

## **Anxiety among University Students and its effects on Nutrition**

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## **Introduction:**

Anxiety which is experienced by creatures, is uneasiness whose reason is undefined like worry, fear, stress and distress. While anxiety is the result of inner conflicts which occur according to some theorists, it is learned behaviors according to some theorists (1). It has such physical effects as an increase of blood pressure and heartbeat, sweating, strain in muscles due to immediate blood flow through main muscle groups, slowdown of functions of immune and digestive systems. In addition to them, nausea, coldness, shivering and chill in hands and feet are sensed. From emotional perspective, it causes disease, a sense of fear and panic. This sensation is one of the basic affections which come with such emotions as fear, anger, sadness and happiness associated with that human-being survives.

The lifelong frequency of generalized anxiety disorder (GAD) which is one of the most important psychiatric disorders and commonly seen in the public, is approximately notified as 5% (2, 3, 4). It is also notified that GAD is seen in primary care patients who complain about the anxiety at a rate of 22% (5).

A lot of changes also occur the university education term when comprises the period of time between adolescence and the term of reaching full responsibility and independence in community. In this term, social phobic signs are revealed or current signs increase in many students. If exams affect career choice and feature opportunities of individual, it can particularly be stressful (6). While intermediate exam anxiety positively affects academic success, high-level anxiety negatively affects (7, 8).

Besides all these, human health is under the influence of many factors like nutrition, genetics, climate and ambient conditions. The most important one of these factors is nutrition. Nutrition is necessity for growing up, developing, maintaining life and keeping healthy (9). One of risky groups in terms of nutrition problems is university students (10). In some studies in our country, it is suggested that university students don't eat sufficiently and properly (11, 12). In adolescence which corresponds to the first years of university education, such special situations as prominent acceleration of physical growing and developing, life style changes and changes in food habits, continuing dieting, smoking and doing exercise affect energy and food requirements (13). In that term, nutrition has importance in terms of that individuals will be able to maintain their lives as healthy, school success and prevention of chronic diseases which can occur in the future (11,12).

Eating disorders are attractive illnesses because of increasing obesity and anorexia patients in recent years (13). In eating disorders that are known for that they can occur by being associated with many reasons, mood disorder is more frequent than normal population (14, 15). It is thought that negative changes in appetite and food habits are generally associated with depression, but anxiety can also lead to this kind of eating disorders. Social phobia, agoraphobia, simple phobia and obsessive compulsive disorders are the most widely diagnosed from anxiety disorders (16). The relation of anxiety with nutrition is a reflection of mood. The importance of the subject and the fact that there is no much research which has been done so far about the subject in our country are two of the significant factors in planning the research.

It is purposed to determine food habits of the students of Faculty of Medicine at İzmir Katip Çelebi University and to research how it is affected by anxiety in this study.

## **Material and Method:**

While the study was carried out in March, April and May in 2014, its universe was composed of totally 196 students who were from 1st, 2nd and 3rd classes on Faculty of Medicine at İzmir Katip Çelebi University and had formal education. While there is no sampling for the students who participated in the research, all students who agreed to voluntarily participate in the study are included in the study. Before applying the survey, the

students who participated in the study were verbally informed and the students who agreed to participate in the study were evaluated. The research is cross-sectional and all willing students were tried to be included. Students who were not at school during the study or didn't willingly participate in the study are considered exclusion criterion.

In the evaluation of food habits, the survey method which was created by researchers is used. In this method, demographic data and food habits which belong to the students are questioned, the answers which are given are evaluated in the form identified by student who participated in the study according to available choices in the survey. Furthermore, by applying the Back Anxiety Inventory to the students, the students' complaints about anxiety are researched.

Coding of data and its statistical analysis were done on the packaged software of SPSS 18.0 for windows on computer. Questions are interpreted by doing distribution of percent value. Chi-squared test is used as statistical analysis method. The value  $p < 0.05$  is accepted as threshold level for statistical significance in evaluations.

### Findings:

Totally, 196 students (109 girls (55,6%) and 87 boys (44,4%)) who are receiving education and from 1st, 2nd and 3rd classes of Faculty of Medicine at İzmir Katip Çelebi University, were included in the study which is carried out in order to determine how food habits of university students are affected by anxiety and exam anxiety. Age ranges, are mother and father alive or dead, their working situation and educational levels, do they live together or not, the most-dwelled region before university, region in where is dwelled right now, the amount of monthly pocket money and margin of nutrition in pocket money from demographic features which belong to students are questioned. The findings which belong to them is shown on table 1.

