

# Investigating Burnout Levels And Its Determinants Among The Veterinary Medicine Students: The Case Of Istanbul University

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## Abstract

This study was conducted to examine burnout levels and their determinants among veterinary medicine students. Answers (n = 447) to a survey formed the data of this study. Maslach Burnout Inventory - Student Scale, which was adapted to the Turkish language, was used to determine the burnout levels of the students. As a result, burnout levels were obtained as 13.31, 7.82, and 7.69 for Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA) components, respectively. Year of study and having a hobby affected three of the burnout components. In order to determine the relationship between students' burnout levels and students' tendency to drop out, to work in a different profession after graduation and academic failure, a logistic regression analysis was conducted. Results revealed that year of study, weighted grade point average (WGPA), EE, DP, PA, repeating academic semester(s), number of the repeated academic semester(s), and perceived difficulty of veterinary education were significantly associated with the students' intention to drop out of the faculty. Gender, living situation, monthly income, EE, DP and PA affected education-occupation mismatch. Furthermore, gender, year of study, WGPA, living situation, monthly income, EE, DP, PA, and perceived difficulty level of the veterinary education influenced repeating academic semester(s). The results of this study reveal that burnout syndrome would lead to students' dropping out of the faculty, education-occupation mismatch and academic failure. Future studies must be conducted throughout the country to assess burnout syndrome in veterinary students.

Keywords: Burnout, Veterinary medicine, Drop out, Education-occupation mismatch, Academic failure

## Introduction

The veterinary profession has reported having the highest suicide records among the general population in some countries. In the USA, in a survey of 11,627 veterinarians, 17 % of them had experienced suicidal ideation since leaving veterinary college.<sup>1</sup> In the UK, 14 out of 15 studies reported that veterinarians are at risk of suicide.<sup>2</sup> In Australia, the suicide rate for veterinarians was almost twice as high as that of the general population between 2001 – 2012.<sup>3</sup> One of the possible reasons for these high suicide rates can be attributed to the high demanding characteristic of the veterinary profession<sup>4</sup> and being predisposed to depression during veterinary education. In the UK,

veterinary students were found to be more depressed than the general population.<sup>5</sup> During veterinary education, students deal with both academic and non-academic stressors. Heavy study load, concerns about the assessment, availability of the learning materials, being a perfectionist, moving to another location, financial and social issues are the reported factors that might affect the mental health of a veterinary student.<sup>6,7,8</sup> It was reported that the percentage of students with clinical depression was 32 % for the first-year veterinary faculty students.<sup>9</sup> It is highly possible that due to the increased study load and harsh academic competition among the students, the percentage of students with clinical depression will increase until the final year if there isn't any mental support system.

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Burnout syndrome can be described as a result of being chronically exposed to stressors. Previous studies identified three dimensions of burnout to describe how people react to their jobs.<sup>10,11,12</sup>

When the three components of the syndrome, Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA) are met, burnout occurs. Emotional Exhaustion is described as the feeling of being drained by the continuous stressors while depersonalization is a cynical attitude towards others and personal accomplishment is being dissatisfied with oneself, lack of self-efficacy, and the tendency to evaluate oneself negatively. When burnout occurs, people suffer from increased emotional exhaustion, depersonalization, and decreased level of personal accomplishment.<sup>10</sup> Burnout syndrome was first described by Freudenberg<sup>13</sup> and later Maslach and Leiter<sup>14</sup> developed one of the most used scales (Maslach Burnout Inventory-MBI) to assess the burnout levels. The scale was used for social service, healthcare, mental health, criminal justice, and education. Over the past decades, Schufelli et al.,<sup>15</sup> have adopted the MBI to assess academic burnout in students.

Burnout syndrome was frequently focused on medical students by the researchers. There are not many studies focusing on burnout for veterinary medicine at the undergraduate level. However, studies show that burnout syndrome is endemic in veterinary medicine.<sup>16,17</sup> In order to take appropriate precautions to improve mental health and prevent suicide ideation, knowing the factors causing burnout on a veterinary faculty student has great importance.

