Depressive Symptom Prevalence and Risk Factors in Eastern Turkish University Students

Türkiye'nin Doğusunda Üniversite Öğrencilerinde Depresif Belirti Sıklığı ve Risk Faktörleri

Depression in University Students

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48. Ulusal Psikiyatri Kongresinde poster bildiri olarak sunulmuştur.

Özet

Amaç: Bu çalışmanın amacı Kars, Artvin, Ardahan ve Iğdır illerindeki üniversite öğrencilerinde depresif belirti sıklığını ve ilişkili faktörleri belirlemektir.Gereç ve Yöntem: Kesitsel olan çalışma 2118 öğrenci üzerinde uygulandı. Veriler anket yöntemiyle toplandı, depresyon düzeyini saptamak için Beck Depresyon Ölçeği kullanıldı. Bulgular: 646 (%30.5) öğrencinin Beck Depresyon Ölçeğinin kesme noktası olan 17 ve üzerinde puan aldığı görüldü. Üniversite bölümü, lokalizasyonu ve süresi depresyon açısından istatistiksel olarak anlamlı fark yaratmaktadır. Doğduğu mevsim, öğretim türü ve cinsiyet anlamlı farklılık yaratmamaktadır. Tartışma: Öğrencilerde depresif belirtiler yaygındır. Depresif belirti sıklığı ile okulun türü, yeri ve süresi arasında ilişki vardır.

Anahtar Kelimeler

Depresif Belirtiler; Yaygınlık; Üniversite Öğrencisi; Sosyal Destek

Abstract

Aim: The study aimed at investigating the prevalence of depressive symptoms and factors related to depression in Kars, Artvin, Iğdır ve Ardahan university students. Material and Method: An cross-sectional study was conducted 2118 undergraduate students. The datas were obtained by a self-reported student questionnaire and the Beck Depression Envantory is used to determine the depression level. Results: 646 students (30.5%) scored on and above the cut-off point on the Beck Depression Inventory (BDI). There were statistical significant differentiations of the depression prevalence regarding division, localization and duration of the university . Although there weren't significant differentiation regarding type of teaching, gender and season birth. Discussion: Depressive symptoms are common among students. There is a significant relationship between depression and place, duration and kind of school.

Keywords

Depressive Symptoms; Prevalence; University Student; Social Support.

DOI: 10.4328/JCAM.2907 Received: 08.10.2014 Accepted: 21.11.2014 Printed: 01.07.2016 J Clin Anal Med 2016;7(4): 440-4
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Introduction

Depression is common mental disorder that can be seen in everyone regardless of the age, sex, race and socioeconomic status. Symptoms of the depression include depressed mood, loss of interest, anhedonia, and feelings of guilt or low self-esteem, sleep or appetite disturbances, low energy, decreased concentration and tendency to suicide [1].

Disability, linked to depression is gradually increasing and according to the World Health Organization it is estimated that by 2020 depression will be the second disease that causes the most disability [2]

Many people believe that college years are the best years of their lives. However, the rate of depression among university students is higher than the general population [3]. Inability to adapt university environment, separation from parents, relationships with other students and teachers, economic difficulties and dormitory problems cause academic failure and psychiatric problems [4]. The core symptoms such as impaired ability of concentration, loss of interest, psychomotor retardation, low self-esteem, feelings of worthlessness and social withdrawal causes a decrease in learning by disrupting cognitive functions. Academic achievement is corrupted [5]. Even in mild cases,,depression puts peoples in states of individual immobility, inefficiency, and unhappiness therefore, to reach individuals exhibiting these symptoms is important in terms of preventive mental health [6]. For that reason, evaluating the depressive symptoms and depression properties in university students is an important health research [7].

Kars, Ardahan, Artvin and Igdir provinces is located in the northeast of Turkey. As far as we know, the prevalence of depression and risk factors have not been assessed in eastern Turkey. We investigated the prevalence of depressive symptoms and the affecting factors in this region.

Material and Method

The Type of Research and Sample Selection

This cross-sectional survey was held in university students of Kars, Artvin, Ardahan and Iğdır provinces. Sampling was done among 10,850 students based on lists of the universities.

