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EDUCATIONAL STRESS, SOCIAL STRESS AND GENDER DIFFERENCES AMONG UNIVERSITY STUDENTS

Assist. Prof. Dr. Nazime Tuncay
Cyprus Health and Social Sciences University- TRNC
nazime.tuncay@gmail.com

Assist. Prof. Dr. Ruhsan Müdüroğlu
Cyprus Health and Social Sciences University- TRNC
ruhsanm@gmail.com

Assist. Prof. Dr. Ayşe Bulut
Cyprus Health and Social Sciences University- TRNC
draysebulut@gmail.com

Abstract
Stress is an unavoidable part of our educational life as well as our social life and it is a fact that we have to learn how to cope with it. The aim is to study the relationship of the educational and social stressors among university students according to the year of study and gender. After collecting data via Educational and Social Related Stress Questionnaire, cross-tabs, graphs and independent t-test are carried out by using IBM SPSS Statistics 25. Educational Stress Factors are analysed in the following groups: lack of self-confidence, exams after graduation, difficulty of courses, lack of being good in profession, lack of being a good student. Also, students' answers to other stress factors like frequency of visiting parents, sleeping routine, living away are analysed. There were interesting differences according to gender. For instance, male students are found to have more stress about "Lack of Confidence about being a Good Student" and "Exams after Graduation" than female students. Implications of the study are discussed in light of the findings and recommendations are given accordingly.

Keywords: Educational stress, social stress, university students, gender.

INTRODUCTION

Although stress has been studied by many academicians for decades, we still have many stress-related issues. It has been a part of our lives and it affects us both mentally and physically. Overall, it is an important term for all physiologists and psychologists, since it results in effects on physical and psychological well-being (Atkinson, Millar, Kay, & Blinkhorn, 1991). Stress has lots of negative effects on female and male, and people react differently under different stress factors. Different personality factors and learning strategies may affect the academic stress experienced by male and female students (Niemi & Vainiomäki, 2006; Rosal et al., 1997). So, we have to take it seriously. There is a relationship between psychological stress, and changes in the limbic hypothalamic-pituitary-adrenal (LHPA) axis (Hammen, Henry, & Daley, 2000; Kaufman, Plotsky, Nemeroff, & Charney, 2000; Stroud, Salovey, & Epel, 2002). Hypothalamus releases corticotrophin-releasing hormone (CRH), which causes the secretion of adrenocorticotropic hormone (ACTH) from the pituitary in the stress response and ACTH triggers cortisol secretion (Kudielka & Kirschbaum, 2005).

Recent research has reported that there is a difference between male and female stress (Karandrea, Kittas, & Kitraki, 2000). Men have higher cortisol levels in response to psychological stress than females (Kudielka & Kirschbaum, 2005). Male generally showed greater blood pressure, epinephrine, cortisol and ACTH responses than female. Previous studies reported that male students were more reluctant to report their stress experience, were less conscious of stress, and have less knowledge about health and disease detection behaviour than female students (Brougham, 2009; Davies et al., 2000). Also, masculine norms such as independence, invincibility and power can be a barrier to

adequately explaining their stress levels for male students (Davies et al., 2000). Some researchers have reported that female students at the university feel more stressful than male students; stress factors such as frustration, self-imposed stress, and pressure in relation to academic life have reported causing higher levels of stress among female students than male students in the university (Brougham, 2009; Misra, 2000). There are also many studies that confirm concerning rates of stress-related anxiety and depression among students (Abu-Ghazaleh, Rajab, & Sonbol, 2011; Alzahem, van der Molen, Alaujan, Schmidt, & Zamakhshary, 2011; Humphris et al., 2002; Naidu, Adams, Simeon, & Persad, 2002).

