

# Depression among University Students: A Cross Sectional Study

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## Abstract

Depression is a serious mental problem among university students. There is very limited information available about mental health of university students in Afghanistan. The main objective of this study was to determine the level of depression among university students. In addition the current study also aimed to investigate whether there is significant mean difference between depression and demographic variables. A cross sectional design was used in this study. The level of depression was assessed by using short version of Depression Anxiety Stress Scale (DASS-21), along with sociodemographic performance. To analyse the collected data, descriptive statistics and independent t-test, analysis of variance (ANOVA) were used using statistical package for social sciences (SPSS) version 21. A total of 531 (male = 203, female 528) undergraduate students participated in this study their age range was 18 to 22 years. The prevalence of mild, moderate and severe and extremely severe depression was 7.7%, 20.2%, 9.2% and 6.2% respectively. The overall prevalence of depression was found to be 43.3%. There was a significant mean difference between depression and gender, age, number of family members, place of living and parents' income. No mean difference was observed for field of study and marital status. Significant number of university students suffering from depression. A comprehensive prevention and intervention plan is required to this issue among university students.

**Keywords:** Depression, Students, University, Afghanistan.

## Introduction

Depression is one of most common mental health problems in all human societies (Kumar, Srivastava, Paswan & Dutta, 2012; Iyer & Khan, 2012) that creates variety of issues and disturb the normal and healthy life of individuals. Depression is one of the common psychiatric disorders that are characterized by lack of interest in formerly enjoyable pursuits, feelings of sadness, feelings of

worthlessness, sleep and appetite disturbances and at times thoughts of death and dying (Feliciano & Areán, 2007). Depression affects all people regardless of their race, religion, ethnicity, gender and so on, therefore, it can be found among all groups. University students are a special group that faces a lot of challenges and mental health issues among them represents an important and growing public health concern (Eisenberg, Eisenberg, Gollust, Golberstein, & Hefner, 2007). University is an important transient life stage, with special academic, financial, interpersonal pressures and as well as planning for their future careers. Undergoing these transitions may lead to an increased risk of depression (Sarokhani et al., 2013). Depression among university students is higher than general population (Ibrahim, Kelly, Adams & Glazebrook, 2013). It is also observed that this phenomenon seems to be increasing (Reavley & Jorm, 2010) and it has impact on quality of life and academic attainment of students (January et al. 2018). Depression is one of the emotional problems which is prevalent among students. It affects students' ability to perform the activities of daily life (Khurshid, Parveen, Yousuf, & Chaudhry, 2015). Depression has negative effect on student's success and depressed students displayed lower average point and spend less time on work (American Association of Suicidology as cited in Khurshid et al., 2015).

As per World Health Organisation WHO (2017a) estimation more than 300 million people of all ages suffering from depression. Almost half of them live in South-East Asia Region and Western Pacific Region (WHO, 2017b). Prevalence of depression is reported to vary in different countries among university students. Khodadadi, Anbari & Farahani (2018) investigated depression, anxiety and stress in students of Lorestan University of Medical Sciences in Iran and found that the prevalence of different degrees of depression was 17.4%. The prevalence of mild, moderate, severe and very severe depression was 10.2%, 5.7%, 1% and 0.5% respectively. Deb, Banu, Thomas, Vardhan, Rao & Khawaja (2016) studied the ascertain the level of depression among Indian university students and found that 37.7%, 13.1%, and 2.4% of the students were suffering from moderate, severe, and extremely severe depression. A study which was conducted among Turkish university students showed that 27.1%, had depression (Bayram & Bilgel, 2008). Many studies looked at gender, age, year of education, marital status and family income differences in relation to depression. A lot of studies reported that there is a statistically significant difference between gender and depression and with higher level in women than men (Eskandari et al., 2012; Salem, Awad Allah & Said, 2016; Wani, et al. 2016; Lamis & Lester, 2013). However, some

research found no statistically significant difference between gender and depression (Choi et al., 2015; Musumari et al., 2018; Khodadadi et al., 2018). In some studies it has been also noticed that there is a statistically significant difference between age and depression (Salem et al., 2016; Wahed & Hassan, 2017), year of education and depression (Othieno, Okoth, Peltzer, Pengpid, & Malla, 2014), place of residence and depression (Salem et al., 2016; Rab, Mamdou, Nasir, 2008) parents income and depression (Tuyen, Dat & Nhung, 2019), while some studies found no significant difference between marital status and depression (Eskandari et al., 2012; Tuyen et al., 2019). Furthermore, some studies reported no statistically significant difference between age and depression (Khodadadi et al., 2018), year of education and depression (Musumari et al., 2018), field of study and depression (Khodadadi et al., 2018), place of residence and income (Choi et al., 2015) and parents income and depression (Musumari et al., 2018).

