

## **STRESS LEVEL OF UNIVERSITY STUDENTS**

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### **ABSTRACT**

The main purpose of this study is to examine the stress level of university students according to certain variables. The participants are students attending different classes and departments in Istanbul Commerce University. In the first part of the scale; gender, age, lycee type, faculty, department, and accommodation questions are asked to collect demographic information of the subjects. Second part of questionnaire stress level is studied by a "Stress Scale" developed by Baltaş and Baltaş (2000). Data is analysed using statistical techniques, namely frequency, percent, arithmetic mean, Independent Sample t-test, One-Way ANOVA, Student-Newman-Keuls Test. The result of the research shows that there are significant differences between the variables related to the demographic characteristics when they are analyzed with respect to the level of stress.

*Keywords: Stress, Stress Level, University Students*

### *ÜNİVERSİTE ÖĞRENCİLERİNİN STRES DÜZEYİ*

### **ÖZET**

Bu araştırmanın ana amacı, üniversite öğrencilerinin stres seviyelerinin çeşitli değişkenlere göre incelenmesidir. Katılımcılar, İstanbul Ticaret Üniversitesi'ne devam eden farklı bölüm ve sınıflardan öğrencilerdir. Ölçeğin ilk bölümünde; cinsiyet, yaş, mezun olunan lise, fakülte, bölüm ve kalınan yerden oluşan "Kişisel Bilgi Formu" bulunmaktadır. Ölçeğin ikinci bölümünde, Baltaş ve Baltaş (2000) tarafından geliştirilen "Stres Ölçeği" yer almaktadır. Elde edilen verilerin analizinde, frekans, yüzde ve aritmetik ortalama, t testi ve tek yönlü varyans analizi, Student-Newman-Keuls tekniğinden yararlanılmıştır. Araştırmada bazı kişisel özellikler ile stres düzeyi arasında fark bulunmuştur.

*Anahtar Kelimeler: Stres, Stres Düzeyi, Üniversite Öğrencileri*

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## 1. INTRODUCTION

Stress is seen as modern society's illness by professionals from different sectors. Stress has effects on people's behaviors, communications and efficiency. Stress is not only a factor in working places; it is also common factor in educational environments experienced by students.

Stress is first defined by Hans Selye (1977) while searching for female hormones. Before Selye, the term "stress" was used to describe a mental strain or unwelcome happening.

Selye demonstrated that stress weakened rats' immunity. Stress has become a universal explanation for human behaviour in industrial societies (Viner, 1999).

Walter Cannon defined stress as "an external factor affecting bodily homeostasis". Cannon, introducing the term "homeostasis" and "fight or flight" response to stress is believed to do the first researches about stress (Şahin,1998; Viner,1999).

Although the term stress has first shown up in physiology. Today, there are many definitions of stress in many areas. According to Robbins, "stress is a dynamic condition in which an individual is confronted with an opportunity, constraint or demand related to what he or she desires and for which the outcome is perceived to be both uncertain and important" (Robbins, 1996).

Stress is a negative emotional experience, accompanied by predictable physiological, cognitive and behavioral changes that are directed either toward altering stressful circumstances or accommodating to its effects.

### 1.1. Sources of Stress

Sources of stress are mainly divided into two:

#### 1.1.1. Environmental Factors

There are environmental uncertainties that create stress: economical, technical and political uncertainties.

#### 1.1.2. Individual Factors

Some people are more prone to stress which can be explained by individual differences such as family problems, economical problems and personality.

- a) **Perception:** Stress does not lie in the objective condition of environmental or individual basis but the perception or the interpretation of the person (Baltaş and Baltaş, 2000).
- b) **Social support:** It is important for a human whether the social needs are satisfied through others: existence of social relations, their structure, support systems, their socioemotional, instrumental and informational dimensions (Anesthal, 1992).

- c) **Believing in Locus of Control:** Believing in external locus of control creates more stress (Sayiner, 2003).
- d) **Hostility:** Type A personality is characterized by feeling a chronic sense of time urgency and by an excessive competitive drive. Therefore Type A personality is believed to live more stress in comparison to type B Type A personality is generally has speed in speech and actions (Baltaş and Baltaş, 2000).

Stress may not only result from the physical threatening conditions but also from misinterpretations or misunderstandings of the information's coming from outside world (Baltaş and Baltaş, 2000). There are physical, psychological and behavioral symptoms. Stress can not only be studied in laboratory conditions. Stressful life events delayed effects of stressful life experiences can also be studied though questionnaires or interviews.

## **2. RESEARCH OBJECTIVE**

The main purpose of this study is to examine the stress level of university students according to certain variables.

## **3. METHOD**

### **3.1. Participants**

The participants of this study are 212 students attending Istanbul Commerce University.