In Turkey, burnout syndrome was studied in the veterinary profession.<sup>18</sup> However, there is not any study that determines the prevalence and determinants of burnout syndrome in veterinary medicine students. To our knowledge, this study will be the first one to address burnout syndrome in veterinary medicine students in Turkey.

This study aims to identify the determinants of burnout syndrome and burnout levels of veterinary students. Furthermore, this study investigates whether the students' burnout scores would be a predictor of future dropouts, academic failure, and occupation-education mismatch.

## Materials & Methods

### Participants and Procedure

In this study, a survey was conducted with 468 students of Istanbul University, the Faculty of Veterinary Medicine who are in their 1st, 2nd, 3rd, 4th, and 5th year. After eliminating the surveys with missing answer(s) a total of 447 students' answers were used as the material of this study. Students were asked to respond voluntarily to a written survey which was kept anonymous. Most respondents were

female (52.8%), coming from a metropolitan area (59.3%), living with their family (37.6%), having a monthly income of 471-1000 TL (39.6%) and having a hobby (75.6%) (see Table 1).

Table 1. Demographic characteristics of the respondents.

Characteristics	n	%
<b>Gender</b>		
Male	190	42.5
Female	236	52.8
Missing	21	4.7
<b>Previously living in</b>		
Metropolitan	265	59.3
City centre	70	15.7
District	59	13.2
Village	32	7.2
Missing	21	4.7
<b>Year of study</b>		
1 <sup>st</sup>	84	18.8
2 <sup>nd</sup>	63	14.1
3 <sup>rd</sup>	104	23.3
4 <sup>th</sup>	98	21.9
5 <sup>th</sup>	77	17.2
Missing	21	4.7
<b>Living with</b>		
Alone	43	9.6
With family	168	37.6
With relatives	16	3.6
In dormitory	114	25.5
With friends	85	19.0
Missing	21	4.7
<b>Monthly Income (TL)</b>		
0-470 TL	115	25.7
471-1000 TL	177	39.6
1001-1500 TL	63	14.1
1501+ TL	71	15.9
Missing	21	4.7
<b>Having a Hobby</b>		
No	88	19.7
Yes	338	75.6
Missing	21	4.7

### Survey Design

The survey consisted of three parts. In part I, students were-asked to give socio-demographic information, using close-ended questions. In part II, students were asked to rate their intention to drop out of the veterinary faculty, their tendency to work in a different profession after graduating from the veterinary faculty, the number of the repeated academic semester(s) if they have any, and perceived difficulty of the veterinary education. In part III, Maslach Burnout Inventory - Student Scale,<sup>15</sup> which was adapted to the Turkish language by Çapri et al.,<sup>19</sup> was used to assess the burnout levels of the students. The Turkish version of the MBI-SS had three subscales and 13 items (EE = 5 items, DP = 4 items, and PA = 4 items). On a Likert scale of 1 to 5 (1 = never, 2 = sometimes, 3 = generally, 4 = most of the time, 5 = always) the experienced frequency of each statement is rated in MBI-SS. The maximum scores that can be obtained for EE, DP, and PA subscales would be 25, 20, 20 while minimum scores would be 5, 4, and 4, respectively.

### Statistical Analyses

The statistical analyses were performed using SPSS 19.0 (Armonk, NY, USA). The General Linear Model was used to investigate the associations between demographics and

burnout levels of the students. In order to identify the predictive parameters of Emotional Exhaustion, Depersonalization, and Personal Accomplishment multiple linear regression analysis with the backward elimination method was used: categorical predictors were dummy coded.

The relationship between students' demographics and their tendency to drop out of the veterinary faculty, their inclination to work in a different profession after graduating from the veterinary faculty and repeating academic semester(s) were analyzed by performing a logistic regression analysis.

### Results

The mean scores of the students obtained for Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA) were determined as 13.31, 7.82, and 7.69, respectively. Changes in the mean scores of EE, DP, and PA as a function of students' demographics are presented in Table 2.

