

Study of depression in university students in Pakistan

Fatima Gul,¹ Wang Yuefen,² Inam Ullah,³ Shagufta Zada⁴

Abstract

Objective: To assess the prevalence of depression among university students in Pakistan.

Methods: The descriptive cross-sectional study was conducted from October 1, 2017, to February 25, 2018, at Agriculture University, Faisalabad, Gomal University, Dera Ismail Khan, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, University of Peshawar and Qurtuba University, Dera Ismail Khan, Pakistan. Data was collected using a pre-tested, structured questionnaire, and was analysed using SPSS 19.

Results: Of the 1159 subjects, 367 (31.6%) were males and 792 (68.3%) were females. The overall age range was 19-45 years. Of all the subjects, 986 (85%) had some degree of depression, while 173 (15%) were normal. Depression in females was significantly higher than males ($p < 0.05$). Depression also had a significant association with academic grades ($p < 0.001$).

Conclusions: Depression was found to be common among university students in Pakistani.

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Introduction

Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration. It is one of the emotional problems, and hopelessness and helplessness are its main causes. Commonly, depression is marked by sad feelings among college students which are known as a common mental illness.¹ Depression is a prevalent problem among college students across the world and it affects a students' ability to perform activities of daily life (ADLs). ADLs is a problematical disorder that causes numerous impairments in case of interpersonal, societal and professional functioning.² It is basically a deficiency of positive behaviour that exhibits as a range of symptoms like sleeping disorders, lack of attentiveness, anxiety, deficiency of self-care, and shortage of interest in routine experiences of life. Unattended depression generally affects daily life and persists for a long time.³

It has been estimated that 480 million people all over the world are affected from depression; half of the people also have anxiety.⁴ It has been estimated that more than 90% people in the community suffer from anxiety, depression and co-morbidities are common mental health problems.⁵ Previously mentioned parameters are used as a tool for a measurement of psychological illness in communal life, because in several studies cosmopolitan prevalence of

severe types of depression has been recorded.⁶ It is stated that two-third of the sufferers are from the developing nations and this proportion may rise due to factors like increase in population, urban development and strong associations between confrontational socio-environmental factors and prevalence of mental illness.^{7,8} There are a total of 151.2 million people worldwide affected by depression. Depression is considered to be the third greatest common cause of disability, and it is predicted that it would top the list by 2030. The cases of depression reported in man are 7-12%, while for women a higher ratio of depression (20-25%) is observed and these proportions are prevailing in all types of races, areas, education and financial or social statuses.⁹ It is one of the most common health problems for university students.¹⁰ Depressed students time and again feel sad, which leads to poor academic performance. According to various studies, depression, anxiety and stress has great impact on the performance of students¹¹ which may damage their educational achievement, lead to weakening in relationships, create problems in married life, and affect their jobs in the future.¹²⁻¹⁴ Depression is marked as a predominant issue among the developing countries compared to the developed countries.¹⁵ However, among the developing countries, Pakistan is leading the list by having the highest depression rate because of unemployment, gender discrimination, political uncertainty, insecurity, economic issues, disrupted social settings and stressful working conditions.^{16,17}

Rate of prevalence of depression, anxiety and stress amongst Turkish university students was found to be as high as 27.1%, 47.1% and 27.0%, respectively.¹⁸ This data is correlated with a number of different findings that

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^{1,2,4}Marxism School of Philosophy, Northeast Forestry University, Harbin, China, ³College of Wildlife Resources, Northeast Forestry University. Harbin, China.

Correspondence: Wang Yuefen. Email: Mlbwyf@126.com

showed increased rates of psychosomatic sickness in numerous university students worldwide.^{19,20}

In Pakistan, 6% population is affected by depression. A study carried out in the country reported that there is a depression-affected person among every four families that took part in the study.²¹ According to the World Health Organisation (WHO), the main victims of depression in Pakistani society are women. The main reasons included divorce, family conflicts, loss of parents in early childhood, stressful family events and lack of awareness about female rights.²² The current study was planned to assess the prevalence of depression among university students in Pakistan.