The mental health situation in Afghanistan is characterized by a highly felt need and an extremely incapacitated mental health care system (Ventevogel, Azimi, Jalal & Kortmann, 2002). There is a dearth of quality information about mental health issues in Afghanistan (Sayed, 2011). Though accurate data on mental health disorders is not available in Afghanistan, according to Omidian & Miller (2006) depression, anxiety, and other types of mental health problems are very high among young Afghans and twice as high among women as men. According to WHO estimation more than one million Afghans suffer from depressive disorders (Raphelson, 2018). Cardozo et al, (2004) conducted a national survey and found that 44 percent of the respondents had experienced more than four traumatic events in the last ten years, 68 percent had some form of depression, 72 percent had anxiety and 42 percent had post-traumatic stress disorders (PTSD). There is very limited information available about mental health of university students in Afghanistan. Students, lecturers, and staff of Afghan universities are victims of trauma and are experiencing mental health issue (Babury & Hayward, 2013). The only study which has been published in a journal is conducted by Bakhtyari, Mutamed & Bena (2018) on Bamyán University (BU), Ghazni University (GU), and Parwan University (PU). The result showed that that 30% of the participants from all three universities had moderate depression, 20% had mild mood swings, 15% had border-line clinical depression, 12% had severe depression, and 3% had extreme depression respectively. It is worthwhile to be mentioned that due to lack of scientific research the intensity of the mental health problems is not clear. Therefore this study aimed to determine the level of depression among two public university students in

Kabul. Moreover it also aimed to identify the mean differences between depression and socio-demographic variables.

## Method

### *Design*

The present study descriptive cross- sectional survey design was used, because it was appropriate for answering research questions.

### *Participants*

All regular undergraduate university students who were enrolled only in similar departments of Kabul University and Shaeed Prof. Rabbani Education University were the target population of the current study. The total population of this study consisted of 9107 students and they belonged to different departments and batches of an undergraduate regular program of 2019 academic year. To determine the sample size of the participants Krejcie & Morgan (1970) formula was used.

$$S = \frac{X^2 NP(1 - P)}{d^2 (N - 1) + X^2 P (1 - P)}$$

Where: S= required sample size  $X^2$  = the table value of chi-square for 1 degree of freedom at the desired confidence level; N= the population size; P= the population proportion (assumed to be .50 since this would provide the maximum sample size); and d= the degree of accuracy expressed as proportion (.05). The formula showed that at least 368 individuals should be selected for the study. However to maximize confidence in generalizing the findings and to get a more accurate picture of the problem and reduce errors the researcher added 50% of the participants from the population to the already specified study sample by the mentioned formula and sample size became 552 participants (male = 208, female =344). To select representative universities, departments and students from different universities the multistage probability sampling technique was employed. At first, purposive sampling technique was used and two public universities, Moreover both universities had only 15 similar departments, therefore in the second stage, all 15 similar departments were selected for the study. At third stage, proportionate stratified random sampling was employed and students in each of the selected departments were selected proportionality into male and female categories. Furthermore, years of the study was also considered. Finally 552 questionnaires

distributed to participants using simple random sampling techniques. The researcher could collect 531 properly filled questionnaires. The rest 21 questionnaires were discarded for incompleteness. Due to this, the study analysis was done based on the response of 531 study participants.