The effects of the gender, previous living quarters, living situation, and monthly income on the mean scores of the EE, DP, and PA were found to be insignificant ( $P > 0.05$ ). Year of study and having a hobby had a significant effect on all of the burnout components. Students who are in their 4th-year had the highest EE (15.73) and DP (9.78) scores than students from 3rd, 2nd, and 1st-year. In addition, students without a hobby had higher EE (14.21) and DP (8.54) scores than the others. Concerning PA component, 1st-year students (8.81) and students with a hobby (8.31) showed higher scores.

Table 2. Relationship between demographics and the means of Emotional exhaustion, Depersonalization and Personal accomplishment1.

Items	Sub-groups	EE			DP			PA		
		Mean	SE	F Values* (P)	Mean	SE	F Values* (P)	Mean	SE	F Values* (P)
Gender	Male	13.19	0.44	0.24 (0.626)	8.21	0.37	3.52 (0.061)	7.78	0.27	0.39 (0.533)
	Female	13.43	0.50		7.44	0.43		7.60	0.31	
Previously living in	Metropolitan	13.70	0.43	0.37 (0.773)	8.49	0.37	1.78 (0.151)	7.28	0.26	2.25 (0.082)
	City center	13.31	0.64		7.26	0.54		8.33	0.39	
	District	13.00	0.69		7.67	0.58		7.60	0.42	
Year of study	Village	13.24	0.87	18.84 (<0.001)	7.87	0.74	26.49 (<0.001)	7.55	0.53	3.93 (0.004)
	1 <sup>st</sup>	10.41 <sup>a</sup>	0.64		4.38 <sup>a</sup>	0.54		8.81 <sup>a</sup>	0.39	
	2 <sup>nd</sup>	11.40 <sup>b</sup>	0.69		6.58 <sup>b</sup>	0.58		7.43 <sup>b</sup>	0.42	
	3 <sup>rd</sup>	14.12 <sup>c</sup>	0.56		8.66 <sup>c</sup>	0.48		7.26 <sup>c</sup>	0.34	
	4 <sup>th</sup>	15.73 <sup>d</sup>	0.57		9.78 <sup>d</sup>	0.49		7.42 <sup>d</sup>	0.35	
Living situation	5 <sup>th</sup>	14.89 <sup>de</sup>	0.61	9.72 <sup>de</sup>	0.52	7.52 <sup>e</sup>	0.37	7.96 0.47	1.71 (0.148)	
	Alone	12.85	0.78	8.06	0.66	0.35 (0.842)	8.08			0.34
	With family	13.08	0.55	7.37	0.47	7.82	0.72			
	With relative(s)	14.47	1.19	8.04	1.01	7.66	0.32			
	In dormitory	12.76	0.53	7.74	0.45	6.94	0.36			
Monthly income (TL)	With friend(s)	13.40	0.59	7.90	0.50	7.75	0.39	7.85 0.34	0.23 (0.874)	
	0-470 (IG I)	12.88	0.56	7.10	0.47	2.31 (0.075)	7.71			0.30
	471-1000 (IG-II)	13.09	0.49	7.50	0.41	7.45	0.43			
	1001-1500 (IG-III)	14.10	0.70	8.01	0.60	7.75	0.39			
	1501+ (IG-IV)	13.17	0.64	8.67	0.54	7.75	0.39			
Having Hobby	No	14.21	0.58	9.70 (0.002)	8.54	0.50	8.71 (0.003)	7.07	0.35	12.59 (<0.001)
	Yes	12.42	0.39	7.10	0.33	8.31	0.24	7.75	0.39	
<b>Overall mean</b>		<b>13.31</b>	<b>0.40</b>		<b>7.82</b>	<b>0.34</b>		<b>7.69</b>	<b>0.25</b>	

\* F and P values obtained by GLM analysis. a, b, c, d Means in the same column with different superscripts are significantly different.