On the other hand, there are stress factors such as public speaking and mental arithmetic in front of a viewer, examination stress. It is accepted by many researchers that "Examinations", "fear of failure", "workload" and "completing course requirements" are the most stressful factors among the students related to the education and the academic environment. Also in the previous studies, "fulfilling the requirements to graduate" and "the fear of failing a course or academic year" were found to be the major stressors (Alzahem et al., 2011). According to a review in 2014, the most stressful elements for students are academic work (including particularly examinations, grades, and workload), faculty-related factors, and personal factors (Elani et al., 2014). The causes of psychological stress in students are multifactorial and numerous; however, they are associated with the challenging university environment and demographic factors (Acharya, 2003; Alzahem et al., 2011), moreover stressors vary by individual attitude, beliefs and cultural background (Acharya, 2003). The aim is to study the relationship of the educational and social stressors among university students according to the year of study and gender.

METHODS

Prior ethical approval was obtained by the Human Ethics Committee of Near East University, Turkish Republic of Northern Cyprus (No: YDU/2019/70-845). In December 2019, 346 undergraduate students studying at Cyprus Health and Social Sciences University were asked to complete an anonymous questionnaire, which was distributed at the end of lectures for each of the academic years. Student participation in the research was voluntary and the purpose of the study was explained well in advance to the students. Questionnaires included items related daily routines, educational stress, workload and exams, and social relationships and it was divided into 3 categories: Demographic information, social stressors, and academic stressors. The response codes for each item were: 1, "not stressful"; 2, "slightly stressful"; 3, "stressful"; 4, "very stressful"; and 5, "extremely stressful". Scores for each category were assessed by response codes in those categories. After collecting Education Related Stress Questionnaire data, cross-tabs and independent t-test were carried out by using IBM SPSS Statistics 25.

RESULTS AND DISCUSSION

Results section contain some important findings of the *year of study* and *gender* statistics about educational and social stress among university students. Comparing the level of stress between male and female students a significant difference was observed for "educational stress", "differences between stress factors of the male and female students", "sleeping routine", "Lack of self-confidence", "frequency of visiting parents", "exams after graduation", "difficulty of courses" and "educational stress".

Table 1: Demographic Statistics

		Female	Male	Total
Department	***Dentistry***	106	64	170
	Physical Therapy and Rehabilitation	6	5	11
	Child Development Education	16	1	17

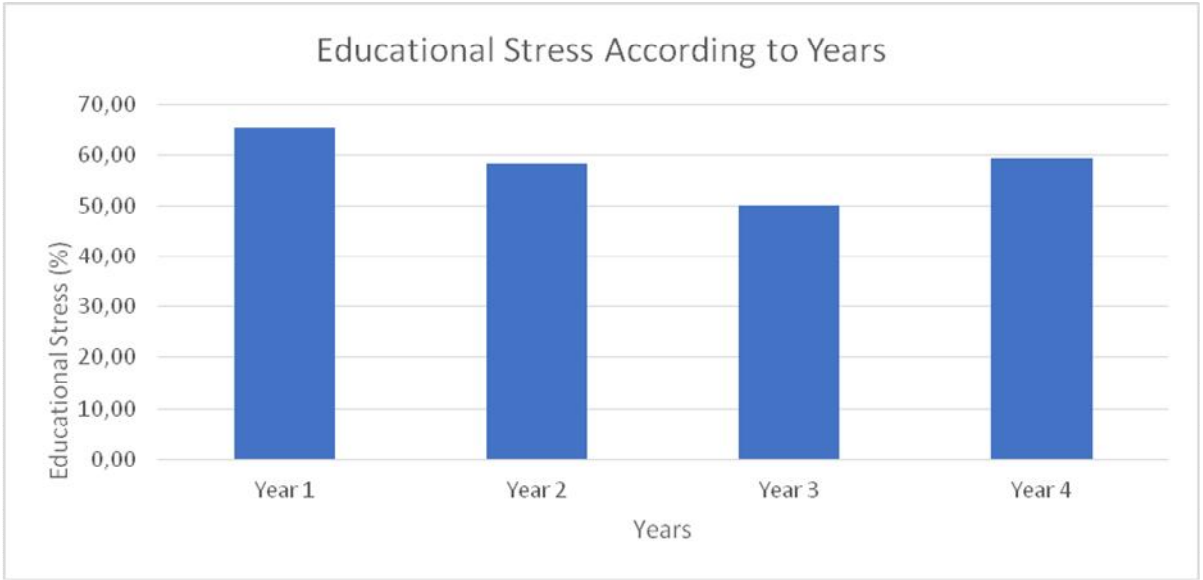
	Psychology	10	4	14
	Sports Management	5	35	40
	Coaching Education	12	46	58
	Recreation	0	14	14
	Nutrition and Dietetics	18	4	22
Total		**173**	**173**	**346**