### *Tools*

The questionnaire used in this study consisted of two parts: the first part dealt with socio demographic data. The second part constituted short form of Depression, Anxiety, and Stress Scale (DASS- 1). DASS 21 has 21 items that encompass 3 scales namely; depression, anxiety and depression. It is designed to measure the negative emotional states of depression, anxiety and stress with 7 items per scale (Henry & Crawford, 2005). Item 3, 5, 10, 13, 16, 17 and 21 measure depression. Frequency/severity ratings are made on a series of 4-point scales (Norton, 2007). Higher scores indicate more frequent symptomatology (Osman et al., 2012). The depression scale assesses symptoms such as dysphoria, hopelessness, self-worthlessness, and lack of interest (Lovibond & Lovibond, 1995). The psychometric properties of the DASS-21 have been studied in different countries with good results. The Cronbach's alpha of depression scale ranging between 0.70 and 0.87 (Henry & Crawford, 2005; Wang et al., 2016). It also has convergent and discriminant validity that reported in several studies (Bados et al., 2005; Norton, 2007). DASS 21 is translated in so many languages for cross cultural use. The Persian translation and validation of DASS 21 is done by Asghari, Saed, Dibajnia in 2008. The Persian version of DASS has internal consistency. Chronbach alpha for the total score of DASS 21 is 0.94 and for the depression scale is 0.85. The translated version also has good convergent and discriminant validity (Asghari, Saed, Dibajnia, 2008). For the present study a pilot study was conducted on 90 non sample students to check the reliability of the translated version of ASIQ. the entire reliability of DASS- 21 were found to be 0.93. Moreover for the reliability of DASS depression scale was found to be Depression 0.78. DASS items are scored on 0-3 scale scoring for depression, anxiety and stress, scale are derived by summing up the items in each scale. Scores obtained on DASS 21 should be multiplied by 2 get the final score. Table (1) represent the scoring method for DASS.

**Table 1. Lovibond scoring scale for DASS**

	Depression scale	Anxiety scale	Stress Scale
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Very severe	+28	+20	+34

Lovibond and Lovibond (1995)

### *Data analysis*

A descriptive analysis was done of the findings. SPSS 21 version was used to analyse the data. The findings were analysed through percentage and frequencies, to find out the prevalence of suicidal ideation. Independent sample t- test and One Way ANOVA were employed to see whether there was significant mean difference between suicidal ideation in terms of demographic variables.

## **Results**

### *Demographic Characteristics of respondents*

As can be seen from table 2, this study includes 38.2% male and 61.8% female respondents. More than 40% of the participants placed in the age group of 20-21 years and at least (25.8%) are laid in the age group of 22 years. Concerning the respondents marital status, a big number of them (81.0%) were single. According to place of residents the students are divided into four categories: own house more than the half of them 66.1%, relatives house less than all 5.5%, government hostel 12.6% and private hostel 15.8% of students.. Furthermore, the participants in this study (51.6%) live in families consisted of 7 to 10 family members and the percentage of students whose parents have 6000-15000 Afghani income represented 35.9.

### *Level of depression among participants of the present study*

Table 3 indicates that 28 (5.3%) of male and 79 (14.9%) of females students have moderate depression; 18 (3.4%) of male and 23 (4.3%) of female students have mild depression; 14 (2.6%) male and 35 (6.6%) female students have severe depression and 14 (2.6%) of male and 19 (3.6%) of female students have extremely severe depression. In addition, this table also shows that higher number 301 (56.7%) of students have no depression; generally, 107 (20.2%) students have moderate depression; 49 (9.2%) students have severe depression; 41 (7.7%) students have mild depression and only 33 (6.2%) of students have extremely severe depression.

**Table 2. Demographic Characteristics of respondents**

Variable	Category	Frequency	Percent	Total
Sex	Male	203	38.2	531
	Female	328	61.8	
Age	18-19	172	32.4	531
	20-21	222	41.8	
	22	137	25.8	
Marital status	Single	430	81.0	531
	Engaged	50	9.4	
	Married	51	9.6	
Field of study	Social science	363	68.4	531
	Natural science	168	31.6	
Academic years	First	162	30.5	531
	Second	122	23.0	
	Third	121	22.8	
	Forth	126	23.7	
Place of living	Own house	351	66.1	531
	Relatives house	29	5.5	
	Government hostel	67	12.6	
	Private hostel	84	15.8	
Number of family members	3-6	161	30.3	531
	7-10	274	51.6	
	11-14	68	12.8	
	15-Above	28	5.3	
Parents income	6000-15000 AFN	184	35.9	512
	16000-25000 AFN	187	36.5	
	26000-35000 AFN	86	16.8	
	36000 – above AFN	55	10.7	

\*\*p&lt;0.01

**Table 3. Level of depression among university students**

Categories	Sex				Total	
	Male		Female		N	%
	N	%	N	%	N	%
Normal	129	24.3	172	32.4	301	56.7
Mild	18	3.4	23	4.3	41	7.7
Moderate	28	5.3	79	14.9	107	20.2
Severe	14	2.6	35	6.6	49	9.2
Extremely severe	14	2.6	19	3.6	33	6.2
N= 531						

**Effect of demographic variables on the students' experience of depression**

Assessing the effect of demographic variables in relation to experience of depression of the students is another aim of the present study. Accordingly, the results of these variables are presented in tables 4 and 5.

