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Mental health status and quality of life among university students from West Turkey

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Abstract

This study's aim was to evaluate the relations between mental health and quality of life among university students from West Turkey. The study group was 307 students (81.0% of the target population). A questionnaire form, Beck Depression Inventory (BDI), Beck Anxiety Scale (BAS), Beck Hopelessness Scale (BHS), International Physical Activity Questionnaire (IPAQ), Fagerstrom Test for Nicotine Dependence (FTND), CAGE Test for Alcohol Dependence, World Health Organization Quality of Life Short Form (WHOQOL-BREF) were applied to self-report method. Qui square test, Student t test, Pearson and Spearman Correlation tests were used for statistical analyses. Statistical significance was accepted as p<0.05. The frequency of depression was 18.9%. The average points of BDI, BAS and BHS were 10.47±9.24, 31.81±10.21, 4.93±4.16, respectively. The frequency of the students with middle and low physical activity level was 82.7%. The frequency of high level nicotine dependence was 38.0%. The frequency of the students with alcohol dependence was 9.8%. Negative correlations were found that between the social domain in quality of life and depression, anxiety, hopelessness and alcohol using (for each one p<0.05). This study was shown that social domain in quality of life can be effective from some mental health problems among the university students.

Keywords: University, Student, Mental, Quality of life.

Introduction

Adolescent and youth ages are a special periods in terms of physical, psychological, social, cognitive and economic issues. Additionally, university students are a specific group between young people. A new social environment, housing, poverty, future concerns, low social support, mental disorders (for example; depression, anxiety, hopelessness), substance abuse (tobacco-alcohol-drug using) and eating disorders are problems of university students, especially[1,2].

The point prevalence of depressive signs was reported between from 13% to 20%[3]. From Turkey, some studies[4-6] were reported higher prevalence as nearly 40% about the adolescent / youth age. Future uncertainties and school success etc. are the major causes of anxiety and hopelessness in university students. From Turkey, some studies[7-11] reported approximately one in five of the university students have middle level anxiety and hopelessness. Additionally, there are positive relations between depression, anxiety and hopelessness.

Worldwide, tobacco using frequency changed from 15% to 60% and was nearly 80% in developed countries[12,13]. In Turkey, it reported that tobacco using frequency was 30%. Recently, frequency of tobacco use showed a declining trend with the tobacco control program in Turkey[14].

Today, it shows a rapid increase in alcoholism among young people. Age for the first met with alcohol regressed to until the child ages in Turkey. Alcohol use is perceived as proving himself in Turkey, as in other developing countries[15]. Mental problems as like; anxiety, antisocial personality disorder, phobic and panic disorders, obsessive-compulsive disorder and post-traumatic stress disorder can be considered comorbid problems with alcohol dependence[16,17]. In addition, some studies[18] have reported an association between alcohol use and depression.

By World Health Organization, quality of life is defined as individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns[19]. A study from Turkey showed that an association between anxiety, depression with low level quality of life in women[20]. Considering the literature, we have seen that quality of life was studied with various patient groups. However, the number of studies about quality of life has limited among university students in Turkey.

The aim of this study was to evaluate of the associations between mental health and social domain in quality of life among health-related schools' students of the University from West Turkey.

Methodology

This cross-sectional study was realized from January 2015 to June 2015 among 2nd class students in health-related schools of the University from West Turkey.

This university is located in the Aegean region in Turkey. It was founded in 2010 year. In 2014-2015 academic years, 379 Turkish students were studying in 2nd classes in schools related with health (Medical Faculty, Dentistry Faculty, Health Sciences Faculty, Institute of Health Sciences and Health Services Vocational School). Foreign students (n = 20) were excluded with cause of the use a questionnaire form which compatible to Turkish people in this study. It is aimed to reach the entire targeted population by the researchers. This study group was occurred 307 (81.0% of target population) students.

We questioned the social relationships of the students and social environment in the university with a questionnaire form that prepared by the literature[6,18,21]. The answers were dichotomized. "Good and very good" responses in social relations were considered as "good". In social environment of university, we said as "a participant" for regular participants in the artistic and sporting activities.

For the determination of depression, BDI was used[22]. Hisli *et al.*[23] modified it to Turkish norms. It occurs from 21 questions. We obtain maximum 63 points from this scale. From BDI, 17 and over scores were accepted as "depression".