%49.13 of the participants were from Dentistry department (n=170) and there were also students from Physical Therapy and Rehabilitation (n=11), Child Development Education (n=17), Psychology (n=14), Sports Management (n=40), Coaching Education (n=58), Recreation (n=14) and Nutrition and Dietetics (n=22) departments. These numbers were not planned by the researchers, the results were just a conclusion of the number of participants from each department (*Table 1*).

Educational Stress

After delivering a statistical analysis with the participants, it is found that the highest Educational stress was reported by Year 1 students (65.35%), and the lowest Educational Stress is reported by Year 3 students (50.18%). Additionally, it is observed that all Year 1, Year 2, Year 3 and Year 4 students have educational stress level above 50%. This result was not expected by the authors and it shows that there is a serious stress problem that needs to be solved (*Figure 1*).

Figure 1: Educational Stress According to Years



Especially exams create high stress over students and the importance of high theoretical knowledge increases this educational stress among students. It is mentioned that female students demonstrated a large and significant increase in emotional distress (Rosal et al., 1997). To the contrary, in another study among Malaysian dental students, it is found that there is no significant difference between male and female students in most of the Educational Stress Questionnaires (Ahmad, Md Yusoff, & Abdul Razak, 2011). Female students reported symptoms, e.g. stress, anxiety, depression, headache, gastrointestinal symptoms and pain, more often than their male classmates (Peterlini, Tibério, Saadeh, Pereira, & Martins, 2002; Roberts et al., 2001).

Differences Between the Stress Factors of Male and Female Students

In some of the studies in the literature, it is found that male nurses have experienced more job stress than female nurses and there were differences in the area of job stress between male and female nurses (Lee & Cho, 2016). In the current research, it is found that female students have more stress

than male students as expected. Nonetheless, it is difficult for the male to accept and express feelings of incompetence, fear and weakness, while it was more difficult for women to take a proactive problem-solving behaviour (Matud, 2004).

Table 2: Differences Between Stress Factors of the Male and Female Students

	Gender	N	Mean	Std. Deviation	Std.Error Mean
Lack of Confidence about Being a Good Student	Female	170	3,15	1,38	0,11
	Male	171	**3,66**	1,31	0,1
Lack of Confidence about Being a Good Profession	Female	169	2,99	1,42	0,11
	Male	171	**3,63**	1,37	0,11
Frequency of visiting Parents Living away	**Female**	138	**2,04**	1	0,09
	Male	153	1,69	0,81	0,07
Sleeping Routine	**Female**	173	**1,77**	0,52	0,04
	Male	172	1,66	0,51	0,04
Exams after Graduation	Female	169	2,33	1,37	0,11
	Male	168	**2,67**	1,65	0,13
Difficulty of Courses	Female	170	2,55	1,14	0,09
	Male	169	**2,95**	1,38	0,11

Similarly to our findings, amongst dental students, male students in dentistry were more stressed when faced with specific factors related to clinical training (Rosli, Abdul Rahman, Abdul Rahman, & Ramli, 2005). On the other hand, females expressed higher levels of stress in certain areas of dental training (Polychronopoulou & Divaris, 2010). In a parallel study, which is regarding stress levels, female students reported higher levels of stress than male students amongst medical students (Tyssen et al., 2007). However, there are conflicting results indicating no gender differences and stress factors; also, some studies mentioned that the level of perceived stress was similar between male and female students (Aseeri, Alasmari, Alqahtani, Alqahtani, & Togoo, 2018; Moffat, McConnachie, Ross, & Morrison, 2004; Tyssen et al., 2007). Niemi & Vainiomäki mentioned that gender differences in specific stress symptoms and in the overall level of stress were rare, during the entire six-year medical programme a significant increase of stress symptoms was found in both genders (Niemi & Vainiomäki, 2006). Confirming this, according to our findings, all of the students have stress and there is no student who does not experience stress among all the participants.