		N (Number)	% (Percent)
<b>Gender</b>	Female	109	55.6
	Male	87	44.4
<b>Age</b>	18	34	17.3
	19	50	25.5
	20	69	35.2
	21	35	17.9
	Over 21	8	4.1
<b>Whether mother is alive or dead</b>	Alive	194	99.0
	Dead	2	1.0
<b>Working status of mother</b>	Working	91	46.4
	Not working	105	53.6
<b>Educational level of mother</b>	Doesn't know how to read and write	3	1.5
	Primary school graduate	34	17.3
	Secondary school graduate	15	7.7
	High school graduate	51	26.0
	University graduate	93	47.4
<b>Whether father is alive or dead</b>	Alive	186	94.9
	Dead	10	5.1
<b>Working status of father</b>	Working	163	83.2
	Not working	33	16.8
<b>Educational level of father</b>	Doesn't know how to read and write	2	1.0
	Primary school graduate	16	8.2
	Secondary school graduate	13	6.6

	High school graduate	42	21.4
	University graduate	123	62.8
<b>Do mother and father live together or not</b>	Yes	175	89.3
	No	21	10.7
<b>Social situation of the most-dwelled geographical region before university</b>	Countryside	8	4.0
	County	64	32.7
	Metropolis	124	63.3
<b>The most-dwelled geographical region before university</b>	Aegean	81	41.3
	Black Sea	10	5.1
	Central Anatolia	25	12.8
	Marmara	25	12.8
	Mediterranean	24	12.2
	Eastern Anatolia	9	4.6
	Southeastern Anatolia	18	9.2
	Other	4	2.0
<b>Place in where is dwelled right now</b>	With family at home	70	35.7
	With friend at home	61	31.1
	Alone at home	47	24.0
	Alone at dormitory	9	4.6
	With friend at dormitory	9	4.6
<b>The amount of monthly pocket money</b>	0-500 TLs	84	42.9
	501-1000 TLs	77	39.3
	1001-1500 TLs	26	13.3
	1501 TLs and over	9	4.6
<b>How much of pocket money is spent for nutrition</b>	0-25%	49	25.0
	26-50%	94	48.0
	51-75%	43	21.9
	76-100%	10	5.1

*Table 1: Some demographic attributes which belong to the students within the scope of the study*

After some demographic attributes of the student group within the scope of the study were reviewed, the use of cigarette-alcohol-pleasure-inducing substance-psychiatric drug and diseases in himself/herself or his/her family were questioned (table 2).

		<b>N (Number)</b>	<b>% (Percent)</b>
<b>Smoking</b>	Yes	38	19.4
	Gave up	0	0
	No	158	80.6
<b>Use of alcohol</b>	Yes	45	23.0
	Social drinker	56	28.5
	No	95	48.5
<b>Use of pleasure-inducing substance</b>	Yes	6	3.1
	No	190	96.9
	Tried	0	0
<b>Use of psychiatric drug</b>	Used before	0	0
	Using right now	20	10.2
	Never used	176	89.8
<b>Medical disease in himself/herself</b>	Not exist	169	86.2
	Exist	27	13.8
<b>Medical disease in his/her family</b>	Not exist	68	34.7
	Exist	128	65.3
<b>Overweight first degree relative</b>	Not exist	83	43.3
	Exist	113	57.7
<b>Other overweight relatives</b>	Not exist	122	62.2

	Exist	74	37.8
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**Table 2:** Some medical information of the students within the scope of the study

After general profile of the student group within the scope of the study was built up, questions which were prepared intended for weight perceptions and eating habits of the students, were asked. 46.4% (n: 91) of the participants see themselves as normal weight and 28.1% (n: 55) of the participants see themselves as low weight. 34,2% (n:67) of the students thought that people misevaluate about their weights.

58.2% of the participant students (n: 114) eat three meals every day. While 141 students (71,9%) have never said lie about their eating habits, 52 students (26,5%) sometimes lied.

The question of “Do your problems about your weight make focusing on your courses difficult?” is answered by 150 students (76,5%) as never and 33 students (16,8%) as sometimes. 185 students (43,4%) feel guilty about eating at different rates. The habit of vomiting after eating is determined as a rate of 7,1% (n:14).

The question about the frequency of weighing of the students is answered by 18 students (9,2%) as every day, 33 students (16,8%) as once a week, 63 students (32,1%) as once a month, 82 students (41,8%) as several times in a year.

The question of “How long do you eat a meal on average?” is answered by 100 people (51,0%) as 15-30 minutes and 70 people (35,7%) as 5-15 minutes. While 49.5% of the students (n: 97) generally eat at home, 29.6% of the students (n: 58) prefer fast food restaurants. Students substantially (59.2% n: 116) underlined that they prefer to consume olive oil.