1 EE: Emotional exhaustion, DP: Depersonalization and PA: Personal accomplishment

The results of the regression analysis showed that 4th-year students, students from the IG-III group, and students without a hobby ended up with an increase in the scores of

EE ( $P < 0.001$ ) while 1st and 2nd -year students had lower scores. Males, students coming from a metropolitan area, and students without a hobby scored higher for DP whereas 1st, 2nd, 3rd -year students, and students from IG-I and IG-II groups scored lower ( $P < 0.001$ ). It was observed that students previously living in city centers, 1st-year students, students living with their family had higher scores on PA while students without a hobby scored lower ( $P < 0.001$ )

The results of the logistic regression analysis show the predictors of students' intention to drop out of the Veterinary faculty in Table 4. According to the results, 1st-year students, students having higher WGPA, and higher PA Table 3. Multiple linear regression estimation of the relationships between demographics and the means of Emotional Exhaustion, Depersonalization and Personal Accomplishment1.

Parameter	B	SE	$\beta$	t	R <sup>2</sup>
EE	1 <sup>st</sup> year	-4.11	0.61	-0.32	-6.70
	2 <sup>nd</sup> year	-2.95	0.67	-0.21	-4.43
	4 <sup>th</sup> year	1.35	0.57	0.11	2.37
	IG-III	1.08	0.63	0.08	1.72
	No hobby	1.70	0.55	0.14	3.07
DP	Male	0.85	0.39	0.09	2.17
	Metropolitan	0.80	0.40	0.09	1.99
	1 <sup>st</sup> year	-5.38	0.52	-0.48	-10.32
	2 <sup>nd</sup> year	-3.23	0.58	-0.26	-5.60
	3 <sup>rd</sup> year	-1.12	0.48	-0.11	-2.32
PA	IG-I	-1.40	0.51	-0.14	-2.77
	IG-II	-0.89	0.45	-0.10	-2.01
	No hobby	1.52	0.48	0.14	3.20
	City center	0.90	0.37	0.12	2.41
	1 <sup>st</sup> year	1.57	0.34	0.22	4.61
Living with family	0.56	0.29	0.09	1.95	0.107
	No hobby	-1.19	0.34	-0.17	

1 EE: Emotional exhaustion, DP: Depersonalization and PA: Personal accomplishment

scores are less likely to drop out. However, students who scored higher for EE, DP, students repeating academic semester(s), and students with a higher perceived difficulty Table4. Logistic regression estimation of the relationships between demographics and students' intention to drop out of the Veterinary Faculty

Parameter	B	SE	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)		Nagelkerke R square	
						Lower	Upper		
Gender	-0.07	0.20	0.10	0.750	0.94	0.63	1.39	0.000	
Previously living in	Male	-0.24	0.38	0.38	0.538	0.79	0.37	1.67	0.006
	Metropolitan	0.09	0.43	0.05	0.832	1.10	0.47	2.56	
	City center	-0.29	0.45	0.41	0.524	0.75	0.31	1.82	
Year of study	District	-0.29	0.45	0.41	0.524	0.75	0.31	1.82	0.067
	1 <sup>st</sup> year	-1.13	0.37	9.47	0.002	0.32	0.16	0.66	
	2 <sup>nd</sup> year	-0.37	0.36	1.08	0.299	0.69	0.34	1.39	
	3 <sup>rd</sup> year	0.28	0.30	0.84	0.359	1.32	0.73	2.40	
WGPA	4 <sup>th</sup> year	0.07	0.31	0.04	0.833	1.07	0.58	1.96	0.053
	No hobby	-0.78	0.19	16.04	<0.001	0.46	0.32	0.67	
Living with family	Alone	-0.12	0.39	0.09	0.760	0.89	0.42	1.89	0.007
	With family	-0.45	0.28	2.65	0.104	0.64	0.37	1.10	
	With relative(s)	0.41	0.55	0.55	0.458	1.50	0.51	4.38	
	In dormitory	0.09	0.29	0.09	0.765	1.09	0.62	1.93	
	Monthly Income (TL)	0-470 (IG I)	0.32	0.32	1.01	0.315	1.38	0.74	
Having a Hobby	471-1000 (IG-II)	0.21	0.30	0.48	0.490	1.23	0.68	2.20	0.006
	1001-1500 (IG-III)	0.51	0.36	2.02	0.156	1.67	0.82	3.39	
	1501+ (IG-IV)	0.16	0.03	43.65	<0.001	1.18	1.21	1.23	
EE	0.16	0.03	43.65	<0.001	1.18	1.21	1.23	0.147	0.026
	0.23	0.04	33.60	<0.001	0.79	0.73	0.86	0.120	
DP	0.67	0.23	8.23	0.004	1.96	1.24	3.09	0.026	0.054
	0.42	0.11	15.71	<0.001	1.52	1.24	1.87	0.054	
PA	0.49	0.18	7.73	0.005	1.63	1.16	2.31	0.027	0.027
	0.49	0.18	7.73	0.005	1.63	1.16	2.31	0.027	