### **3.2. Procedures**

Data is collected through questionnaires. In the first part, there is demographic form developed by researchers. These demographic information's are; gender, age, lycee type, faculty, department, and accommodation. In the second part "Stress Scale" developed by Baltaş and Baltaş (2000) is given. "Stress Scale" is a five-type Likert Scale. The sub-tests measure common stressors like working environment, physical environment, social environment, self-interpretation. Since our sample is university students, assuming that they do not have a regular work, we omitted the working environment sub-test. So the newly developed scale has 25 items and three subscales. For physical environments sub-scale, minimum score is 3, maximum score is 15; for social sub-scale range is between 13 and 65; for self-interpretation sub-scale, range is between 9 and 45.

### **3.3. Analysis of Data**

Data is collected through questionnaires. Analysis of data distribution of sub-scales with frequency, percentage and arithmetic mean. The general opinions of students

and t-test are applied to find out if there is a significant difference between the stress level of students for gender and age. One-Way ANOVA is applied to find out significant differences among lycee type, faculty, department and accommodation. Student-Newman-Keuls Test is applied to point out which group is significantly different. Finally, correlation is computed to analyze between sub-scales. The interpretations are made according to these results.

#### 4. RESULTS

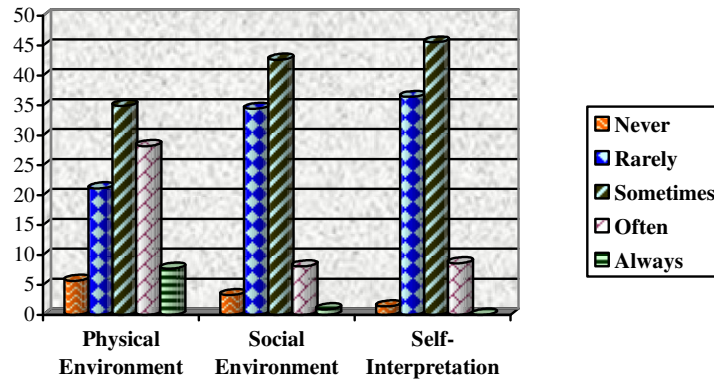
**Table 1. The Distribution of the Sample According to their Demographic Information**

<b>Demographic Information</b>	<b>Groups</b>	<b>f</b>	<b>%</b>
<b>Gender</b>	Female	111	45,1
	Male	100	40,7
<b>Age</b>	18-19	37	21,9
	20 +	32	62,3
<b>Lycee Type</b>	Science Lycee	7	2,8
	Anatolian Lycee	75	30,5
	Vocational Lycee	7	2,8
	General Lycee	88	35,8
	Super Lycee	30	12,2
<b>Faculty</b>	Science and Literature	49	19,9
	Communication	10	4,1
	Engineering and Design	29	11,8
	Commercial Sciences	116	47,2
	Vocational Education	7	2,8
<b>Department</b>	Statistics	22	8,9
	Psychology	28	11,4
	Business Administration	28	11,4
	International Trade	20	8,1
	Banking and Finance	29	11,8
	Tourism Administration	39	15,9
	Visual Communication Design	10	4,1
	Industrial Engineering	12	4,9
	Computer Engineering	15	6,1
Accounting	5	2,0	
<b>Accommodation</b>	With Family	160	65,0
	With Relatives	6	2,4
	With Friends	16	6,5
	Alone	12	4,9
	Stay in Dormitory	15	6,1

In this study, first objective is “How is the distribution of stress for dimensions of physical environment, social environment and self-interpretation?”.

**Table 2. The Distribution of Stress Level for Three Sub-Scales**

Sub-Scales	Never		Rarely		Sometimes		Often		Always	
	f	%	f	%	f	%	f	%	f	%
Physical Environment	12	5,7	44	21,1	73	34,9	59	28,2	16	7,7
Social Environment	7	3,3	72	34,4	89	42,6	17	8,1	2	0,9
Self-Interpretation	3	1,4	76	36,4	95	45,5	18	8,6	0	0
			<b>Total</b>				<b>Missing</b>			
Sub-Scales			<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>				
Physical Environment			204	97,6	5	2,4				
Social Environment			187	89,5	22	10,5				
Self-Interpretation			192	97,9	17	8,1				



**Graphic 1. The Distribution of Stress Level for Three Sub-Scales**

As seen in Table 2 and Graphic 1; for physical environment sub-scale, 34,9 % of the students replied as “sometimes”, followed by “often” (28,2 %), “rarely” (21,1 %) “always” (7,7 %), “never” (5,7 %).

For social environment sub-scale, maximum score is “sometimes” (42,6 %) followed by “rarely” ( 34,4 %), “often” (8,1 %), “never” ( 3,3 % ) and “always” (0,9 %) respectively.