Anxiety was determined by BAS. This scale has developed by Beck *et al.*[24]. And reliability and validity study was made by Ulusoy *et al.*[25]. It includes 21 questions and maximum point is 63. Anxiety is increasing while the scale's score increased.

Hopelessness was determined by BHS[26]. For BHS, reliability and validity study was made by Seber*et al.*[27]. There are 20 propositions in the scale. For each compatible answer with the answer key is taken 1 point. While the scale's score increased hopelessness is increasing.

For tobacco users who for his/her own statement, FTND was applied. This test includes 6 questions. Each response is scored between from 0 to 3. Maximum point is 10. The degree of nicotine addiction was accepted as low in 0-3 points; middle in 4-6 points; and high in 7-10 points[28].

Alcohol dependence was determined with CAGE test in the alcohol users. Obtained scores changed between from 0 to 4; and 2 and upper scores indicate the doubtful cases for alcohol dependence[29].

In determination of physical activity, IPAQ short form was used. By the Metabolic Equivalent (MET); "high, middle and low" physical activity levels were considered as >3000 MET-minutes / week, 600-3000 MET-minutes / week, and <600 MET-minutes / week, respectively. Reliability and validity study was made for this Scale in Turkey[30].

Social domain in quality of life was determined with WHOQOL-BREF[31].There are five domains (Physical, Psychological, Social, Environment and Cultural) in WHOQOL-BREF's Turkish form. We selected social domain, only. Social domain points calculate between from 0 to 100. High score means a better quality of life.

Questionnaire form and scales' practice time was 30 minutes.

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The necessary permits for this study are obtained from the administrative unit of these schools. And this study received Ethical Committee approval (Date: 11.12.2014 and Number: 262). Verbal consents were received to this study from each participant.

In statistical analyses; qui square, student t test, Pearson and Spearman Correlation Tests were applied. For statistical significance values, $p<0.05$ were accepted.

Results and discussion

The numbers of boys and girls were 105 (34.2%) and 202 (65.8%), respectively. The average age of the study group was 20.2±1.6 (min: 18; max: 37). The average age was higher in boys than girls (20.5±1.4, 20.1±1.6, respectively), (p: 0.037).

In this study group; the proportions of good social relations were as follows: With mother: %92.2, with father: 85.3%, with siblings: 86.0%, with friends: 90.2 for their own statement. In the university environment; 11.1% of the students participated in regularly sporting activities. The proportion of the students with artistic endeavor was 32.9%.

The average score for social domain in quality of life was 67.7 ± 14.3 (min: 20.0; max: 100.0). From the students; Who have good relationships with his/her mother, who have good relationships with his/her friends and participants in sporting activities on a regular basis have higher average score of social domain in quality of life than the others (For each one, $p<0.05$).

The distribution of the average points of social domain in quality of life by the social relations and the university environment was presented in Table-1.

The frequency of tobacco using was 16.3% (n: 50). Only 4 students reported quit smoking. The average smoking year was 4.30 ±3.21 (min: 1; max: 12) in the smokers (n: 50). The average number of cigarettes was 10.20±7.52 (min: 1; max: 30).By FTND; 19 of the 50 students (38.0%) were high level nicotine dependence. By CAGE test; the frequency of alcohol user was 26.7% (n: 82). Of the alcohol users 81.1% was using more than less once or twice a week. Of the alcohol users 9.8% (n: 8) were alcohol dependent. Only 2 students (0.7%) reported alcohol if he left. An alcohol user left drinking alcohol before one year and the other one left it before one and half year. The

average alcohol using time was 4.39 ±2.44 (min: 1; max: 13) years. The 223 students (72.6%) reported as "I do not use alcohol".

Distribution of the students by the Nicotine and Alcohol Use / Dependence was presented in Table-2.

Table-1: The distribution of the average points of social domain in quality of life by the social relations and the university environment.