1 EE: Emotional exhaustion, DP: Depersonalization and PA: Personal accomplishment

level of veterinary education are prone to leave higher education.

The determinants of students' tendency to work in a different profession after their graduation are shown in Table 5. Male students and students with higher EE and DP scores mostly tend to work in a different profession while

Table 5. Logistic regression estimation of the relationships between demographics and students' tendency to work in a different profession

Parameter	B	SE	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)		Nagelkerke R square
						Lower	Upper	
Gender								
Male	0.82	0.24	12.22	<0.001	2.28	1.44	3.61	0.044
Previously living in								
Metropolitan	-0.72	0.40	3.17	0.075	0.49	0.22	1.08	0.016
City centre	-0.27	0.46	0.35	0.555	0.76	0.31	1.87	
District	-0.62	0.49	1.61	0.205	0.54	0.21	1.40	
Year of study								
1 <sup>st</sup> year	-0.35	0.40	0.75	0.386	0.71	0.32	1.55	0.010
2 <sup>nd</sup> year	0.18	0.40	0.21	0.646	1.20	0.55	2.63	
3 <sup>rd</sup> year	0.21	0.35	0.36	0.547	1.24	0.62	2.48	
4 <sup>th</sup> year	0.14	0.36	0.14	0.709	1.15	0.56	2.33	
WGPA	-0.38	0.21	3.19	0.074	0.69	0.45	1.04	0.011
Living with								
Alone	-0.25	0.42	0.35	0.556	0.78	0.34	1.78	0.018
Family	-0.63	0.31	4.19	0.041	0.53	0.29	0.97	
Relative(s)	0.03	0.39	0.00	0.958	1.03	0.53	3.27	
In dormitory	-0.50	0.33	2.33	0.127	0.61	0.32	1.15	
Monthly Income (TL)								
0-470 (IG I)	-0.76	0.35	4.75	0.029	0.47	0.24	0.93	0.017
471-1000 (IG-II)	-0.53	0.31	2.87	0.090	0.59	0.32	1.09	
1001-1500 (IG-III)	-0.43	0.39	1.20	0.273	0.65	0.30	1.40	
Having a Hobby	0.51	0.27	3.64	0.056	1.67	0.99	2.81	0.012
EE	0.11	0.03	18.11	<0.001	1.11	1.06	1.17	0.069
DP	0.14	0.03	27.79	<0.001	1.15	1.09	1.21	0.101
PA	-0.16	0.04	13.38	<0.001	0.86	0.79	0.93	0.050
Repeating academic semester(s)	-0.20	0.28	0.48	0.487	0.82	0.47	1.43	0.002
Number of repeating academic semester(s)	0.10	0.11	0.84	0.359	1.11	0.89	1.37	0.003
Perceived difficulty of the veterinary education	-0.02	0.18	0.01	0.928	0.98	0.70	1.39	0.000

1 EE: Emotional exhaustion, DP: Depersonalization and PA: Personal accomplishment

students living with their family, from the lowest monthly income and higher PA scores were less likely to work in a different profession other than Veterinary medicine. Furthermore, students having lower WGPA (Weighted Grade Point Average) (P = 0.074) and students with a hobby (P = 0.056) showed a tendency to work in a different profession. The results of the logistic regression analysis revealed that male students with high scores in EE, DP, and perceived difficulty level of veterinary education tend to fail semester(s). On the other hand, 1st year students, students with high WGPA, students living with their family and living in a dormitory, and students who are from the IG-I and IG-II are less likely to fail (Table 6.)