Due to lack of depression prevalence data belonging to this region, prevalence, design effect, confidence limit, confidence interval was accepted as 50%, 1.0, 2%, 95% respectively and the sample size was found to be 1966 according to the Epi Info program. Total of 2250 students determined by random numbers table regarding those who do not want participate and fill the survey incorrect. Of students determined, we had able to reach 2168 (19.9 %). They informed about the study and written informed consent was obtained from all participants by letting them to know that participating the study and specifying name is not compulsory, and regarding data will only be used for the scientific research. Those who want to participate were asked to complete a prepared questionnaire in separated sections. Examination was completed in total of 2118 person after the removal of those who do not want participate and fill the survey incorrect.

Data Collection Tools

Socio-demographic Questionnaire Form: The form developed by the researchers, situations such as date of birth, gender, school, place of birth, place of residence were questioned. A prior application was made in a groups of ten students to finalize the shape of form.

Beck Depression Inventory (BDI): One of the most commonly used self-report in research and clinical studies which is developed by Beck et al [8]. The main objective of the inventory is to assess symptoms of depression in a comprehensive manner [9]. At the same time it provides an assessment of cognitive content.

In 1988, by examining the cut-off scores 17 and above scores has been shown to distinguish depression over 90% accuracy in university students. Studies that accept 20 cut-off points as 17 and above also available [10].

Statistical Analysis

Entire data was loaded into SPSS software. Statistical evaluation of test data that is inconsistent with normal distribution by the Kolmogorov-Smirnov test was analyzed using Mann-Whitney U test. Comparisons between more than two groups was held by Kruskal-Wallis test. In the case of the normal distribution Student's t-test was used. In classified data, Chi-square analysis was used. Continuous variables with mean and standard deviation, and categorical variables were expressed as number and percentage. In this analysis, the significance level was considered as $p < 0.05$.

Results

Of the 2118 students participated in the study, 1283 (60.6%) of them was male, 835 (39.4%) was female, and the mean age was 18.84 ± 2.26. The average age of male students (18.96 ± 2.36) were found to be greater than the average age of female students (18.64 ± 2.08), ($t= 3.231$, $p<0.001$). 1376 students (65.0%) were in the center of Kars, 742 students (35.0%) were in schools in nearby cities or towns. 1347 (%63.6) of the students were in normal classes and 771 (%36.4) of them were in the evening classes (Table 1).

Students' BDI scores ranged from 0 to 62 and the average was 13.50 ± 8.047. There was no significant relationship between the BDI scores and the average age of the sample ($p> 0.05$). Depression prevalence was found to be % 30.5 (n=646) considering the 17 BDI cut-off value. No significant difference was found between female (29.9%, n = 250) and male (30.9%, n = 396) students in terms of depression ($x2=0.204$, $p=0.651$).

Kagızman Vocational School (VHS) had the highest depressive symptom rate and Kars School of Health (CAR) had the lowest depressive symptom rate ($p<0.001$). Of the total 44.6% of the students were associate degree (2-years diploma) and 55.4% were undergraduate students. Comparing in terms of training time has revealed the rate of depressive symptoms was 36% in two-year schools, while rate of depression was 26.1% in the four-year schools ($p<0.001$). While depressive symptom rate was 29.6% in the normal education classes, it was 32.0% in the evening classes ($p> 0.05$). Sample population divided into four groups according to birth month and there was no significant difference in terms of depression. Students' ages ranged from 17 to 50. 56.9% (n = 1206) at the age of 17 and 18, 43.1% (n = 912) were 19 years and older. The difference between depres-