**Table 4. Effect of sex, university and field of study in experience of depression**

Variable	Category	N	M	SD	t	p-value
Sex	Male	203	9.64	9.30	-2.178	0.030
	Female	328	11.39	8.78		
Field of Study	Social Science	363	10.91	9.01	0.455	0.649
	Natural Science	168	10.53	8.93		

The results of t- test displayed in table (4) disclosed that there was a statistically significant difference in the scores for male (M=9.64, SD=9.30) and female (M= 11.39, SD=8.78); [t (529) = -2.178, p = 0.030]. These results suggest that gender has an effect on depression. Moreover the mean score for female students was higher than male students. Based on the above results it noticed that more female students are depressed than male students. This implies that females were highly vulnerable than male students for depression. Furthermore, as can be confirmed from Table 4 there was no statistically significant difference in the scores for social sciences (M=10.92, SD=9.01) and natural sciences (M= 10.53, SD=8.93); [t (529) = 0.455, p = 0.649]. This result implies that students of social sciences and natural sciences do not significantly differ on depression and both social sciences and natural science students experience depression in same manner.

The results of ANOVA displayed in table (5) disclosed that there was a statistically significant effect of age range on depression at the  $p < .05$  level for the three conditions [ $F(2, 528) = 7.183, p = 0.001$ ]. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the 18-19 years old condition (M = 12.83, SD = 8.85) was significantly different than the 20- 21years old condition (M = 9.45, SD = 8.54) and 22 years old condition (M = 10.42, SD = 9.42). However, the 20-21 years old condition (M = 9.45, SD = 8.54) did not significantly differ from the 22 years old conditions.

As it is disclosed in table 5, statistical significant mean differences were not observed in experiencing depression among respondents' marital status [ $F(2, 528) = .051, p > 0.05$ ]. Furthermore, students' place of living had significant effect on students' depression [ $F(3, 527) = 6.344, (p < 0.05)$ ]. Furthermore, students' place of living had significant effect on students' depression [ $F(3, 527) = 7.44, (p < 0.05)$ ]. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the private hostel condition ( $M = 14.64, SD = 8.96$ ) was significantly different than the own house condition ( $M = 9.69, SD = 8.42$ ), but it was not significant for the relatives house condition ( $M = 10.62, SD = 9.15$ ), and government hostel condition ( $M = 11.82, SD = 10.46$ ). Moreover, the government hostel condition did not significantly differ from the own house and relatives house conditions.

The results of ANOVA displayed in table 5 disclosed that there was a statistically significant effect of number of family member on depression at the  $p < .05$  level for four conditions [ $F(3, 527) = 3.404, p = 0.018$ ]. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the 7-10 family member condition ( $M = 11.73, SD = 9.49$ ) was significantly different than the 3-6 family member condition ( $M = 8.94, SD = 8.09$ ). However, the 11-14 member condition ( $M = 11.29, SD = 7.80$ ) did not significantly differ from the 7-10 member and 15- above conditions.

A statistical significant mean difference was observed on the year of study in experiencing depression [ $F(3, 527) = 2.901, p < 0.05$ ]. Post hoc comparisons using the Tukey HSD test indicated that first year students reported significant mean difference on depression as compared to fourth year students ( $p < 0.05$ ). On the other hand second year students had no statistically mean difference on depression with first years ( $p > 0.05$ ), third year ( $p > 0.05$ ) and fourth year students ( $p > 0.05$ ). The mean depression score of first years students ( $M = 11.94, SD = 8.91$ ) was higher than the fourth year students ( $M = 9.28, SD = 8.27$ ). According to this results first year students are more at risk of depression than 4<sup>th</sup> year students.