## Discussion

In this study, burnout levels and their determinants were assessed. Year of study and having a hobby are the main effects on students' burnout scores. Students in their 4th

Table 6. Logistic regression estimation of the relationships between demographics and repeating academic semester(s)

Parameter	B	SE	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)		Nagelkerke R square
						Lower	Upper	
Gender								
Male	0.44	0.23	3.66	0.056	1.56	0.99	2.45	0.013
Previously living in								
Metropolitan	-0.48	0.41	1.40	0.237	0.62	0.28	1.38	0.007
City centre	-0.27	0.47	0.34	0.562	0.76	0.30	1.91	
District	-0.58	0.50	1.33	0.249	0.56	0.21	1.50	
Year of study								
1 <sup>st</sup> year	-1.91	0.52	13.23	<0.001	0.15	0.05	0.42	0.078
2 <sup>nd</sup> year	-0.31	0.39	0.64	0.423	0.73	0.34	1.57	
3 <sup>rd</sup> year	-0.25	0.34	0.53	0.466	0.78	0.41	1.51	
4 <sup>th</sup> year	-0.01	0.33	0.00	0.968	0.99	0.51	1.90	
WGPA	-2.35	0.30	61.67	<0.001	0.10	0.05	0.17	0.066
Living with								
Alone	-0.07	0.39	0.03	0.860	0.93	0.43	2.01	0.062
With family	-0.93	0.30	9.60	0.002	0.39	0.22	0.71	
With relative(s)	-0.54	0.62	0.77	0.380	0.58	0.17	1.96	
In dormitory	-1.19	0.35	11.74	0.001	0.31	0.16	0.60	
Monthly Income (TL)								
0-470 (IG I)	-1.55	0.38	17.06	<0.001	0.21	0.10	0.44	0.084
471-1000 (IG-II)	-1.01	0.31	10.64	0.001	0.37	0.20	0.67	
1001-1500 (IG-III)	-0.19	0.36	0.29	0.590	0.82	0.41	1.67	
Having a Hobby	0.14	0.28	0.25	0.618	1.15	0.67	1.98	0.001
EE	0.08	0.02	9.81	0.002	1.08	1.03	1.13	0.036
DP	0.08	0.03	10.80	0.001	1.09	1.04	1.14	0.038
PA	-0.14	0.04	11.27	0.001	0.87	0.80	0.94	0.042
The perceived difficulty level of the veterinary education	0.64	0.23	8.10	0.004	1.91	1.22	2.97	0.034

1 EE: Emotional exhaustion, DP: Depersonalization and PA: Personal accomplishment

year had higher EE and DP scores than 3rd, 2nd, and 1st-year students. A heavy pre-clinical and clinical education is started on the 4th year of study and students are responsible for the clinical rotations where they start to communicate with patient owners, experiencing patients being examined and facing misdiagnosed issues. The results of this study have shown that students get affected by this work load because it is mentioned as the main contributor to stress.<sup>20</sup> Supporting our findings, a review study that concerns medical students in China indicated that senior students suffered greater burnout.<sup>21</sup> This has administrative implications for the faculty to consider workload that causes high burnout scores for the 4th and 5th-year students. Studies show that students develop a coping mechanism to deal with burnout syndrome. Using substances such as alcohol, drugs, and food are reported to be an unhealthy coping mechanism to get over the depressive mood.<sup>22</sup> On the other hand, positive coping mechanisms including engaging in hobbies are effectively helpful in coping with stress. The result of this study reveals that having a hobby decreased the EE and DP scores while it increased the PA score. Student social clubs in the university enable students to establish new friendships with those from various faculties, develop social bonds and engage in their hobbies, as well as helping to build a sense of social belongingness that has an important effect on students' well being and feelings of belongingness to the university.<sup>5</sup> Therefore, encouraging students to attend social clubs is crucial to decrease burnout levels.