Table 1. Sociodemographic characteristics and faculties of students

Variables	Depression		No depression			
	n=646 (%30.5)		n=1472 (%69.5)			
	n	(%)	n	%	x2	p
Gender					0,204	0,651
Male	887	(69,1)	396	(30,9)		
Female	585	(70,1)	250	(29,9)		
Faculty					38,42	p<0.01
FEAS	125	(71,0)	51	(29,0)		
Ardahan VS	118	(66,3)	60	(33,7)		
Artvin VS	134	(62,3)	81	(37,7)		
Artvin Faculty of Forestry	25	(61,0)	16	(39,0)		
Artvin Health VS	42	(71,2)	17	(28,8)		
Faculty Educational Sciences	209	(78,0)	59	(22,0)		
Faculty of Arts and Sciences	285	(73,5)	103	(26,5)		
Iğdır VS	48	(64,0)	27	(36,0)		
Kağızman VS	81	(60,0)	54	(40,0)		
Kars VS	224	(65,5)	118	(34,5)		
Kars Health VS	118	(80,8)	28	(19,2)		
Sarıkamıs Sport VS	26	(66,7)	13	(33,3)		
Faculty of Veterinary Medicine	37	(66,1)	19	(33,9)		
License-Prelicense					24,16	
Prelicense	605	(64,0)	340	(36,0)		
License	867	(73,9)	306	(26,1)		
Localization					17,01	p<0.01
Central	998	(72,5)	378	(27,5)		
Perifer	474	(63,9)	268	(36,1)		
Education type					1,349	0,245
1.Education (day)	948	(70,4)	399	(29,6)		
2.Education (night)	524	(68,0)	247	(32,0)		
Birth Season					4,581	0,205
January-February-March	428	(68,9)	193	(31,1)		
April- May- June	397	(72,4)	151	(27,6)		
July-August-September	346	(66,5)	174	(33,5)		
October-November-December	301	(70,2)	128	(29,8)		
Age					3,380	0,947
17	470	(69,7)	204	(30,3)		
18	372	(69,9)	160	(30,1)		
19	261	(9,4)	115	(30,6)		
20	146	(69,6)	70	(32,4)		
21	87	(68,5)	40	(31,5)		
22	38	(70,4)	16	(29,6)		
23	25	(64,1)	14	(35,9)		
24	14	(70,0)	6	(30,0)		
25	9	(60,0)	6	(40,0)		
26 and older	50	(76,9)	15	(23,1)		

VS: Vocational School, FEAS: Faculty of Economics and Administrative Sciences

sive symptoms and age was not significant (Table 2).

Discussion

30.5% of the students in our study area took more points than the cut-off point. In the present study we evaluated that season of birth, type of education, age and gender not differ significantly in terms of depression and type of the school, location and duration of the education can be risk factors for the depression.

In spite of some clinical differences, depression is a major public health problem that can be seen in everyone, regardless of age, gender, race and socioeconomic status, in all countries as well as in Turkey [11]. As reported in many studies, transient depressive symptoms in adolescents and young adults are more likely to occur [12]. In 15 European countries, multicenter conducted studies among university students, prevalence of depressive symptoms was 32% [13].

In the evaluation of 6,463 university students from Eastern and Western Europe revealed the prevalence of depressive symptoms was 43.2% in Eastern Europe and 23.5% in Western Europe [14]. In a study conducted at two universities in the United States, BDI scores were measured as 8.2 and 7.6. [15,16]. The frequency of depressive symptoms in adolescents in other countries varies between 21-56%, yet in our country, this rate was reported as 27%. [17].

In our study, we have found the rate of depressive symptoms in college students to be 30.5%. In a survey conducted at Pamukkale University among 504 students, the prevalence rate of depression was found to be 26.2% considering the BDI cut-off point 17 and older [18]. Kaya et al. reported the rate of depression as 21.9% in Inonu University Medical School students and 31.8% in the School of Health Sciences students [19]. In a survey that held in the Tokat province of Turkey in students from five different school the prevalence was found to be 35.2% [20]. In Gaziantep, it is found as %33.3 among the School of Health Sciences students [21]. In Sivas, conducted in college students using the BDI, prevalence of depressive symptoms among students in the Faculty of Medicine was 35.2%, in the School of Nursing was 26.0%, and it was 34.7% in all students [22]. In a study conducted in Gulhane Military Medical Academy (GATA), this rate was 35.4% [23]. In our study five associate degree and eight graduate schools were included. In the present study, the rate of depressive symptoms in college students was 30.5%.

In the literature there is no existing study covering students of associate and bachelor's degrees as well as normal and evening education classes. In studies from other countries the prevalence of depression ranges between 8.3% and 45% [24, 25]. In our study, the rate of depression in females (29.9%) and the rate of depression in males (30.9%) did not differ at significant levels (x2=0.204, p=0,651). Similar results were also obtained in Pamukkale, Tokat, and the Middle East Technical University studies in Turkey. [6,21, 26].