**Table 5. Effect of age, marital status, place of living, number of family members, year of study and parents income in experience of depression**

Variable	Category	N	M	SD	F	p-value
Age	18-19	172	12.83	8.85	7.183	.001
	20-21	222	9.45	8.54		
	22	137	10.42	9.42		
Marital Status	Single	51	10.76	8.97	.051	.950
	Engaged	430	11.18	8.47		
	Married	50	10.70	9.74		
Place of living	Own house	351	9.69	8.42	7.44	.000
	Relatives house	29	10.62	9.15		
	Government hostel	67	11.82	10.46		
	Private hostel	29	14.64	8.96		
Number of family members	3-6	161	8.94	8.09	3.404	.018
	7-10	274	11.73	8.49		
	11-14	68	11.29	7.80		
	15-above	28	11.03	10.12		
Year of study	First	162	11.94	8.91	2.901	.034
	Second	122	11.70	9.07		
	Third	121	9.91	9.47		
	Forth	126	9.28	8.27		
Parents income	6000-15000 AFN	184	12.63	9.68	3.795	.010
	16000-25000 AFN	187	10.24	8.68		
	26000-35000 AFN	86	10.00	8.36		
	36000- Above AFN	55	8.79	8.62		

The results of ANOVA displayed in table 5 disclosed that there was a statistically significant effect of parent's monthly income on depression at the  $p < .05$  level for four conditions [ $F(3, 508) = 3.795, P = .010$ ]. Taken together, these results suggest that parents income do have an effect on depression. Post hoc comparisons using the Tukey HSD test indicated that the mean score for the 6000- 15000 Afghani rupees ( $M = 12.63, SD = 9.68$ ) was significantly different than the 36000- above Afghani rupees condition ( $M = 8.89, SD = 8.62$ ). However, the 16000- 25000 Afghani rupees condition ( $M = 10.24, SD = 8.68$ ) did not significantly differ from the 6000- 15000 Afghani rupees, 26000- 35000 Afghani and 36000 Afghani and above.

## Discussion

The purpose of this study was assessing the level of depression among university students and to identify the mean differences between depression and socio-demographic variables i.e. sex, age, field of study, marital status, academic year, and place of residence and monthly income of parents.

Analysis of the data indicated that the prevalence of mild, moderate, severe and extremely severe depression was 7.7%, 20.2%, 9.2% and 6.2% respectively. The overall prevalence of depression was found to be 43.3%. This finding showed that a significant number of students experience depression. Prevalence of depression in university students shows wide variation in many countries, it means that living in different places of the world, having unequal living level, culture, ethics, behaviour, income, relationships, etc. may seriously influence on experiencing depression by the students. A study done by Khodadadi et al., (2018), the students of Lorestan University in Iran showed that 17.4% of students had depression. In a study in Pakistan, a very high prevalence of depression 40.9% was estimated (Rizvi, Qureshi, Rajput & Afzal, 2015). Mutalik, Moni, Choudhari & Bhogale (2016) found the 83.6% of students in a govt. degree college in Bagalkot India had symptoms of depression. Singh, Goel, Sharma & Bakshi (2017) found that 59.2% of students in Punjab university, India had depression. Hishan et al. (2018) found that the prevalence of depression among university students in Johar bahru, Malaysia was 62.2%. A study that was conducted among Turkish university students in 2008 demonstrated that 27.1% of students had depression (Bayram & Bilgel, 2008). The difference in level of depression among university students around the world could be due to political differences, economical cultural differences, use of different tools and non-representative sample.

The researchers found a significant difference in depressive symptoms among male and female students and female students reported higher level of depression than male students. This showed that gender contributes to students' depression. It is because Afghanistan is patriarchal society, females are expected to do all house chores. So beside the academic tasks the burden of work at home puts more pressure on them and makes them vulnerable. This finding is supported by findings of many pervious studies (Eskanadrieh et al., 2012; Salem et al., 2016; Wani et al., 2016). However results of studies are contrary to our results (Bayram & Bilgel, 2008, Argyropoulos et al., 2017; Shortt, 2018).

The result of current study revealed that statistical significant mean differences were not observed in experiencing depression connecting to the field of study. This indicates that the contents of the course do not have effect on students. Studying in same educational environment and having equal facilities could a reason for the insignificant difference between field of study and depression. One of the more important reason for this can be the interest of students in Afghanistan at least to have higher education, because it is difficult to join a university, public or private, so if they are enrolling in one of the universities, it is a good luck for them. Another reason could be this that after graduation, they may not have any or less choice to join job easily in their field of study, so they may find a very different job from the field of their study, it shows that in Afghanistan still the negative approaches, corruption and other negative issues are influencing the implementation choices to the jobs as it is different in other countries because they implement the graduates on the basis of their professional knowledge and this is worth for them. This unpleasant behaviour must be changed for the benefit of the students, families and the country itself in Afghanistan.