Some social relationships (N: 307)		n	%*	Average score for social domain of quality of life X ± SD	Statistical analyses t; p
Status of social relationship with his/her mother	Good	283	92.2	68.45 ± 13.45	2.189; 0.038
	No good	24	7.8	58.89 ± 21.05	
Status of social relationship with his/her father	Good	262	85.3	67.61 ± 14.16	0.275; 0.784
	No good	45	14.7	68.30 ± 15.71	
Status of social relationship with his/her siblings**	Good	264	91.0	68.01 ± 13.88	0.966; 0.343
	No good	26	9.0	64.36 ± 18.76	
Status of social relationships with his/her friends	Good	277	90.2	68.93 ± 13.60	3.981; 0.001
	No good	30	9.7	56.44 ± 16.58	
Answers about the university social environment		N	%		
Regularly participate in sporting activities	Participating	34	11.1	73.53 ± 12.55	2.817; 0.007
	No participating	273	88.9	66.98 ± 14.44	
Regularly participate in artistic activities	Participating	23	7.5	67.83 ± 15.00	0.039; 0.969
	No participating	284	92.5	67.70 ± 14.35	

*Column percent, **There were 17 people without siblings. In total 290 people were taken.

Table-2: Distribution of the students by the Nicotine and Alcohol Use / Dependence.

Tobacco (N:307)	n	%
Using	50	16.3
Fagerstrom Test for Nicotine Dependence (N: 50)		
Low-level dependent	11	22.0
Middle-level dependent	20	40.0
High-level dependent	19	38.0
Alcohol (N: 307)	n	%
Using	82	26.7
CAGE Test (N: 82)		
Alcohol dependence	8	9.8

In this study; the frequency of depression was found 18.9%. BDI average score was 10.47±9.24 (min: 0; max: 50). In boys and girls; BDI average scores were 9.33 ± 8.67, 11.07 ± 9.49 (t: 1.161; p>0.05).

The average score for BAS was 31.81±10.21 (min: 21; max: 63). The average score for BAS was higher in girls (32.78±10.27) than in boys (29.94±9.86), (t:2.360; p<0.05).

The average score for BHS was 4.93±4.16 (min: 0; max: 20). BHS average score was not found statistically significant difference by gender, it was 4.84 ± 4.12 in boys and 4.98 ± 4.20 in girls (t: 0.256; p>0.05).

The students who had high-middle-low physical activity level frequencies were 17.3% (n: 53), 47.8% (n:147), 34.9% (n: 107), respectively.

The average score for social domain in quality of life was 67.71 ± 14.37 (min: 20; max: 100). For the average scores of social domain in quality of life, it was not any difference significantly between boys and girls (67.04 ± 15.27 – 68.05 ± 13.91), (t: 0.564; p>0.05).

In our study, the negative correlations were found between social domain in quality of life with depression (r: -0.469), anxiety (r: -0.337), hopelessness (r:-0.365), alcohol dependence (r: -0.230). And the positive correlation was found between social domain in quality of life with physical activity (r: 0.112), (for each one: p<0.05). But it was not found a relation between social domain of quality of life with tobacco dependence (r: -0.050; p>0.05).

The correlations between social domain in quality of life and some parameters were presented in Table-3.

Discussion: Considering the previous studies that we can say the following: We expect that adverse effects on life's quality or mental health among students who attending medical faculty or health related schools with cause of difficulties of educational process[32,33]. In our study, the social domain in quality of life level was middle level according to the scores of the participants. Additionally, researchers expect that level of life's quality and responses associated with social relationships are compatible. This study's results shown that a positive correlations were found social domain points of the WHOQOL-BREF and social relationship status with the students' mothers, siblings and friends (for each one, p<0.05). But we could not find any relation between social domain in quality of life and to be good relationship with his / her father (p>0.05). One of the reasons of this result may be Turkey's patriarchal family structure and authoritarian father character.

In this study, the numbers of the students continuing sporting (n: 34) and artistic activities (n: 23) are very little in the university's social environment. To realize of the study in a developing university can be a reason for explain of this result. However, it found higher scores for social domain in quality of life in the students who continuing sporting than the others (p<0.05). Likewise, scores for social domain in quality of life increased while physical activity level also was increasing (r: 0.112; p<0.05). These results can be regarded as evidence of a positive impact of physical activity on the social domain in quality of life. Some studies[33-35] have reported similar results to our results available.

In our study, nearly one in five students (18.9%) has depression by BDI (these students were suspected cases for depression). The other studies from Turkey reported approximately 18% prevalence for depression among university students[36, 37]. By the literature, the prevalence of depression was higher in women than men in general population. However, prevalence of depression has not difference in terms of gender among university students, generally[6]. For example, major depressive disorders were reported similar frequency by gender in a university study from Chinese[38]. We found a similar result, too. In this study, we could not see any difference about depression prevalence by gender (p>0.05).