Subjects and Methods

The descriptive cross-sectional study was conducted from October 1, 2017, to February 25, 2018, at Agriculture University, Faisalabad, Gomal University, Dera Ismail Khan, PirMehr Ali Shah Arid Agriculture University, Rawalpindi, University of Peshawar and Qurtuba University, Dera Ismail Khan, Pakistan. Participants were students of either gender from bachelor to doctorate (Ph.D.) levels. The required permission for conducting the study was obtained from the concerned authorities.

After an extensive literature review on the effects of depression on university students, a questionnaire was designed. To evaluate the rate of depression, the depression screening test was applied as established by the psychiatrist Ivan Goldberg, M. D 1993⁵. The questionnaire had 18 items and the depression was measured on a 5-point Likert scale according to which, 0 = Not at all, 1 = Just a little, 2 = Somewhat, 3 = Moderately, 4 = Quite a lot, and 5 = Very much.

Data was collected during organised field surveys conducted by the researchers. On pre-determined dates, different universities were visited and the questionnaires were filled from randomly-selected participants. The responses were taken individually while keeping the identities of the students anonymous.

Data were analysed using SPSS19 in preliminary and validation phases. Cross-tabulation with depression level was done of all the variables, including age, body mass index (BMI), weight, height and cumulative grade point average (CGPA). Chi-square test was used to test the significance of the variables. Data was analysed through one-way analysis of variance (ANOVA) to test the mean difference among the variables. $P < 0.05$ was considered significant. Post Hoc test was also employed to validate the results.

Results

Of the 1159 subjects, 367(31.6%) were males and 792(68.3%) were females. The overall age range was 19-45

Table-1: Association of depression with various variables among the subjects.

Factor	Distribution	Depression Level	Factor (%)	P. Value
Smoking	Yes	Normal	7(14.0)	0.396
		Perhaps	16(32.0)	
		Mild	13(26.0)	
		Moderate	11(22.0)	
		Sever	3(6.0)	
	No	Normal	166(15.0)	
		Perhaps	422(38.1)	
		Mild	321(28.9)	
		Moderate	172(15.5)	
		Sever	28(2.5)	
Gender	Male	Normal	55(15.0)	0.846
		Perhaps	134(36.5)	
		Mild	107(29.2)	
		Moderate	63(17.2)	
		sever	8(2.2)	
	Female	Normal	118(14.9)	
		Perhaps	304(38.4)	
		Mild	227(28.7)	
		Moderate	120(15.2)	
		sever	23(2.9)	
Class	Bachelor	Normal	95(15.2)	0.419
		Perhaps	226(36.1)	
		Mild	177(28.3)	
		Moderate	114(18.2)	
		sever	14(2.2)	
	Master	Normal	77(15.0)	
		Perhaps	202(39.5)	
		Mild	151(29.5)	
		Moderate	66(12.9)	
		sever	16(3.1)	
	M.Phil.	Normal	0(0)	
		Perhaps	7(46.7)	
		Mild	4(26.7)	
		Moderate	3(20.0)	
		sever	1(6.7)	
Ph.D.	Normal	1(20.0)		
	Perhaps	3(60.0)		
	Mild	1(20.0)		
	Moderate	0(0)		
	sever	0(0)		
Class system	Annual	Normal	30(17.4)	0.068
		Perhaps	63(36.6)	
		Mild	45(26.2)	
		Moderate	34(19.8)	
		sever	0(0)	
	Semester	Normal	143(14.5)	
		Perhaps	374(38.0)	
		Mild	286(29.1)	
		Moderate	149(15.2)	
		Sever	31(3.2)	

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Grade				*0.001
A	Normal		145(16.4)	
	Perhaps		349(39.4)	
	Mild		246(27.8)	
	Moderate		122(13.8)	
	Sever		23(2.6)	
B	Normal		25(10.1)	
	Perhaps		82(33.2)	
	Mild		81(32.8)	
	Moderate		52(21.1)	
	Sever		7(2.8)	
C	Normal		2(12.5)	
	Perhaps		2(12.5)	
	Mild		3(18.8)	
	Moderate		8(50.0)	
	Sever		1(6.2)	

* Significant p value (<0.05), Sever: severc

Table-2: Cross-tabulation of various variables among the subjects.