Concerning the predictive values of burnout, the results showed that gender is a significant parameter for the depersonalization component. In this study, male students were found to have more cynical attitudes toward others. Studies indicate that gender affects burnout. In other words, women and men experience burnout in different ways. Purvanova and Muros<sup>23</sup> revealed that women are slightly more exhausted than men. Men, on the other side, are more depersonalized. Income is also reported to affect burnout scores.<sup>24</sup> The results in our study were consistent with that; a decrease in monthly income increased the DP scores of the students. Another significant predictor of burnout was the living situation of the student. Living with family increased the students' PA scores. Students who live in a supportive environment, either at university or in the community are benefiting from moral support. In the study of Chigerwe et al.,<sup>16</sup> students living with other veterinary students had a lower level of burnout.

In this study, we also assessed the predictors of students' tendency to drop out of the veterinary faculty, students' tendency to work in a different profession after graduating from veterinary faculty and to repeat academic semester(s).

Dropping out of the faculty is an important issue that represents a human and economic loss. Experiencing financial problems, not fitting with the academic demands, suffering lack of motivation, the study not stimulating their interest,<sup>25</sup> an increase in physical, psychological, and social problems cause students to drop out.<sup>26</sup> In this study, the students with lower WGPA, students having higher scores on EE, DP and lower scores on PA, students repeating academic semester(s), number of the repeated academic semester(s), and students' perceived difficulty level of the veterinary education increased students' intention to drop out. Students who are chronically being exposed to stressors experience burnout, lack of self-efficacy, anxiety, and depression. Students feeling emotionally drained may not be motivated to study and eventually, this leads them to have lower WGPA scores, fail, and as a result, drop out of the faculty.

Intention to work in a different profession may be caused by education-occupation mismatch where students' interest does not match their actual study. Making an unsuitable study choice would result in a student being cynical towards the study subject and ending up in burnout. Our results showed that male students and students who are experiencing burnout intend to work in a different profession after graduation.

However, education-occupation mismatch was reported to result in income penalties.<sup>27</sup> In a study conducted by Robts,<sup>28</sup> it was revealed that college graduates working in a different profession earn 11% lower than their counterparts. Therefore, it is essential to match individual education skills with occupational job characteristics.

Academic failure may cause a delay in graduation and a delay in income. Furthermore, due to the increasing number of students, the lecturer-students ratio is disrupted. To protect students' and universities' financial investment, knowing the predictors of students at risk of academic failure is crucial.<sup>29</sup> In our study, students experiencing burnout and students having a perception that veterinary education is difficult tended to fail. Furthermore, 1st year students, students living with their family and in the dormitory, students that are from IG-I and IG-II were less likely to fail. This can be explained by the fact that first-year students are more motivated to study and have a keen interest in the veterinary subject which is consistent with their high PA scores. Also, students living with family or in dormitories probably receive emotional support from their family and friends. Considering students' monthly income, the low and middle-income group students may feel they are obligated to be successful due to their limited budget.

One limitation of this study is that, the sample was constituted by the students from Istanbul University. In order to have a solid idea of the determinants of burnout on veteri-

nary students, a nation-wide survey must be implemented.

## Conclusion

The results of this study reveal that students of the veterinary faculty are experiencing burnout. Furthermore, burnout scores were found to be the determinants of students' intention to drop out, education-occupation mismatch, and academic failure.

It is highly possible that students experiencing burnout during the veterinary medicine education would continue to have burnout through their professional life which would result in misdiagnosis, depression, or even a suicide decision. Therefore, faculties are recommended to consider the burnout determinants and take precautions considering these determinants while designing the curriculum to avoid possible burnouts.

It would be effective to assess burnout levels of students in each term to identify students who are dealing with burnout. Students with high burnout scores must be directed to support systems. Identifying and supporting students to deal with burnout would decrease possible dropouts, education-occupation mismatch, and academic failure.

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