Sleeping Routine

Sleeping routine of the students are defined as "Not enough" (1) and "Enough" (2). Students themselves decided as their sleep is "Enough" or "Not enough". Independent t-test results about female and male students sleeping routine stress are shown in *Table 3*.

Table 3: Sleeping Routine

		T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Sleeping Routine	Equal variances assumed	2.121	343	0.035	0.118	0.055
	Equal variances not assumed	2.121	342.982	0.035	0.118	0.055

The sleeping routine differences are shown in *Table 3*. A significant difference between the male and female students was shown about "Sleeping routine" of the students. Female students (M=1.77) have more stress than male students (M=1.66) about this factor (*Table 2*).

Lack Of Self Confidence

The stress of Frequencies of Self Confidence were described by students as Extremely Stressful, Very Stressful, Stressful, Slightly Stressful, and Not Stressful. Independent t-test results about female and male students "lack of self-confidence stress" are shown in *Table 4*.

Table 4: Lack of Self-Confidence about Being a Good Student

		T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Lack of confidence about being a good student	Equal variances assumed	-3.489	339	0.001	-0.508	0.146
	Equal variances not assumed	-3.489	338.013	0.001	-0.508	0.146

There was a significant difference between the male and female students in terms of "Lack of Confidence about being a good student" as shown in *Table 4*. Male students (M=3.66) have more stress than female students (M=3.15) about **"**Lack of Confidence about being a Good Student".

Table 5: Lack of Self-Confidence about Being Good in Profession

		T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Lack of Confidence About Being Good in Profession	Equal variances assumed	-4.206	338	0	-0.638	0.152
	Equal variances not assumed	-4.205	337.226	0	-0.638	0.152

According to independent t-test results, a significant difference between the male and the female students was shown about "Lack of confidence about being good in profession" among the students (*Table 5*). Male students (M=3.63) have more stress than female students (M=2.99) about **"**Lack of Confidence about being Good in Profession" as shown in *Table 2*.

Frequency of Visiting Parents

One of the Social stress factors that was considered in this research study was "Frequencies of Visiting Parents". The stress of "Frequencies of Visiting Parents" is described by students as Extremely Stressful, Very Stressful, Stressful, Slightly Stressful, Not Stressful, Independent t-test results about female and male students are shown in *Table 6*.

Table 6: Frequency of Visiting Parents

		t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Frequency of Visiting Parents	Equal variances assumed	3.289	289	0.001	0.351	0.107
	Equal variances not assumed	3.255	264.050	0.001	0.351	0.108

There was a significant difference between the male and the female students about "Frequency of visiting parents" as shown in *Table 6*. Female students (M=2.04) have more stress than male students (M=1.69) similar to our expectations as shown in *Table 2, and this is confirming previous studies* (Brougham, 2009; Misra, 2000).

Exams After Graduation

Students decided their stress about "Exams after Graduation" as *Extremely Stressful*, *Very Stressful*, *Stressful, Slightly Stressful* and *Not Stressful*. *Table 7* shows independent t-test results for female and male students' stress levels of "Exams after Graduation".

Table 7: Exams after Graduation

		t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Exams after Graduation	Equal variances assumed	-2.071	335	0.039	-0.341	0.165
	Equal variances not assumed	-2.070	323.231	0.039	-0.341	0.165

There was a significant difference between the male and the female students in the terms of "Exams after Graduation" *(Table 7).* Male students (M=2.67) have more stress than female students (M=2.33) (*Table 2*).

