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# PREVALENCE OF STRESS AND DEPRESSION AMONG UNIVERSITY STUDENTS OF KARACHI

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## ABSTRACT

**Background:** Stress is an all-time concerned issue in undergraduate students. Stress levels are high due to workload, pressure of academic and extra-curricular activities and unhealthy lifestyle. Though stress can be beneficial for academic growth but increased magnitude can be harmful for physiological, psychological and social aspects.

**Objective:** To determine stress and depression levels among university students.

**Methodology:** This study was carried out at the University of Karachi in which 1000 students from different faculties including Science, Pharmacy, Administrative Science and Social Sciences participated. This cross-sectional study was designed to investigate the level of stress and depression in university students of Karachi through Major Depression Inventory (MDI), Undergraduate Stress Questionnaire and Higher Education Stress Inventory (HESI).

**Results:** MDI result shows that 21.7% ( $p < 0.05$ ) students felt difficulty in paying attention watching or listening lecture during class most of the time & 14.9% ( $p < 0.001$ ) students reported that they had trouble sleeping at night all the time. USQ results shows that 42% students reported during lecture in class, 38.6% students felt stress when they had a lot of tests and 34% students felt stress when they crammed for test. HESI result shows that 69% students were totally agreed that they were less well treated because of their sex & 37.2% students were somewhat agreed that they were felt Lacking opportunities for influencing studies.

**Conclusion:** High percentage of undergraduate students experience stress and depression due to academic problems. This study high-lightened the major stress and depression in university students and may benefit the society in reducing stress via awareness provided.

**Keywords:** stress; depression; undergraduate students; academic stressors

**INTRODUCTION:** by academic, social, and financial responsibilities [1]. Many researches have been conducted to evaluate stress in undergraduate students that shows that the academic stressors experienced by students are broadly examined and hence a trendy research topic [2].

Many research studies proved that undergraduate student between 18 to 22 years old are not able to cope with stressful circumstances and are at risk physically and emotionally [1]. In order to find the causes of stress and their sources, "reviewed and germane literature" has been used in this research.

Undergraduate students are prone to high level of

stress due to academic and extra-curricular activities. It has impact on both physical and mental health [3]. In terms of physiology it produces aversive effect to noxious stimuli [4]. Stress affects all of our body system specifically nervous system [1]. Stress is regarded as a complexed process which is the recent focus of research society [3]. The most common causes of stress in undergraduate students are excessive assignment workload, deadlines, changes in sleep pattern, eating habits, lack of social activities due to workload, short vacations and financial problems [5]. Undergraduate students may not be able to cope with increased level of stress due to work demands [1] [6]. Poor eating habits

dietary selection, excess drinking beverages smoking and other reckless behaviors to reduce stress are the reasons that students are unable to meet the challenges of university lifestyle and maintain a disciplined schedule [1]. According to one research study, those students who have increased level of stress are less healthy and have unhealthy lifestyle [1]. Emotional feelings of students are often neglected by teachers as they give priority to those who have the acquisition of knowledge, so weak students felt difficulty in learning and became emotionally stressed [7]. Students often feel fidgeting, frustration, nervousness, anxiety and depression that cause bizarre behaviors which affect their learning ability and skills [2]. Students that are not properly counseled and entertained by their teachers and parents, their stress and depression may lead to severe physical and mental damage [7]. The concept of stress has become an important sphere in the field of science. Many survey based are being conducted by using different parameters. Certain level of stress is important for academic progress of undergraduate students, but too much stress can cause harmful effects on physiological, psychological and social grounds [7].

#### METHODOLOGY:

Several studies showed that anxiety and depressive symptoms have high rate of psychological morbidity among students and different parameters have been used to examine this phenomena [8]. These parameters include Major depressive inventory (MDI), Undergraduate stress Questionnaire (USQ) and Higher Education Stress Inventory (HESI) to access stress and depressive symptomatology [8] [1]. A cross-sectional study was designed to investigate the prevalence and information about stress in different situations among university students. Undergraduate students (n=1000) were targeted for this research. Population of students from different faculties including Science, Administrative and Social Sciences were targeted for this study. After a short introductory session related to this study, students gave informed consent to take part in this study. They were free to ask question in which they were confused. Inclusion and Exclusion Criteria: Study included student currently enrolled in University of Karachi aged between 19 to 26 years. College students, students from other universities and younger than 18 or older than 26 was excluded. Data was collected via questionnaire designed according to the theme of study. Stress was evaluated via the following parameters:

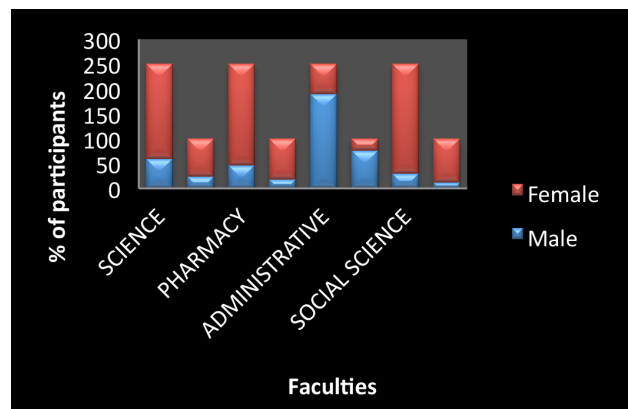
- Higher Education Stress Inventory (HESI) to measure stress at different situations.
- Major depressive inventory (MDI) to measure depression using 2-point rating scale.
- Undergraduate Stress Questionnaire (USQ) to measure stress that students mostly experienced.

#### STATISTICAL ANALYSIS:

The data were analyzed and compared statistically by mean of chi squared test to compare percent values using SPSS version 16. The significant value is determined by  $p < 0.05$  and non-significant by  $p > 0.05$ .

#### DISCUSSION

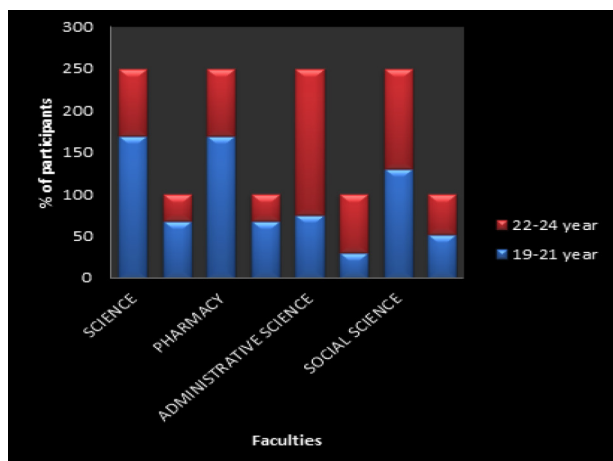
In this study, total participation rate was 100% (1000 out of 1000). Academic faculty rate of First year was 20.7%, Second year 28.9%, Third year 22% and Final year 31.4%. [9] Found that students experienced high level of stress as they progressed through their programme. Dahlin, Joneborg and Runeson carried out a cross-sectional study to examine stress and depression among medical students and found that Final Year students were less convinced by psychosocial environment and more critical of the training education. 32.6% participants were male and 67.41% were female. (Figure 01)



**Figure 01: Classification according to faculty and gender values are presented in percentile.**

Gender difference was also found in a study [10], in which high level of anxiety and depressive symptoms were found in female students as compared to male students. Another research study of [11] proved that high depressive symptoms are found in female so they seek more psychological help as compared to male. Similar results were found in our study 51.5% students were between 19 to 21 years old and 45.5% students

were between 22 to 24 years old (Figure 02).



**Table 01. MDI (Major Depressive Inventory). Percentages of Item Numbers from the Entire Sample, for the variable “All of time”**

	Science		Pharmacy		Ad. Science		Social Science	
	n	%	n	%	n	%	n	%
MDI, All the time								
Low in spirits or sad	55	22	28	11.2	20	8	25	10
Lost interest in daily activities	45	18	18	7.2	38	15.2	44	17.6
Lack in energy & strength	23	9	5	2	25	10	37	14.8
Less self - confident	22	9	16	6.4	36	14.4	36	14.4
Bad conscience or feelings of guilt	51	20	7	2.8	17	6.8	45	18
Life wasn't worth living	24	10	13	5.2	33	13.2	42	16.8
Difficulty in concentrating	31	12	25	10	35	14	54	21.6
Very restless	28	11	20	8	30	12	48	19.2
Subdued or slowed down	23	9	10	4	20	8	51	20.4
Troubled sleeping at night*	38	15	25	10	33	13.2	53	21.2
Suffered from reduced appetite	21	8	22	8.8	22	8.8	49	19.6
Suffered from increased appetite	19	8	13	5.2	47	18.8	45	18

$P < 0.05$  Significant. 14.9 % ( $p < 0.001$ ) students reported that they had trouble sleeping at night All the time

**Table 02 Study of Depression: MDI (Major Depressive Inventory). Percentages of Item Numbers from the Entire Sample, for the variable “Most of the Time”**