Factors	Depression Level	Mean±S.E	P Value
Age	Normal	20.57±0.187	0.695
	Perhaps	20.73±.091	
	Mild	20.61±.017	
	Moderate	20.57±.151	
	Sever	21±.374	
Weight	Normal	56.95±.805	0.302
	Perhaps	55.20±.505	
	Mild	54.93±.538	
	Moderate	55.80±.801	
	Sever	55±2.521	
Height	Normal	5.37±.030	0.473
	Perhaps	5.34±.015	
	Mild	6.30±.693	
	Moderate	6.21±.871	
	Sever	5.31±.080	
BMI	Normal	21.04±.401	0.768
	Perhaps	20.57±.232	
	Mild	20.93±.330	
	Moderate	20.77±.409	
	Sever	21.51±1.487	
CGPA	Normal	18.50±2.266	0.868
	Perhaps	20.08±1.481	
	Mild	19.52±1.678	
	Moderate	21.82±2.336	
	Sever	17.94±5.460	

SE: Standard error.

BMI: Body mass index.

CGPA: Cumulative grade point average.

Sever: severc

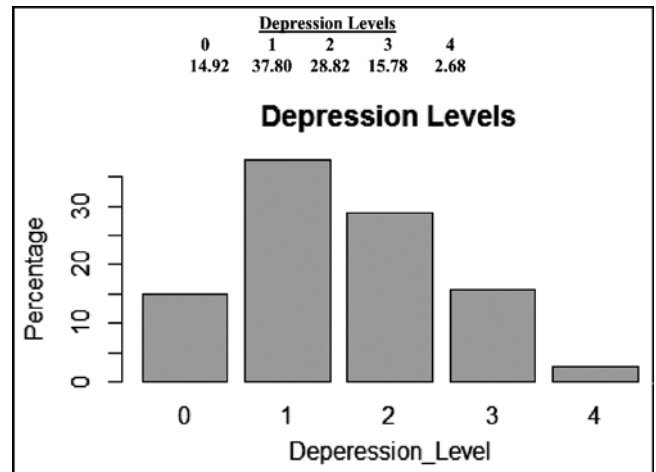


Figure: Distribution of depression among the respondents.

years. Of all the subjects, 986(85%) had some degree of depression, while 173(15%) were normal (Figure).

Depression was not significant in gender wise females and males (p=0.846). Depression also had a significant association with academic grades (p<0.001) (Table-1).

There was no significant difference in terms of depression's association with age, weight, height and BMI and depression levels (Table-2).

Discussion

The current study, to our knowledge, is the largest epidemiological study about depression among university students in Pakistan with an elaborate survey response rate. The study found a depression prevalence rate of 85%. In terms of the four levels of depression, 37.8% of those having depression were in the 'perhaps' category, 20.82% 'mild', 15.78% 'moderate' and 2.68% 'severe'. Realistic prevalence of depression among university students in various countries indicated wide variation. In a Spanish university, for instance, 9% had main type depression and 33% had slight depressive episodes.²³ In Japan, prevalence ranged from 21% for major to 33% for mild depressive symptoms.²⁴ A study among Turkish university students demonstrated 27.1%, 47.1% and 27% rates of depression, anxiety and stress, respectively¹⁸. In another study in Pakistan, prevalence of depression was estimated at 40.9%.²⁵

The current study found depression more prevalent in female students, which is a finding in contrast with literature.²⁶

The prevalence of depression among females was almost double compared to the males.²⁷ A study on two rural groups reported 66% and 72% depression among women

in contrast to 25% and 44% of men.²⁸ Similar results were demonstrated by another study in both rural and urban areas.²⁹ The findings of the present study are also in line with these previous studies.