However, study at GATA revealed that depressive symptoms in females was significantly higher [23]. In general, depression rate is more common in women as reported [27-30]. In our study, lack of gender differences in terms of depression can be linked to difficulties of admission to universities, as admitted females got more self-confidence.

In the study, the age of subjects varies between 17 to 50. Also, we found that age did not affect the rate of depression. The relationship between increasing age and prevalence of depressive symptoms in university students, have not been fully elucidated. In the literature, there are studies reporting that the age

does not influence the rate of depression in university students [21,29]. However in some studies depressive symptoms were found to be more common in older aged students [30]. Also, there are studies reporting that increasing age is a risk factor for the depression [16]. Socio-cultural differences may result in this condition.

As in the case of Tokat and Denizli studies, we also found that there is a significant relationship between schools in terms of depression rate ($p< 0.001$). Kagızman Vocational School (40%) and Artvin Faculty of Forestry (39.0%) were the two schools with the highest levels of depressive symptoms. The lowest depressive symptom rate was determined in Kars School of Health Sciences (19.2%) and the Faculty of Education (22.0%). In the Tokat study, highest depression rate was in the Faculty of arts and sciences and School of Health Sciences, and also lowest depression rate was found to be in faculty of education and faculty of physical education and sports science [6]. Finding a job after graduation and amenities at the location of the school may be considered to be effective.

In the case of normal and evening classes of education no significance is found. Koç and Polat used Scl-90 in their research and demonstrated the effect of education shape on depression and anxiety in the students of education faculty [31]. In particular, they found higher depression points in normal class students and explained this condition with the better economic status of evening class students. It is not compatible with our research subjects because of the limited number of samples and restriction to a single faculty. Depression in schools in the center of Kars was 27.5%, while in schools in surrounding cities and towns was 36.1% ($p<0.001$). Social life amenities in Kars and schools in Kars can explain the variation in the rate of depression. There are few studies comparing psychiatric conditions in associate degree and undergraduate students. Inanc et al. [32] reported no significant differences between associate degree and undergraduate students in terms of depression. In our study the depression rate was higher in the associate degree students as compared to undergraduates.

One reason for this can be the lower admission points of associate degree programs. Therefore, students who cannot admit to bachelor degree programs because of their lower points have to admit associate degree programs. The reason for the insignificant differences in the Gaziantep study can be that the study was performed in the people who admitted to health organization [32]. Therefore, the results of our study may not reflect the situation of students better.

There are studies showing that there is a relationship between birth month and depressive symptoms [33,34]. However in our study, there was no significant association between depressive symptoms and birth month. This can be resulted because previous studies were performed in health organizations while our study were held in university students. Another reason may be cultural differences. There are limitations of our study. One of the limitation of our study is our failure psychiatric interview. We used scaling because of our large sample region and size. Our preferred method is widely used in studies.

Because of the lack of psychiatric examination we do not know whether the subjects have additional psychiatric diagnoses. Another limitation of our study is that our study was performed in a single region. Therefore, we can say that our results reflect the entire country. Another limitation of our research is the cross-sectional nature. Because of this, cause and effect relationship could not be established. Thus, investigating the socio-cultural and economic variables may benefit more in epidemiological studies for students.

As a result, depression is a common serious individual and public health problem because of high chronicity, and recurrence rate, high risk of suicide and significant loss of manpower. Therefore identifying the depression and determining the prevention, therapy, recurrence risk factors is highly important [35]. We think the current survey that included four province of Turkey (Kars, Artvin, Ardahan, Iğdır) and include season of birth, educational type, duration of education, school location, age, gender effects may contribute to the literature and will provide benefits for the clinicians and managers.

Competing interests

The authors declare that they have no competing interests.

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How to cite this article:
Kıvrak Y, Kokaçya MH, Sevim E, Çöpoğlu ÜS. Depressive Symptom Prevalence and Risk Factors in Eastern Turkish University Students. J Clin Anal Med 2016;7(4): 440-4.