	Science		Pharmacy		Ad. Science		Social Science		Total
	n	%	n	%	n	%	n	%	
MDI, Most of the time									
Low in spirits or sad	35	14	44	17.6	52	20.8	53	21.2	73.6
Lost interest in daily activities	55	22	50	20	30	12	58	23.2	69.2
Lack in energy & strength	72	29	52	20.8	32	12.8	38	15.2	77.8
Less self - confident	50	20	59	23.6	39	15.6	39	15.6	74.8
Bad conscience or feelings of guilt	58	23	37	14.8	27	10.8	30	12	60.6
Life wasn't worth living	59	24	45	18	25	10	51	20.4	72.4
Difficulty in concentrating	80	32	52	20.8	42	16.8	43	17.2	86.8
Very restless	42	17	59	23.6	49	19.6	61	24.4	84.6
Subdued or slowed down	57	23	65	26	31	12.4	57	22.8	84.2
Troubled sleeping at night	28	11	33	13.2	25	10	53	21.2	55.4
Suffered from reduced appetite	64	26	45	18	35	14	45	18	76
Suffered from increased appetite	56	22	47	18.8	41	16.4	53	21.2	78.4

$P < 0.05 = 21.7$  % ( $p < 0.05$ ) students felt difficulty in concentrating e/g. watching or listening lecture during

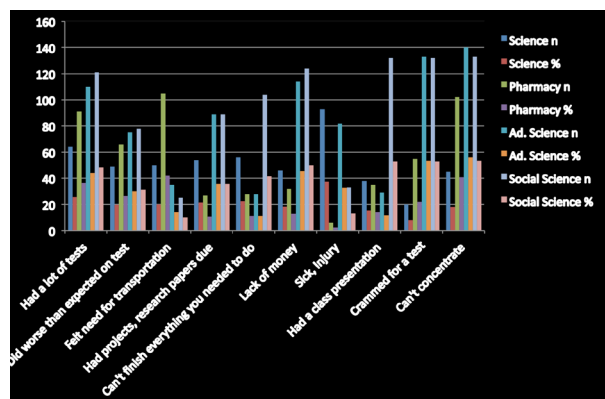
class “Most of the time”.

[12] Found that participants with a mood disorder had a significantly higher MDI-score than the rest of their sample ( $p < .001$ ) and participants with a bipolar disorder and other relational problems had a significantly lower MDI score than the other subjects ( $p < .05$ ).

The Undergraduate Stress Questionnaire (USQ; [13]) comprised of 82 items that follow life events that undergraduate students may experience. We used only 10 items that students currently experience in university. In our Study 42% students reported that they felt stress when they can't concentrate during lecture in class, 38.6% students felt stress when they had a lot of tests and 34% students felt stress when they crammed for test. Others were non-significant item numbers.

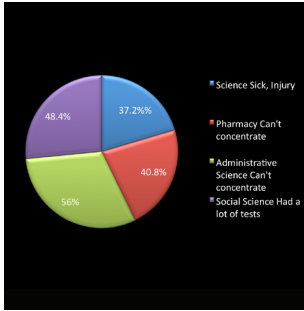
**Table 03. Study Stress USQ (Undergraduate Stress Questionnaire). Percentages Of Item Number From The Entire Sample.**

	Science		Pharmacy		Ad. Science		Social Science	
	n	%	n	%	n	%	n	%
Had a lot of tests	64	25.6	91	36.4	110	44	121	48.4
Did worse than expected on test	49	19.6	66	26.4	75	30	78	31.2
Felt need for transportation	50	20	105	42	35	14	25	10
Had projects, research papers due	54	21.6	27	10.8	89	35.6	89	35.6
Can't finish everything you needed to do	56	22.4	28	11.2	28	11.2	104	41.6
Lack of money	46	18.4	32	12.8	114	45.6	124	50
Sick, Injury	93	37.2	6	2.4	82	32.8	33	13.2
Had a class presentation	38	15.2	35	14	29	11.6	132	52.8
Crammed for a test	20	8	55	22	133	53.2	132	52.8
Can't concentrate	45	18	102	40.8	140	56	133	53.2



**Figure 05: Percentages of all 10-items**

According to one study the top four categories that students experienced as being stressful were academic, finances, intimate relationships and family problems in which academic stress was at high rate [1]. Higher Education Stress Inventory was used to measure stress and it was developed by [8]. It comprise of 33-item with 4-point Likert scale. We used only 2-point Likert scale and 14-item.