Marriage, irrespective of gender, was another potential depressing factor found among the elite working population of Karachi as single individuals were least depressed compared to divorced and widowed. However, the prevalence of depression among married couples was very low.³⁰

A study has shown no gender difference in the rate of depression.³¹

A variety of factors can be responsible for the prevalence of depression in university students. In general, university life is a transient stage of life, with focus on academics and the consequent financial and social stresses can lead to depression. Lack of expertise in governmental policy-making setup regarding mental illness is a major cause of rising depression prevalence.³²

Also, smoking is taken as a causal factor for depression³³, but it is possible that smoking might be the coping mechanism for the students.

Prospective cohort, multi-centre studies are recommended to provide effective, generalisable information on depression and its effects on patient care.

Conclusion

The prevalence of depression was found to be considerably high among university students, especially among females. Academic grades also had an association with depression.

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References

1. Shumaila K, Qaisara P, Muhammad IY, Abid GC. Effects of depression on students' academic performance. *Sci int (Lahore)*. 2015; 27:1619-24.
2. Sadock B, Kaplan H. Kaplan & Sadock's synopsis of psychiatry: behavioral sciences/clinical psychiatry. Baltimore: Lippincott Williams and Wilkins, 2007.
3. NICE. Depression: the treatment and management of depression in adults, NICE clinical guideline 90. NICE clinical guideline 23. London: National Institute for Health and Clinical Excellence, 2009.
4. Broadhead WE, Blazer DO, George LK. Depression disability days and days lost from work, a perspective epidemiological survey. *JAMA* 1991; 5:281-85.
5. Goldberg D, Bridges K, Cook D. The Influence of Social Factors on Common Mental Disorders: Destabilization and Restitution. *Br J Psychiatry*. 1990; 156:704-13.
6. Goldberg D. Identifying psychiatric illness in general medical patients. *BMJ*. 1985; 291:161-62.
7. Holden C. Global survey examines impact of depression. *Science*. 2000; 288:39-40.
8. World Health Organization. The World Health Report 1999 - making a difference. Geneva, Switzerland: World Health Organization, 1999.
9. World health organization: Mental Health and Substance Abuse Facts and Figures Conquering Depression update. [Online] [Cited 2017 August 09]. Available from: URL: http://www.searo.who.int/en/Section1174/Section1199/Section1567/Section1826_8101.htm.
10. Gadit AA. Economic burden of depression in Pakistan. *J Pak Med Assoc*. 2004; 54:43-4.
11. Lyubomirsky S, Kasri F, Zehm K. Dysphoric rumination impairs concentration on academic tasks. *Cognitive Therapy Res*. 2003; 27:309-30.
12. Dusselier L, Dunn B, Wang Y, Shelley II MC, Whalen DF. Personal health, academic, and environmental predictors of stress for residence hall students. *J Am Coll Health*. 2005; 54:15-24.
13. Stewart-Brown S, Evans J, Patterson J, Petersen S, Doll H, Balding J, et al. The health of students in institutes of higher education: an important public health problem. *J Public Health Med*. 2000; 22:492-9.
14. Ali BS, Rahbar MH, Naeem S, Tareen AL, Gui A, Samad L, et al. Prevalence of and factors associated with anxiety and depression among women in a lower middle class semi-urban community of Karachi, Pakistan. *J Pak Med Assoc*. 2002; 52:513-7.
15. Eisenberg D, Golberstein E, Gollust S, Hefner J. Prevalence and correlates of depression, anxiety and suicidality among university students. *Am J Orthopsychiatry*. 2007; 77:534-42.
16. Areeba A, Maham K, Syed RS, Kaneez F, Sameer AT, Mehwish H, et al. Sociodemographic Pattern of Depression in Urban Settlement of Karachi, Pakistan. *J Clin Diagn Res*. 2015; 9:VC09-VC13.
17. Khalily MT. Violence, psychological trauma and possible acute post traumatic interventions in Pakistani society. *Aus J Disaster Trauma Studies*. 12011; 1:1-9.
18. Khalily MT. Developing an integrated approach to the mental health issues in Pakistan. *J Interprof Care*. 2011; 25:378-9.
19. Bayram N, Bilgel N. The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Soc Psychiatry Psychiatr Epidemiol*. 2008; 43:667-72.
20. Adewuya OA, Ola BA, Afolabi OO. Validity of the patient health questionnaire (PHQ-9) as a screening tool for depression amongst Nigerian university students. *J Affect Disord*. 2006; 96:89-93.
21. Wong TW, Gao Y, Tam WWS. Anxiety among university students during the SARS epidemic in Hong Kong. *Stress Health*. 2006; 23:31-5.
22. Vazquez FL, Blanco V. Prevalence of DSM-IV major depression among Spanish university students. *J Am Coll Health*. 2008; 57:165-71.
23. KawadaT, Katsumata M, Suzuki H, Shimizu T. Actigraphic predictors of the depressive state in students with no psychiatric disorders. *J Affect Disord*. 2007; 98:117-20.
24. Farwa R, Ayisha Q, Abdul MR, Afzal M. Prevalence of Depression, Anxiety and Stress (by DASS Scoring System) among Medical Students in Islamabad, Pakistan. *Br J Med Medic Res*. 2015; 8: 69-75.
25. Adewuya AO, Ola BA, Olutayo OA, Mapayi BM, Oginni OO. Depression amongst Nigerian university students. Prevalence and socio-demographic correlates. *Sos Psychiatry Psychiatr Epidemiol*. 2006; 41:674-8.
26. Grant K, Marsh P, Syniar G. Gender differences in rates of