It should be pointed out that these findings were in line to the findings of Khodadadi et al., (2018). They also found that there is no connection between suicidal ideation and field of study. However, findings of some studies are contrary to the findings of the current study (Eskanadrieh et al., 2012; Bayram & Bilgel, 2008), as they found significant difference between field of study and depression.

ANOVA test results revealed that students' marital status had no effect on depression. It is because having more family members helping and supporting individuals to share their concerns and getting more advises, transferring experience and ideas, and even receiving money from each other to find better ways and chances solving their problems connecting to marriage. So they are hopeful that more people in the

family can do better than less numbers. Findings of this study strengthen by results of previous studies (Wahed & Hassan, 2017; Salem et al., 2016; Khodadadi et al., 2018).

The current study looked at age, year of study and place of living difference in terms of depression. The result of ANOVA test showed that there was a statistically significant difference among age, year of study and place of living connecting to depression. In details, 18 to 19 years old students, first year students and students who live in private hostels experienced higher depression and were more at risk of depression (Shortt, 2018). These results are similar to the findings of other studies (Bayram & Bilgel, 2008; Rab et al., 2008; Kuruppuarachchi, Kuruppuarachchi, Wijerathne & Williams, 2002; Ramteke & Ansari, 2016; Eskinadrieh et al., 2012). Furthermore, this study found that there was a significant effect of number of family member on depression. According to the findings of current study, students who have more family members are more at risk of depression than students who have less family members. As the results of this study also show majority of parents have low income, so if the number of family members is less, most needs of the family members may be fulfilled and if number of family is more even the basic needs of the members may not be fulfilled properly so they have to compromise a lot which leads them to experience more stress, anxiety and depression. Fewer studies have explored the effect of number of family members on depression. Khodadadi et al., (2018) finding is contrary to the findings of the current study. They found no significant difference between depression and number of family members.

Moreover, the result of present study depicted that the mean score of depression for students whose parents' monthly income was between 6000-15000 Afghani was higher than students whose parents monthly income was 36000 Afghani and above, 26000-35000 Afghani and 16000- 25000 Afghani. The mean difference was also statistically significant. This means that students whose parents have low income are more at risk of depression than students whose parents have higher income. Parents with low income may find it difficult to meet all daily needs of their family members and this issue becomes more serious when their child/children go to university. Beside the transportation fee they also have to pay a lot of money for their stationery and books and in recent years needs for computer, mobile phone, hostel etc.. This result was consistent with findings of previous studies (Islam et al., 2018; Tuyen et al., 2019; Bayram & Bilgel 2008).

## Conclusion

Depression is a serious mental problem among university students. The findings of this study indicated that a significant number of students are suffering from depression. The current study also found that females, students aged between 18 to 19 years, first year students, students who live in private hostel, students with more number of family members and poor income are more at risk of depression. Depression is significant mental health concern in university students. It can affect students' educational, personal, and social life. Therefore, it is important that this problem should be addressed at university. To do so, a designed and strategic intervention and prevention program is required in which beside highlighting the responsibility of mental health professionals/counselling centres, the responsibility of university lecturers and administrative staff should also be highlighted. Future researches not only need to find ways for improving our understandings of causes and consequences of depression among university students, should also focus on attitude on awareness and attitude of students toward mental issues and help seeking.

## References

- Ahmad, N., Cheong, S. M., Ibrahim, N., & Rosman, A. (2014). Suicidal ideation among Malaysian adolescents. *Asia Pacific Journal of Public Health*, 26(5\_suppl), 63S-69S. <https://doi.org/10.1177/1010539514540746>
- Argyropoulos, K., Giourou, E., Dimopoulou, E., Argyropoulou, A., Gourzis, P., Jelastopulu, J. (2017). Anxiety and depression among Greek undergraduate students in the University of Patras. *Global Journal of Medicine and Public Health (GJMEDPH)*, 6(5), 1-9.
- Asghari, A., Saed, F., & Dibajnia, P. (2008). Psychometric properties of the depression anxiety stress Scales-21 (DASS-21) in a non-clinical Iranian sample. *Int J psychol*, 2(2), 82-102.
- Babury, M. O., & Hayward, F. M. (2013). A Lifetime of Trauma: Mental Health Challenges for Higher Education in a Conflict Environment in Afghanistan. *Education Policy Analysis Archives*, 21(68), n68.
- Bados, A., Solanas, A., & Andrés, R. (2005). Psychometric properties of the Spanish version of depression, anxiety and stress scales (DASS). *Psicothema*, 17(4), 679-683

