

Psychological distress and life satisfaction among university students

Abstract

The objective of the present study is to determine the relationship between psychological distress and life satisfaction among university students. The sample of the present research consisted of 398 university students from three faculties (Medical sciences n=133 Social science n=133 and Engineering n=132). Data was collected from different organizations following the purposive sampling technique. After taking the consent from the participants, the depression Anxiety stress scale (DASS) and life satisfaction scale were administered. To obtain the results of descriptive statistics, Pearson Product Moment co-efficient of correlation and linear-regressions were calculated.

Results showed that there was significant ($P < .05$) correlation between Psychological distress and life satisfaction among university students. Further analysis considering the field of education, in engineering student's depression was present 25%, anxiety 32% and stress 20%. In social science students, 21% depression, 30% anxiety and 17% stress. Medical students have 25% depression, 34% anxiety and 23% stress. Overall medical students experience relatively more psychological distress as compare to engineering and social science students.

Keywords: psychological distress, life satisfaction

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Abbreviations: DASS, depression anxiety stress scale; VIF, variance inflation factors; SD, standard deviation

Introduction

Mental health is one of the needed factors for general health. It is not only absence of mental disorders it is a state of an individual in which he is able to cope with life stressors, realizes his or her potential and work purposefully for his life and for society. Mental health is 'the capacity of individuals and groups to interact with one another and the environment, in a way that promotes subjective well-being, optimal development and the use of cognitive, affective and relational abilities'. Mental health is affected by wide range of factors such as social, biological and psychological. In turn, people can develop symptoms and behaviors that negatively affect their mental health, interpersonal relationships and their potential to cope with daily life stressors.¹⁻²

Mental distress is an important public health problem worldwide with more and more affecting the younger population. Although mental health problems affect society as a whole but university students found to have high prevalence of psychological disorders as compare to the general population. This is due to the fact that university students have to face multiple stressors such as academic demands, workload, and pressure to succeed, teacher and parent's pressure, financial burden and worry about future. These stressors can lead to develop psychological problem in students and negatively affect their academic performance. Most common mental health problems found in university students are depression, anxiety and stress. All over the world studies indicated high rate of these psychological problems in students. The university years can be a challenging period of one's life and the pursuance of higher education can prove to be a stressful experience despite of its many positive rewards.³⁻⁵

Recent studies indicated that over 50% of university students reported depressive symptoms shortly after the commencement of their studies. In addition, numerous studies showed higher prevalence

of mental disorder i.e. 53% in USA, 30% in Canada, 53% in Australia and 41.9% in Malaysia. Researches in North America and Europe all point to the fact that university or College students report a higher degree of mental distress compared to the general population.⁶⁻⁷

There are many factors that could predict student's life satisfaction; mental health is one of very important among all of them. Many studies concluded that mental health has effect on life satisfaction, that individual who has better mental health they are more satisfied from their life.⁸⁻⁹ Life satisfaction is negatively associated depression, anxiety and loneliness and positively associated with health.¹⁰ Significant correlation was found between stress and illness among university/college students.¹¹

Studies showed that university and college students are vulnerable to mental health problems. High rates of depression, anxiety and stress among students have generated increasing public concern in western societies, but in eastern societies this issue remains mostly undiscovered. In light of these findings, the mental health of the younger population of Pakistan deserves our special attention. In this study we assessed the psychological distress of university students in terms of depression, anxiety and stress as well as their life satisfaction levels.

Methods

Participants

The sample of the present research consisted of 398 university students of final year from three faculties (Medical sciences, Social science and Engineering).

Materials

Demographic information form

Demographic information form included participant's age, gender, education, family structure and socio-economic status.

The Depression anxiety stress scale¹²

The Depression anxiety stress scale (DASS) is a 21-item (short version) self-reported inventory that evaluates negative affective states. It has three sub-scales depression, anxiety and stress; each contains 7 items. Scores of each sub-scale is obtained by summing the score of relevant items. The depression scale measures low mood, negative thoughts and low self esteem. The anxiety scale measures anxious feelings, restlessness and stress scale assess reaction to stressful situations, negative feelings and impatient. The respondent is required to use four point scale where 0 (does not apply) to 3 (always/ almost applies) to indicate their level of agreement with item they experienced in past week. DASS has found to a validate scale and have demonstrated good internal consistency of the DASS scales in both the 42- and 21-item (DASS-21) versions: Depression (range =.91 to .97); Anxiety (range =.81 to .92); and Stress (range =.88 to .95).

The Satisfaction with life scale¹³

This scale consists of 5 items, answered using a 1-7 scale, where 1 = did not apply to me at all, and 7 = applied to me very much or most of the time (range of possible scores is 5-35). Higher scores indicate higher levels of life satisfaction.