Difficulty of Courses

Students decided their stress about "Difficulty of Courses" as *Extremely Stressful*, *Very Stressful*, *Stressful, Slightly Stressful* and *Not Stressful*. *Table 8* shows independent t-test results for female and male students stress levels of "Difficulty of Courses".

Table 8: Difficulty of Courses

		t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Difficulty of Courses	Equal variances assumed	-2.863	337	0.004	-0.394	0.138
	Equal variances not assumed	-2.861	324.705	0.004	-0.394	0.138

A significant difference between the male and female students was shown about "Difficulty of Courses" (*Table 8*) and it is found that male students (M=2.95) have more stress than female students (M=2.55) as shown in *Table 2*.

Educational Stress Score Distribution

Students decided their stress about "Educational Stress" as *Extremely Stressful*, *Very Stressful*, *Stressful, Slightly Stressful* and Not Stressful. Total Stress Scores of students were calculated and their distribution is illustrated in *Figure 2*. It can clearly be seen in the graph that all of the students have stress and there is no student who does not experience stress among all the participants.

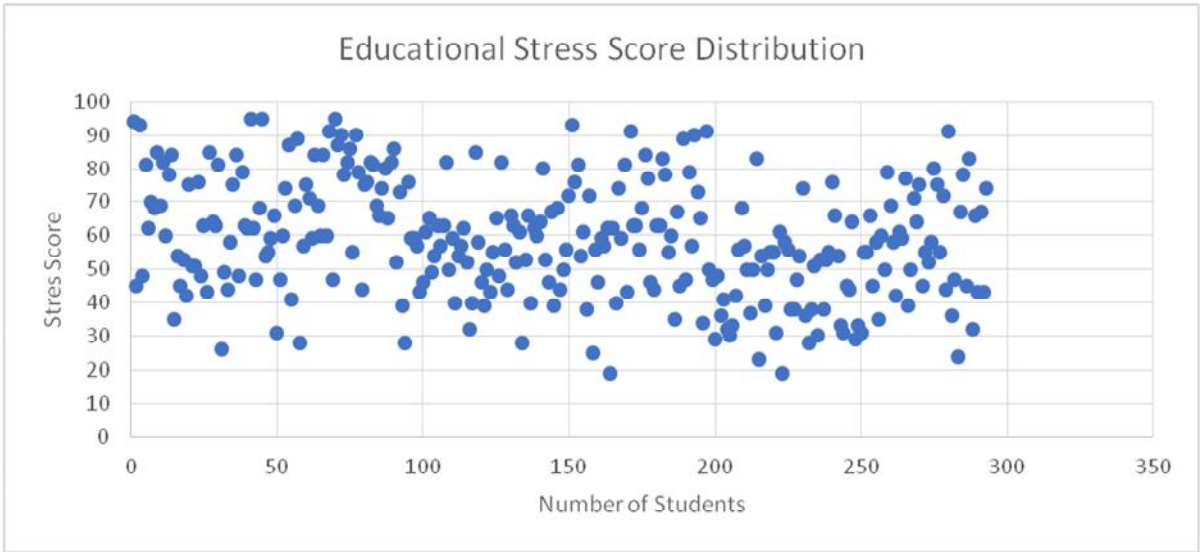


Figure 2: Educational Stress Score Distribution

CONCLUSION

In conclusion, the most stressful year of the faculty seemed as 1st year, moreover, it is observed that above 50% of the students have educational stress. Female students had higher stress levels of "Sleeping Routine" and "Frequency of visiting Parents" than male students. Male students had more stress about "Lack of Confidence", "Exams after Graduation" and "Difficulty of Courses" than female students. Interventions are needed to help students to cope with stress, also new techniques should be tried for delivering courses to different years of education. This study is limited with 346 students in one university. It is recommended to researchers to deliver similar research studies to adapt their universities education to the statistical results to reduce stress factors. Authors will arrange seminars in the university to reduce the stress factors found in the university. The more that we research, the more that we know causes of stress and we can find ways to manage it.

Note: This study was presented as an oral presentation at 11th International Congress on New Trends in Education, April 18, 2020, Turkey.

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