In many countries that including in Turkey, anxiety tends to increase in recent years[39]. It was reported social factors have more effect on anxiety than economic factors among university students[40]. It was reported that higher scores about anxiety, it related to somatic problems, in girls than boys among adolescents[41]. For anxiety, higher scores in girls than boys in our study were found (p<0.05).

Hopelessness was reported more common in male university students from Turkey[42]. We could not find a difference between hopelessness and gender (p>0.05). May be an explanation for this as follows: This study group, 63 (59.4%) of 106 boys were medical school students. For medical students in Turkey, hopelessness frequency may accept as low with cause of low level concerns in terms of employment and life conditions.

Table-3: Correlations between social domain of quality of life with some parameters.

Correlations	Depression	Anxiety	Hopelessness	Physical activity	Alcohol dependence	Tobacco dependence
Quality of life Social domain (WHOQOLBREF)	r: -0.469; p<0.05	r: -0.337; p<0.05	r: -0.365; p<0.05	r: 0.112; p<0.05	r: -0.230; p<0.05	r: -0.050 p>0.05

Variously studies[43-45] presented evidence about the positive correlations between depression, anxiety, hopelessness and the other psychological disorders. We aimed to evaluate the relationship between three psychological problems (depression, anxiety and hopelessness) and social domain in quality of life. We saw that these psychological problems have a negative effect on social domain of quality of life (for each one, $p<0.05$). If we examined the medical literature, we saw that studies about the effects of depression and anxiety on quality of life were examined in patient groups (particularly cancer) more than the healthy population. However, it has been studied these scientific topics about the university students, rarely[46-48]. There is a need to new studies to be conducted in university students. The other hand, a recommendation in this regard follows: The new regulations in social environment of university will provide that positive effects on the mental health and quality of life among university students.

Our study, 16.3% of this study group was consisting smokers. Of smokers 38% and 40% were high / middle level dependent, respectively. From Turkey's studies, a study's the results that realized among girl students were 12.9% in smokers and 62.5% in low level dependent[49]. We could consider that frequency of smokers was slightly lower compared to our study with cause of this study was carried out in girls only. From Turkey, another study that realized in the university students, it was reported that frequency of smokers was 35.6% and nearly 1 / 3 of smokers identified as high level dependent[50]. Compared to this study, smokers / nicotine dependent frequencies of our study are lower. Our study group consisted with health-related schools' students. This feature of the study can bring to explanation for lower frequency about smoking. Alacam *et al.*[50] reported that alcohol user frequency was 35.3%. Additionally, 26.2% of the students were reported as alcohol dependent students by CAGE. As in smoking frequencies, our alcohol user frequency (26.7%) and alcohol dependence frequency (9.8%) were lower in our study group when we compare it with the study of Alacam *et al.*[50]. For explain, we can say that our study group consists with health-related schools' students. By Turkey Chronic Diseases and Risk Factors Study[51], alcohol user prevalence was 23.3% in general population, 22.7% in 15-24 ages group of Turkey. Alcohol user frequency in our study group was higher than Turkey's young population. High consumed alcohol in the Aegean Region may explain to this result. Despite all these explanations for our results about smoking and alcohol using, we must say that this study group have higher smoking and alcohol user frequencies if we consider the fight against tobacco and alcohol policies in Turkey. And we can say that preventive medicine is needed to combat alcohol and cigarettes on this study group.

A study from Nigeria reported negative effects of smoking on quality of life in university students[52]. Additionally, the new developments about this subject have shown that a negative correlation between using tobacco with quality of life about adolescents / youths[21,53,54]. Our study has not shown the negative effects of smoking on quality of life ($p>0.05$). Perhaps, this result may explicable with strong influence of cigarettes on social status, still continuing in Turkey. There was a negative correlation between alcohol dependence and social domain of quality of life ($p<0.05$). Similar results were reported by some studies[55,56].

Limitations: Firstly, this study is cross-sectional. The number of participants was 307, only. And this study was realized in health related schools. It may be reached a broader student population for this study. But participation to this study was disapproved by the other students.

Conclusion

The study presented evidence that is negative effects of depression, anxiety, hopelessness and alcohol on quality of life. The positive effects of promoting of artistic and sporting activities on life's quality were presented. For this university, it is recommended that increasing of the student participation in artistic and sporting activities.

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