- depression among undergraduate's measurement matters. *J Adolesc.* 2002; 25:613-7.
27. Mirza I. Risk factors, prevalence, and treatment of anxiety and depressive disorders in Pakistan: a systematic review. *BMJ.* 2004; 328:794.
 28. Niaz U. A cross-sectional study of the frequency of psychiatric morbidity in affluent urban population of Karachi. *Pak J Med Sci.* 2004; 20:337-44.
 29. Mumford DB. Stress and psychiatric disorder in urban Rawalpindi: Community survey. *Br J Psychiatry.* 2000; 177:557-62.
 30. Naqvi H. Depression in Pakistan: An epidemiological critique. *JPPS.* 2007; 4:1-10
 31. Bostanci M, Ozdel O, Oguzhanoglu NK, Ozdel L, Ergin A, Ergin N, et al. Depressive symptomatology among university students in Denizli, Turkey: prevalence and socio demographic correlates. *Croat Med J.* 2005; 46:96-100.
 32. Boden JM, Fergusson DM, Horwood LJ. Cigarette smoking and depression: tests of causal linkages using a longitudinal birth cohort. *British J Psychiat.* 2010; 196:440-6.
 33. Aisha Y, Sidra I, Waris Q. Depression and its associated risk factors in medical and surgical post graduate trainees at a teaching hospital: a cross sectional survey from a developing country. *J Pak Med Assoc.* 2011; 61:968-73.
 34. Qasim M. Mental health most neglected field in Pakistan. *The News* [online]. 9 October. Available from: URL: <http://www.thenews.com.pk/Todays-News-6-136490-Mental-health-most-neglected-field-in-Pakistan>
 35. Goldberg's Depression scale. [Online] [Cited 2019 August 24]. Available From: URL: <https://www.drloratherapy.com>.
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