Majority of the students (69,9% n:137) expressed that their food habits change in date of exam. In this term, nutrition of 106 people (54,1%) is based on fast food. The most determinant properties for eating habits in this term are determined as easy preparation (59,7% n:117), being substantial (32,7% n:64) and being healthy (7,7% n:15).

Majority of the students (83,7% n:164) defined fast food, 19 students (9.7%) defined frying and 13 students (6.6%) defined fruit and vegetables as unhealthy food.

The classification of the study team according to the Beck Anxiety Inventory score is shown on the table below (table 3).

Beck Anxiety Score	N (Number)	% (Percent)
0-5	88	44.9
6-10	45	23.0
11-20	43	21.9
21-25	11	5.6
26-30	2	1.0
Not fulfill the inventory	7	3.6

**Table 3:** Distribution of the Beck Anxiety Inventory scores of the students within the scope of the study

The groups which we classified according to their Beck anxiety scores are reviewed from the point of statistical significance in terms of sociodemographic features and food habits, the features which is found statistical significant are expressed on table 4.

Reviewed parameter	p-value	Somers-d value
Age	0.000	+0.005
Psychiatric drug use	0.000	-0.159
Existence of medical disease in himself/herself	0.006	+0.151
The difficulty which is associated with weight of focusing on course	0.018	+0.167

Guilt about eating	0.001	+0.139
Frequency of being weighed	0.001	+0.018
Change in eating in exam term	0.032	-0.192

**Table 3:** Statistical significance of the Beck anxiety scores

### Discussion:

Because the students within the scope of the study is selected by simple random method, a visible difference in terms of gender is not determined (109 girls, 87 boys). Majority (35.2%) of the cases within the scope of the study in terms of age ranges is over 20 year-old. This situation is an expected finding when it is considered that the study is done over medical students from 1st, 2nd and 3rd classes at university.

Mothers and fathers of the students who participated in the study substantially consist of people with high-educational level (high school and over) (respectively, n: 144 73,4%, n:165 84,2%). It makes us think that the students in the study group will be more conscious about nutrition, too.

Home (with family at home, with friend at home, alone at home) forms the biggest group with 178 people (90.8%) in terms of place in where the students dwell. People's their own homes are places where are suitable for proper nutrition for the university students. From this respect, we can say that the students have appropriate places for proper nutrition.

The rates of the lifelong uses of cigarette, alcohol, pleasure-inducing substances in university students. In a study which was done over university students in Hatay, these rates are determined as 73,2%, 56,6% and 9,6% respectively (17). In studies which were done at different universities in Turkey, different rates between 27,9% and 81,8% about smoking are given (18). Smoking among the studies is at quite low-level compared to other studies. In terms of the use of alcohol, the students articulated that 51,5% of them have drunk at least one alcoholic beverage throughout their lives. This result is similar to findings in other studies with university students in Turkey (19). It is determined in the study that the students have tried to use pleasure-inducing substance at least one time at a rate of 3,1%. Prevalence of the use of pleasure-inducing substance is low compared to developed countries and other regions of Turkey (20, 21, 22). If it is considered that these three kind of dependencies are effective factors over anxiety, it is expected that the level of anxiety is lower than normal in the study group.

In a study which was done over 144 students whose averages of age are 21,3 in the city of Isparta, it is notified that they prefer homemade food in dinner and lunch at a rate of 52.8% and 74.3% respectively while they prefer fast food in refreshments at a rate of 75.7% (24). While 49,5% (n:97) of the students in the study generally eat at home, 29,6% of them (n:58) prefer fast food restaurants.

When the type of oil which is used by people in the study, is reviewed, it is evaluated as positive in terms of cardiovascular risk factors that the use of butter whose saturated oil that constitutes risk, rate is high and the use of olive oil whose unsaturated oil rate is high. We think that the reason for high use of olive oil is richness of region in where participants in the study live.

Frequently consumption of fruit-vegetables is a factor can be considered prophylactic in terms of such chronic illness risk factors as diabetes (23). 13 students (6,6%) in the study group defined fruit-vegetables as unhealthy food and this situation is too giant deficiency.

It is significant in terms of both their own health and future generations that university students eat healthily (24). Patients must be recommended over eating a balanced diet in patient-doctor meetings (25).

The parameters which show significant correlation with anxiety as statistical in the study, are observed as age, the use of psychiatric drug, existence of medical disease in himself/herself, the difficulty which is associated with weight of focusing on course, guilt

about eating, the frequency of being weighed and change in eating in exam term. More detailed studies which are related to these parameters must be done.

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