Procedure

The sample of the present research consisted of 398 university students of final year from three faculties (Medical sciences, Social science and Engineering). Data collected from different Universities (Baqai medical University, Sir Syed Engineering University and University of Karachi) following the purposive sampling technique. For the collection of data formal permission has been taken from the concerned authorities of origination and briefly explained the purpose of the research. Secondly the participants were told about the ethics of research; informed consent, their voluntarily participation, the matter of confidentiality and right to withdraw from the study.

The participants first completed the Demographic Information then the depression Anxiety stress scale¹² and The Satisfaction with Life Scale.¹³ Responses were scored according to the producer given in manuals. At the end of data collection they were thanked for their cooperation.

Statistical analysis

Data was entered and analyzed in to SPSS version 21. Descriptive statistics were calculated. Mean & standard deviation median (IQR) were computed for age of the patients, depression, anxiety, stress and life satisfaction as appropriate. Whereas frequency and percentage were computed for gender, age group, different categories of Psychological Distress & life satisfaction. Analysis of the collected data was performed using the SPSS package program. Besides descriptive analyses, independent sample t-test, Mann Whitney U Sign Ranks test, Wilcoxon sign test, Kruskall-Wallis variance analysis and linear regression analysis were conducted & also Multi-co-linearity was tested by means of variance inflation factors (VIF) and tolerance. Neither tolerance nor VIF values violated the multi-co-linearity assumption (tolerance values >0.1 and VIF values <10). Finally p-value was set as 95% confidence interval.

Ethical consideration

Present studies meet the ethical standards, principle of confidentiality, informed consent; permission (from authorities, participants, family of participant if it was seemed necessary and

publishers) and right to withdraw from the study were followed by the researchers.

Results

A total of 398 students returned the questionnaire with signed consent which was divided by in to three groups, Engineering n=132, Medical n=133& social science n=133 as shown in Table 1. According to Table 2, The depression, anxiety, stress, satisfaction & mean age means and standard deviations (SD) were 7.22 (SD=0.21), 8.41 (SD=0.19), 8.73 (SD=0.19), 21.64 (SD=0.30) and 22.24 (SD=0.08) respectively. Table 2 shows frequencies and percentages of depression, anxiety, stress, satisfaction & different parameters. Overall prevalence of depression of the students, 114 (29%) score normal, 126 (32%) score was moderate. In case of anxiety, 34% score extremely severe, 26% score moderate whereas only 20 % score severe; and lastly in case of stress 39 % score normal; 22 % mild average and 23% score moderate & 13% score severe & only 3% score extremely severe. As per the above table the relationship of life satisfaction and psychological distress is significant at 0.05 levels. There is an insignificant inverse correlation between life satisfaction and psychological distress of college students but stress vs. depression and Depression vs. Anxiety found positive moderate correlation. Significant association is found among Department and all parameters of the study participant (Table 1-8).

Table 1 Frequency (Percentages)

		F (%)
Department	Engineering	132 (33%)
	Medical	133 (33%)
	Social Science	133 (33%)
Gender	Male	216 (54%)
	Female	182 (46%)
	Normal	114 (29%)
Depression Category	Mild	75 (19%)
	Moderate	126 (32%)
	Severe	46 (12%)
Anxiety Category	Extremely Severe	37 (09%)
	Normal	34 (09%)
	Mild	46 (12%)
Stress Category	Moderate	104 (26%)
	Severe	78 (20%)
	Extremely Severe	136 (34%)
Age Groups	Normal	154 (39%)
	Mild	89 (22%)
	Moderate	92 (23%)
Level of Satisfaction	Severe	50 (13%)
	Extremely Severe	13 (03%)
	<=20 Years	49 (12%)
Level of Satisfaction	>20 Years	349 (88%)
	Extremely Dissatisfied	12 (03%)
	Dissatisfied	37 (09%)
Level of Satisfaction	Slightly Dissatisfied	78 (20%)
	Neutral	22 (06%)
	Slightly Satisfied	146 (37%)
Level of Satisfaction	Satisfied	86 (22%)
	Extremely Satisfied	17 (04%)

Note: Table 1 shows each category's frequencies and percentages of depression, anxiety, stress, satisfaction & different parameter were overall prevalence of depression of the students 114 (29%) score normal, 126 (32%) score was moderate. In case of anxiety, 34% score extremely severe, 26% score moderate whereas only 20 % score severe; and lastly in case of stress 39 % score normal; 22 % mild average and 23% score moderate & 13% score severe & only 3% score extremely severe.

Table 2 The depression, anxiety, stress, satisfaction & mean age means and standard deviations (SD)

Demographics	Range	Mean ± SD	Median
Age (in Years)	35-15	22.24 ± 0.08	22
Stress	21-0	8.73 ± 0.19	8
Depression	21-0	7.22 ± 0.21	7
Anxiety	21-0	8.41 ± 0.19	8
Life Satisfaction	35-5	21.64 ± 0.30	22

Note: The depression, anxiety, stress, satisfaction & mean age means and standard deviations (SD) were 7.22 (SD=0.21), 8.41 (SD=0.19), 8.73 (SD=0.19), & 21.64 (SD=0.30) 22.24 (SD=0.08), respectively.