For self-interpretation sub-scale, the maximum score is “sometimes” (45,5 %); followed by “rarely” (36,4 %) “often” (8,6 %) “never” (1,4 %). There is not any answer given for “always” in self-interpretation sub-scale.

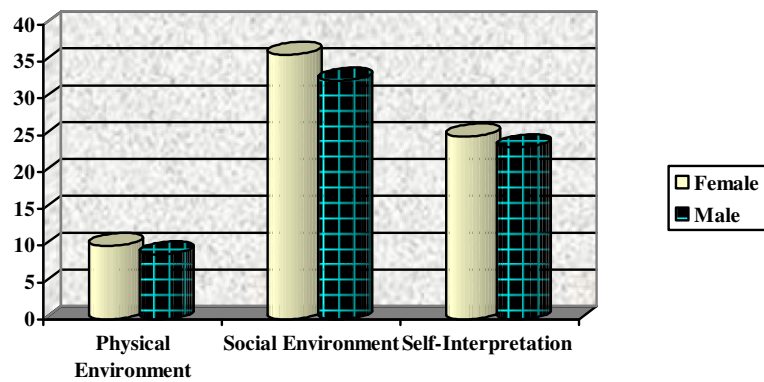
It is demonstrated in Table 2 and Graphic 1; that self- interpretation sub-scale creates the most stress for university students. Social environment and physical environment sub-scales come after self- interpretation sub-scales.

“Is there significant differences between students’ gender for stress level?” is the second objective of this study.

**Table 3. Distribution of Stress Level According to T-Test Results for Gender**

Sub-Scales	Gender	N	Mean	S.D.	t	p
Physical Environment	female	107	9,93	2,99	2,431	0,016*
	male	98	8,85	2,99		
Social Environment	female	98	35,94	9,52	2,680	0,008*
	male	90	32,42	8,85		
Self- Interpretation	female	102	24,84	5,30	1,852	0,066
	male	91	23,34	5,54		

\* p < 0,05 significance level



**Graphic 2. The Distribution of Stress Level for Gender**

The transition to university life is often looked upon as a positive event but the changes in university life can sometimes be stressful to the student as he leaves the social support behind him. Commonly, this stress creates feelings of homesickness and the desire to return home. For this reason, homesickness is also considered as a stressful position for the student. It is possible that individuals who have developed strong relationships at home have learned how to establish such relationships in other environments (Urani et al., 2003). Stable friendships with peers were also mentioned as important sources of support among the high school (Kenny et al., 2002). There is significant difference between females ( $X=35,94$ ), males ( $X=32,42$ ) in social environment sub-scale. The source of the difference is the female students.

Our results suggested that, social environment subscale has the highest score. As our culture is collectivist culture. No one can deny the cultural effects on female students both in positive and negative ways. There may be stress factors coming from being an attendance of a particular university task demands, role demands.

Table 3 and Graphic 2; demonstrates there is significant difference between females ( $X=9,93$ ) and males ( $X=8,84$ ) on physical environment sub-scale. The difference is explained by the females' higher scores.

"Is there significant difference between students' age for stress level?" is the third objective of this study.

**Table 4. Distribution of Stress Level According to T-Test Results for Age**

Sub-Scales	Age	N	Mean	S. D.	t	p
<b>Physical Environment</b>	18-19	45	9,27	2,80	-,312	0,755
	20 +	152	9,43	3,11		
<b>Social Environment</b>	18-19	40	34,32	7,46	,121	0,904
	20 +	140	34,12	9,90		
<b>Self- Interpretation</b>	18-19	40	23,50	4,48	-,178	0,859
	20 +	145	24,12	5,72		

\*  $p < 0,05$  significance level

As seen in Table 4; there is no significant difference between the age for three type of stress subscales.

"Is there a significant difference among students' lycee type for stress level?" is the fourth objective of this study.

**Table 5. Distribution of One-Way ANOVA Results of Stress Level For Lycee Type**

Sub-Scales	Lycee Type	Sum of Squares	df	Mean Square	F	p
Physical Environment	Between Groups	44,06	4	11,015	1,227	0,301
	Within Groups	1759,74	196	8,978		
	Total	1803,80	200			
Social Environment	Between Groups	449,96	4	112,491	1,280	0,279
	Within Groups	15815,30	180	87,863		
	Total	16265,26	184			
Self-Interpretation	Between Groups	141,33	4	35,333	1,174	0,324
	Within Groups	5565,93	185	30,086		
	Total	5707,26	189			

\*  $p < 0,05$  significance level

It is demonstrated in Table 5; that there is no significant difference between the lycee type for three type of stress subscales.

“Is there a significant difference among students’ faculty for stress level?” is the fifth objective of this study.

