord	106 (85,0)	5,99 ± 4,2	
With direction	18 (15,0)	8,06 ± 5,2	

BHS+: Beck's Hopelessness Scale scores

Table 4. Means of hopelessness and its subgroups of final year students according to gender.

Groups (score range)	Mean Score	Female (n=64)	Male (n=60)	P
BHS+ (0-20)	6,29 ± 4,4	6,52 ± 4,8	6,05 ± 3,9	0.56
Feelings and expectations about the future (0-5)	1,47 ± 1,5	1,71 ± 1,5	1,21 ± 1,5	0.07*
-Loss of motivation (0-8)	2,35 ± 1,8	2,39 ± 2,1	2,31 ± 1,5	0.82
Hopes about the future	2,45 ± 1,8	2,40 ± 1,7	2,51 ± 1,8	0.73

BHS+: Beck's Hopelessness Scale scores