

Stress Levels and Stressors of First Year Students in Faculty of Medicine, University of Muhammadiyah Sumatera Utara

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Abstract - Introduction: At the beginning of academic semester, a student must adapt to changes in the environment and learning that he obtained, so they can undergo education well. Changes can lead to the emergence of problems and stress on students.

Aims: to know the description of stress levels and stressors in first year students.

Method: Descriptive study with total sampling. Data was collected using Depression Anxiety and Stress Scale (DASS-42) to determine stress levels and Medical Student Stressor Questionnaire (MSSQ) to determine stressor. **Result:** The description of the stress level of students consists of normal 43%, mild stress 29%, moderate stress 23.4%, high stress 2.8%, severe stress 1.9%. Stressor description consists of Academic Related Stressor (ARS) being high stressor (47.7%), Interpersonal & Intrapersonal Related Stressor (IRS) being high stressor (50.5%), Teaching and Learning Related Stressor (TLRS) being a moderate stressor (57%), Social Related Stressors (SRS) being moderate stressor (54.2%), Drive & Desire Related Stressors (DRS) being moderate stressor (43.3%), Group Activities Related Stressors (GARS) became mild stressors (53 ,3%). **Conclusion:** Most of students have a stress in the first year. ARS and IRS are high stressors, while TLRS, SRS and SRS are moderate stressors and GARS is a mild stressor that causes stress for students.

Keywords: *Stress, Stressor, First year*

1. Introduction

At the beginning of academic semester, students will face major changes in the education they will live. Students will be required to adapt to changes in culture, lifestyle, learning environment, so that they can carry out their education properly. However, Students may experience problems in the adaptation process so that in can trigger stress on students.

Study of stress levels in medical faculty students has been carried out in various universities in the world. Study in *Tehran University of medical Sciences* (TUMS) showed that 284 students (83%) have stress. The most of sources of stress that reported by students are exams (64%), academic curriculum (63%), lack of entertainment on campus (65%), loneliness (59%), lack of learning resources (55%), lack of guidance from faculty (53%), being a doctor (50%), and living condition at boarding (51%).

Study in Allama Iqbal Medical College, Lahore, Pakistan showed that in the first year that students experienced 7,5% mild stress, 71,67% moderate stress and 20,83% severe stress.⁴ In Indonesia, Study in University of Sumatera Utara showed that 422 students in the first year were 15 students (3,6%) mild stress, 365 students (86,5%) moderate stress, 42 students (10%) severe stress.

Stress is influenced by socio-cultural factors, gender, ethnicity and education system. So, the results of study in one of region can not be directly compared to

other regions.⁶The result of study showed that stress can caused somatic, visceral and emotional symptoms that negatively affect to academic achievement. Increased corticosteroid during stress can interfere with declarative memory, concentration and learning.

A long medical education may have a negative effects for students. Reseach results in the UK showed that one third of students who are psychologically ill do not graduate from college. Changes related to being a medical student sessm to have a significant impact on psychological status of students during the first year of their studies. Therefore, with early identification and effective psychological services, the possibility of future illnesses can be prevented. So, they have to be support and caring with student support system. This is very important to target stress prevention strategies for students who have psychological stress levels to prevent the development of more serious conditions related to stress. For example, health and mental health programs are also needed to help students make a smooth transition between different learning environments and changing learning demans and increasing burdens on their mental and physical capacities.

2. Method

This research is a descriptive study with a cross-sectional study design. The population were all of students of 2016 year, Faculty of Medicine, University of Muhammadiyah Sumatera Utara. Sampling method was total sampling. The data collected by questionnaires, Depression Anxiety an Stress Scale (DASS-42) is used to determine stress levels and Medical Student Stressor Questionnaire (MSSQ) is used to determine stressors of students. Data distribution is presented in the frequency table.

3. Result

Size of samples were 107 students. they were consist of 40 male (37,4%), and 67 female (62,6%). In this study, distribution of stress was obtained from data DASS-42 analysis.