**Table 6. Distribution of One-Way ANOVA Results of Stress Level for Faculty**

Sub-Scales	Faculty	Sum of Squares	df	Mean Square	F	p
Physical Environment	Between Groups	86,09	4	21,52	2,42	0,055
	Within Groups	1772,54	199	8,91		
	Total	1858,63	203			
Social Environment	Between Groups	639,90	4	159,98	1,86	0,120
	Within Groups	15676,85	182	86,14		
	Total	16316,75	186			
Self-Interpretation	Between Groups	87,52	4	21,88	0,72	0,576
	Within Groups	5649,68	187	30,21		
	Total	5737,20	191			

\*  $p < 0,05$  significance level

It is found and shown in Table 6; that there is not any significant difference for faculty variable.



“Is there a significant difference between students’ department and stress level?” is the sixth objective of this study.

**Table 7. Distribution of One-Way ANOVA Results of Stress Level for Department**

Sub-Scales	Department	Sum of Squares	df	Mean Square	F	p
<b>Physical Environment</b>	Between Groups	105,92	9	11,769	1,301	0,239
	Within Groups	1745,88	193	9,046		
	Total	1851,79	202			
<b>Social Environment</b>	Between Groups	1349,03	9	149,892	1,773	0,076
	Within Groups	14967,72	177	84,563		
	Total	16316,75	186			
<b>Self-Interpretation</b>	Between Groups	155,62	9	17,291	0,561	0,828
	Within Groups	5576,97	181	30,812		
	Total	5732,60	190			

\* p < 0,05 significance level

It is observed in Table 7; that there is not significant difference for department.

“Is there a significant difference among students’ accommodation for stress level?” is the seventh objective of this study.

**Table 8. Distribution of One-Way ANOVA Results of Stress Level for Accommodation**

Sub-Scales	Accommodation	Sum of Squares	df	Mean Square	F	p
<b>Physical Environment</b>	Between Groups	44,29	4	11,072	1,213	0,307
	Within Groups	1807,50	198	9,129		
	Total	1851,79	202			
<b>Social Environment</b>	Between Groups	255,42	4	63,854	0,724	0,577
	Within Groups	16061,33	182	88,249		
	Total	16316,75	186			
<b>Self-Interpretation</b>	Between Groups	209,94	4	52,486	1,768	0,137
	Within Groups	5522,65	186	29,692		
	Total	5732,60	190			

\* p < 0,05 significance level

Table 8 indicates that there is no significant difference between the lycee type for three type of stress subscales.

“Is there any correlation between physical environment, social environment and self-interpretation subscales and students’ stress level?” is the eighth objective of this study.

**Table 9. Distribution of Stress Level for Paired Samples**

<b>Subscales</b>	<b>N</b>	<b>Correlation</b>	<b>Sig.</b>
Physical Environment and Social Environment	185	0,32	,000
Physical Environment and Self-Interpretation	190	0,35	,000
Social Environment and Self Interpretation	178	0,61	,000

It is found and shown in Table 9, there is a correlation between “physical environment and social environment” subscales 32 %, “physical environment and self-interpretation” subscales 35 %, “social environment and self-interpretation” subscales. The highest correlation is the correlation between “social environment and self-interpretation” subscales 61%.

## 5. DISCUSSION

It is demonstrated that self- interpretation sub-scale creates the most stress for university students. Social environment and physical environment sub-scales follow self- interpretation sub-scales.

There is statistically significant difference between genders for stress level of physical environment, social environment and self-interpretation.

There is no statistically significant difference between stress sub-scales and age, lycee type, faculty, department, accommodation. We know that students attending schools and universities have stressful life-events regarding their backgrounds (Yaylı et al., 2003).

Correlation results indicate the highest correlation is the correlation between “social environment and self-interpretation”.

Stress is generally discussed in negative but it also has positive value (Robins, 1996). This issue should be taken into consideration that adaptive stress level is necessary for a human being to have action. Positive stress and resistance to stress are healthy individual characteristics. According to Maddi, psychological wellness is important in human’s resistance to stress (Şahin, 1998).

Consequently; the most important issue here is not the occurrence of stress. We, all know stress is everywhere for everyone. The important thing is how the person deals with stress: select withdrawal or cope with stress.

## **6. LIMITATIONS**

A number of limitations must be considered in evaluating these findings.

- This study is limited to Istanbul Commerce University students. Further studies can be done in different universities to compare the results.
- Studies can be done to compare the stress levels of government and private university students' stress levels
- This study's sample is university students. Further studies can be done in different educational levels.
- The study may be replicated using different stress measures and the sub-scales may be compared
- This study is done in Istanbul. Similar studies can be done in other countries or cross-cultural studies can be done.

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