Table 3 Parameters

Parameters	Attributes	Department			P-value
		Engineering	Medical	Social Science	
Gender	Male	83 (21%)	66 (17%)	67 (17%)	0.05*
	Female	49 (12%)	67 (17%)	66 (17%)	
	Normal	29 (07%)	36 (09%)	49 (12%)	
Depression Category	Mild	25 (06%)	22 (06%)	28 (07%)	0.002*
	Moderate	37 (09%)	56 (14%)	33 (08%)	
	Severe	21 (05%)	13 (03%)	12 (03%)	
	Extremely Severe	20 (05%)	6 (02%)	11 (03%)	
Anxiety Category	Normal	8 (02%)	12 (03%)	14 (04%)	0.008*
	Mild	11 (03%)	14 (04%)	21 (05%)	
	Moderate	22 (06%)	43 (11%)	39 (10%)	
	Severe	33 (08%)	23 (06%)	22 (06%)	
Stress Category	Extremely Severe	58 (15%)	41 (10%)	37 (09%)	0.004*
	Normal	41 (10%)	46 (12%)	67 (17%)	
	Mild	32 (08%)	30 (08%)	27 (07%)	
	Moderate	33 (08%)	39 (10%)	20 (05%)	
Age Groups	Severe	17 (04%)	15 (04%)	18 (05%)	0.000*
	Extremely Severe	9 (02%)	3 (01%)	1 (00%)	
	<=20 Years	35 (09%)	14 (04%)	0 (00%)	
	>20 Years	97 (24%)	119 (30%)	133 (33%)	
Level Satisfaction	Extremely Dissatisfied	3 (01%)	2 (01%)	7 (02%)	0.003*
	Dissatisfied	6 (02%)	9 (02%)	22 (06%)	
	Slightly Dissatisfied	35 (09%)	20 (05%)	23 (06%)	
	Neutral	7 (02%)	8 (02%)	7 (02%)	
	Slightly Satisfied	48 (12%)	59 (15%)	39 (10%)	
	Satisfied	29 (07%)	32 (08%)	25 (06%)	
	Extremely Satisfied	4 (01%)	3 (01%)	10 (03%)	

Table 4 Parameters

Parameters	Attributes	Satisfaction		P-Value
		Dissatisfied Score <=25 n=294	Satisfied (Score >25)n=104	
Department	Engineering	99 (25%)	33 (08%)	0.961
	Medical	98 (25%)	35 (09%)	
	Social Science	98 (25%)	35 (09%)	
Gender	Male	162 (41%)	54 (14%)	0.663
	Female	133 (33%)	49 (12%)	
	Normal	62 (16%)	52 (13%)	
Depression Category	Mild	58 (15%)	17 (04%)	P<0.001*
	Moderate	105 (26%)	21 (05%)	
	Severe	40 (10%)	6 (02%)	
	Extremely Severe	30 (08%)	7 (02%)	
Anxiety Category	Normal	19 (05%)	15 (04%)	P<0.001*
	Mild	28 (07%)	18 (05%)	
	Moderate	76 (19%)	28 (07%)	
	Severe	60 (15%)	18 (05%)	
	Extremely Severe	112 (28%)	24 (06%)	

Table Continued...

Parameters	Attributes	Satisfaction		P-Value
		Dissatisfied Score <=25 n=294	Satisfied (Score >25)n=104	
Stress Category	Normal	101 (25%)	53 (13%)	0.045*
	Mild	72 (18%)	17 (04%)	
	Moderate	72 (18%)	20 (05%)	
	Severe	40 (10%)	10 (03%)	
	Extremely Severe	10 (03%)	3 (01%)	
Age Groups	<=20 Years	40 (10%)	9 (02%)	0.2
	>20 Years	255 (64%)	94 (24%)	
Level Satisfaction	Extremely Dissatisfied	12 (03%)	0 (00%)	0.2
	Dissatisfied	37 (09%)	0 (00%)	
	Slightly Dissatisfied	78 (20%)	0 (00%)	
	Neutral	22 (06%)	0 (00%)	
	Slightly Satisfied	146 (37%)	0 (00%)	
	Satisfied	0 (00%)	86 (22%)	
	Extremely Satisfied	0 (00%)	17 (04%)	

Table 5 Variables

Variables	Satisfied Mean \pm SD (N=103)	Unsatisfied Mean \pm SD(N=295)	Mean Difference (95% confidence interval)	p-Value
Stress	7.61 \pm 4.03	9.12 \pm 3.72	1.51	0.001*
Depression	5.495 \pm 4.17	7.82 \pm 4.09	2.32	0.001*
Anxiety	7.436 \pm 3.86	8.752 \pm 3.63	1.31	0.002*
Age in Years	22.07 \pm 1.25	22.29 \pm 1.74	0.21	0.252