Table 1. Distribution of frequency of level stress for first year students

Level stress	Frequency (n)	Percentage (%)
Normal	46	43,0%
Mild Stres	31	29,0%
Moderate Stress	25	23,4%
High Stress	3	2,8%
Severe Stress	2	1,9%
Total	107	100,0%

Distribution of stressors was obtained from data of MSSQ analysis and presented in the table frequency

Table 2. Distribution of frequency of stressor for first year students

Stressor	ARS		IRS		TLRS		SRS		DRS		GARS	
	N	%	N	%	N	%	N	%	N	%	N	%
Mild	4	3,7%	7	6,5%	7	6,5%	28	26,2%	35	32,7%	57	53,3%
Moderate	44	41,1%	41	38,3%	61	57,0%	58	54,2%	47	43,9%	40	37,4%
High	51	47,7%	54	50,5%	36	33,6%	21	19,6%	17	15,9%	10	9,3%
Severe	8	7,5%	5	4,7%	3	2,8%	0	0,0%	8	7,5%	0	0,0%
Total	107	100,0%	107	100,0%	107	100,0%	107	100,0%	107	100,0%	107	100,0%

4. Discussion

The results of the study based on the stress scale of DASS-42 showed that most of the first year students at did not experience stress or were normal; 46 people (43%) and the least who experienced stress were very heavy stress; 2 people (1,9%). But when compared overall, the number of people who experienced stress were more than normal, which is 57.0%.

This is consistent with research conducted in Kurnool medical college, Kurnool, Andra Pradesh, India which states that 78,19% of first year students experienced stress, and 21,81% did not experience stress. Higher stress prevalence in the first year may be due to changes in more responsibility for learning and changing ways learn from teacher centered to student centered learning.

At the other study showed that students experienced mild stress were the most. But the other one showed that the most were moderate stress (59,2%), while mild stress (27,5%) and severe stress (13,4%). Difference of stress levels in the each region can be influenced by stress measuring devices used and the different learning environments. For example: differences in class size, class layout, campus cleanliness, internet facilities, library facilities, etc.

Based on the results of MSSQ, the high stressors found in students are ARS and IRS. Then the moderate stressors are TLRS, SRS and DRS, and mild stressor is GARS. This is similar to other studies which ARS (mean score 3,10), IRS (mean score 2,96), TLRS (mean score 2,45) are high score among first year students and can be stated as a major source of stress among students.

Mild stressor indicates that it does not cause any stress on students. Even if it does, it just causes mild stress. Moderate stressor indicates that it reasonably causes stress, but student can manage it well. High stressor indicates that it causes a lot of stress on you. Emotions seem to be disturbed by it and daily activities are mildly compromised due to it. Severe stressor indicates that it severely causes stress on you. It can disturbs student's emotions badly and daily activities are compromised due it.

ARS and IRS were the high stressors on students which showed that academic and intrapersonal and interpersonal relationships were the main source of stress on students. this means that the student is disturbed emotionally by the stressors.

IRS became stressors such as lack of motivation to learn, conflict interpersonal, verbal, physical and emotional abuse, and conflict with lecturers. TLRS, SRS and DRS became most of moderate stressors that caused stress for students, but they can still be managed them properly. TLRS category relate to teaching and learning. In the SLRS category, students indirectly have difficulties in managing their time in social and community activities.

DRS category is related to interest to something. This is usually associated with unwillingness to learn in medical faculty and it can influenced their motivation. For example they entered faculty of medicine caused by their parents. GARS became mild stressor which showed that most of students think about their group activities and interacting with people and this did not cause stress to students.

5. Conclusion

From total samples of first year students, there were more female students, 62,2%. Most students experienced stress (57%) than normal (43%), which mild stress was the most level stress for students (29%). The high stressors were ARS and IRS, Moderate stressors were TLRS, SRS, and DRS, and GARS was mild stressor for students.

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