Frequency of albuminuria among diabetic patients presenting with stroke was 35.37%(n=52) (Table 1). 59.62%(31) of these 52 patients were males and 40.38%(21) were females (Figure 1). Out of these 52 cases 4 (7.69%) were between 20-30 years, 11(21.15%) between 31-40 years, 23(44.23%) between 41-50 years, and 14 (26.93%) between 51-60 years of age. (Figure 2)

**Table 04. Study Stress HESI (Higher Education Stress Inventory). Percentages of Item Number from The Entire Sample, for the variable “Somewhat Agree”.**

	Science		Pharmacy		Ad. Science		Social Science	
	n	%	n	%	n	%	n	%
<b>HESI, Somewhat Agree</b>								
Lack of respectful treatment from teachers	107	42.8	85	34	93	37	53	21.2
Professional role in conflicts with my personal views	86	34.4	74	29.6	38	15	67	26.8
Lack of encouragement from teachers	70	28	76	30.4	90	36	70	28
Not satisfied with choice of career	89	35.6	58	23.2	65	26	74	29.6
No acceptance towards weakness and personal shortcomings	69	27.6	90	36	54	22	53	21.2
Unclear role and function as a student	76	30.4	68	27.2	100	40	43	17.2
Being less well treated because of my sex	49	19.6	38	15.2	86	34	68	27.2
Lacking opportunities for influencing studies	81	32.4	95	38	95	38	101	40.4
Passive reception of knowledge rather than active learning	74	29.6	95	38	95	38	85	34
Expectations from my family has too strongly steered my choice of career	65	26	53	21.2	79	32	59	23.6
Being less well treated because of my ethnic background	33	13.2	53	21.2	81	32	77	30.8
Perceiving many future colleagues dejected or dissatisfied in their profession	49	19.6	61	24.4	53	21	41	16.4
Sense of education not giving adequate preparation for profession	65	26	86	34.4	13	5.2	93	37.2
Student union activities not promoting sense of community	55	22	66	26.4	54	22	79	31.6

**Table 05. Study Stress HESI (Higher Education Stress Inventory). Percentages Of Item Number From The Entire Sample, for the variable “Totally Agree”.**

	Science		Pharmacy		Ad. Science		Social Science	
	n	%	n	%	n	%	n	%
<b>HESI, Totally Agree</b>								
Lack of respectful treatment from teachers	55	22	93	37.2	30	12	62	24.8
Personal development not stimulated through studies	66	26.4	70	28	62	25	57	22.8
Professional role in conflicts with my personal views	37	14.8	62	24.8	54	22	67	26.8
Lack of encouragement from teachers	35	14	65	26	50	20	52	20.8
Not satisfied with choice of career	83	33.2	88	35.2	58	23	57	22.8
No acceptance towards weakness and personal shortcomings	53	21.2	50	20	60	24	74	29.6
Unclear role and function as a student	68	27.2	80	32	52	21	53	21.2
Being less well treated because of my sex	38	15.2	54	21.6	68	27	64	25.6
Lacking opportunities for influencing studies	50	20	43	17.2	43	17	72	28.8
Passive reception of knowledge rather than active learning	58	23.2	43	17.2	43	17	47	18.8
Expectations from my family has too strongly steered my choice of career	58	23.2	115	46	67	27	56	22.4
Being less well treated because of my ethnic background	33	13.2	13	5.2	47	19	48	19.2
Perceiving many future colleagues dejected or dissatisfied in their profession	35	14	31	12.4	71	28	47	18.8
Sense of education not giving adequate preparation for profession	70	28	71	28.4	111	44	96	38.4
Student union activities not promoting sense of community	80	32	81	32.4	115	46	69	27.6

69% students were Totally agreed that they were less well treated because of their sex.

37.2% students were Somewhat agreed that they were felt Lacking opportunities for influencing studies. (table 04,05 Fig 07,08).<sup>15</sup> found that undergraduate male have stronger ability to detach themselves from emotional situations. [2] Found that stress from teachers, result, and test affect their self-confidence so they lack opportunities for influencing studies and when related academic problems are faced, the result would be inability to adjust in stress conditions that would cause physical and mental problems.

## CONCLUSION

The findings from this study indicate that high percentage of undergraduate students felt stress due to academic problems and gender difference. Stress from result is also the main cause of depression among undergraduate students which may lead to destruction of their skills and ability. They may commit suicide if they are not supported and guided by their teachers and parents. Teachers can play an inspirational role by becoming more aware of their functions and can enhance student's ability to cope with academic problems. Proper counseling by understanding the

cause of stress in university students is the emergent requirement.

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**Nida Naseem;** concept, data collection, data analysis, manuscript writing, manuscript review

**Lubna Naz;** data collection, data analysis, manuscript writing

**Nazneen Zehra;** data analysis, manuscript writing, manuscript review