Table 6 Parameter of the study

Parameter of the study	Engineering Median(IQR) (n=132)	Medical Median(IQR) (n=133)	Social Science Median(IQR)(n=133)	P-Value
Age in Years	21 (22-20)	23 (23-22)	23 (23-22)	0.000*
Anxiety	9 (12-7)	7 (10-7)	7 (10-5)	0.001*
Depression	8 (12-5)	7 (9-4)	6 (9-3)	0.001*
Stress	9 (12-7)	9 (6.5-11)	7 (5.5-10)	0.005
Life Satisfaction	22 (25.7-18)	23 (26-20)	21 (26-16)	0.135

Table 7 Spearman's Correlation

Spearman's Correlation	Stress	Depression	Anxiety	Satisfaction
Stress	1.000	0.537**	0.55**	-0.277**
Depression	-----	1.000	0.559**	-0.389**
Anxiety	-----	-----	1.000	-0.194**
Satisfaction	-----	-----	-----	1.000

**.Correlation is significant at the 0.01 level (2-tailed).

Table 8 Dependent variable satisfaction

Dependent variable satisfaction	Model β (95 % CI)	P-value
Depression	-0.38 (-0.69,-0.366)	0.000*
Anxiety	0.087 (-0.054,0.33)	0.16
Stress	-0.164 (-0.431,-0.071)	0.006*

Discussion

Mental health problem manifests with different level of anxiety, depression and stress which has significant effect on the individual's life satisfaction, social and interpersonal relationships. Moreover, the prevalence and seriousness of psychological problems have been found to be on the risk among university students. The study sought to expand the knowledge on psychological health and its relationship with life satisfaction among university students.

Results of present study indicated that students from all discipline (Medical, Engineering and Social sciences) have significant high

level of psychological distress. Considering the field of education, in engineering students depression was present 25%, anxiety 32% and stress 20%. In social science students, 21% depression, 30% anxiety and 17% stress. Medical students have 25% depression, 34% anxiety and 23% stress. Overall medical students experience relatively more psychological distress as compare to engineering and social science students. Similarly high prevalence (43.89) of depression and anxiety among medical students and another study found 60% to 70% psychiatric problems in medical students. It is due to fact that medical field has many challenges and high work pressure from long working hours and excessive stress resulting in psychological disturbance.¹⁴⁻¹⁵

Furthermore in current study life satisfaction has significant negative correlation with depression, anxiety and stress. These findings are consistent with previous researches where psychological distress found to be negatively associated with life satisfaction in university students and negative life events increased the risk of depression, anxiety and stress.¹⁶⁻¹⁷

Stress is a key factor during education students are at high risk of stress and it has negative consequences such as decreased attention, anxiety, depression and even suicide; study conducted in 32 nations revealed that dissatisfaction with life is associated with depression and suicide. Psychological distress is more common in young population, with more mental disorder occurring between age 15 to 24 and rate of suicide in young students was found high (49%) as compare to older adults. With the same line youth Sight's study suggested high frequency of anxiety, depression and stress; moreover females were more psychologically disturbed as compare to males. 30% to 57% university students all over the world found to have mental distress; having positive family history of mental illness, lack of social activities, lack of social support and poor interpersonal relationships were risk factors associated with mental distress.¹⁸⁻²¹

A survey of mental health problems of university students was carried out in Pakistan revealed that 31% of students fall in the "severe" mental health problems and 16% falls in "very severe" category. Another study indicated that stress, anxiety, eating problems and depression were common in university students and it had negative effect on their academic performance and life satisfaction. Furthermore research with students in Ankara found significant and negative correlation of depression, anxiety and stress with life satisfaction.²²⁻²⁵

The area of psychological health of students in Pakistan has received little attention. Few studies were done on this topic and mostly with medical students these studies concluded high prevalence of mental health problems in Pakistani students. The present attempted to fill in the gap by assessing the psychological distress and life satisfaction in cohort of students from different faculties of studies.

Conclusion

The results of our study suggest that student of Engineering; Medical & Social Science are at risk of depression, anxiety and stress. Their life satisfaction levels are similar to other students whereas their happiness levels are lower and that life satisfaction has highly significant negative correlation with like depression, anxiety & stress. The findings of this cross-sectional study may help identify, through psychosocial assessments, those who are at risk of development psychological distress as well as the factors associated with life satisfaction. The results may also serve to provide educators and psychotherapists with information which is useful in designing interventions to effectively deal with the problem of escalating psychological distress among university students.

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Conflicts of interest

Author declares there are no conflicts of interest.

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