- Bakhtyari, M. B., Mutamed, M. & Bena, A. (2018). Prevalence of depression among Afghan university students. *International Research Journal of Social Sciences*, 7(1),16-21.
- Bayram, N., & Bilgel, N. (2008). The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology*, 43(8), 667-672. <https://doi.org/10.1007/s00127-008-0345-x>
- Cardozo, B. L., Bilukha, O. O., Crawford, C. A. G., Shaikh, I., Wolfe, M. I., Gerber, M. L., & Anderson, M. (2004). Mental health, social functioning, and disability in post-war Afghanistan. *Jama*, 292(5), 575-584. doi:10.1001/jama.292.5.575
- Choi, J. H., Ju, S., Kim, K. S., Kim, M., Kim, H. J., & Yu, M. (2015). A study on Korean university students' depression and anxiety. *Indian Journal of Science and Technology*, 8(S8), 1-9. doi: [10.17485/ijst/2015/v8iS8/64705](https://doi.org/10.17485/ijst/2015/v8iS8/64705)
- Deb, S., Banu, P. R., Thomas, S., Vardhan, R. V., Rao, P. T., & Khawaja, N. (2016). Depression among Indian university students and its association with perceived university academic environment, living arrangements and personal issues. *Asian Journal of Psychiatry*, 23, 108-117. <https://doi.org/10.1016/j.ajp.2016.07.010>
- Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *American Journal of Orthopsychiatry*. 77(4), 534-542. <https://doi.org/10.1037/0002-9432.77.4.534>
- Eskanadrieh, S., Liu, Y., Yamashina, H., Kono, K., Arai, A., Lee, R. B., & Tamashiro, H. (2012). Depressive symptoms among international university students in northern Japan: Prevalence and associated factors. *Kokusai Hoken Iryo (Journal of International Health)*, 27(2), 165-170. <https://doi.org/10.11197/jaih.27.165>
- Feliciano, L. & Areán, P. A. (2007). *Mood Disorders: Depressive Disorders, Adult Psychopathology and Diagnosis*. Editors: Michel Hersen, Samuel M. Turner & Deborah C. Beidel. Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 44(2), 227-239. <https://doi.org/10.1348/014466505X29657>
- Hishan, S. S., Jaiprakash, H., Ramakrishnan, S., Mohanraj, J., Shanker, J., & Keong, L. B. (2018). Prevalence and socio-demographic association of depression, anxiety and stress among University students. *International Journal of Engineering & Technology* 7(2.29), 688-691  
<https://doi.org/10.14419/ijet.v7i2.29.13998>
- Ibrahim, A. K., Kelly, S. J., & Glazebrook, C. (2012). Reliability of a shortened version of the Zagazig Depression Scale and prevalence of depression in an Egyptian university student sample. *Comprehensive Psychiatry*, 53(5), 638-647. <https://doi.org/10.1016/j.comppsy.2011.06.007>
- Islam, S., Akter, R., Sikder, T., & Griffiths, M. D. (2020). Prevalence and factors associated with depression and anxiety among first-year university students in Bangladesh: a cross-sectional study. *International Journal of Mental Health and Addiction*, 1-14. <https://doi.org/10.1007/s11469-020-00242-y>
- Iyer, K. & Khan, Z.A. (2012). Depression – A Review. *Research Journal of Recent Sciences*, 1(4), 79-87.
- January, J., Madhombiro, M., Chipamaunga, S., Ray, S., Chingono, A., & Abas, M. (2018). Prevalence of depression and anxiety among undergraduate university students in low-and middle-income countries: a systematic review protocol. *Systematic Reviews*, 7(1), 57. <https://doi.org/10.1186/s13643-018-0723-8>
- Kawada, T., Katsumata, M., Suzuki, H., & Shimizu, T. (2007). Actigraphic predictors of the depressive state in students with no psychiatric disorders. *Journal of Affective Disorders*, 98(1-2), 117-120. <https://doi.org/10.1016/j.jad.2006.07.004>
- Khodadadi, B., Anbari, K.H., & Farahani, M. S. (2018). Evaluation of anxiety, stress and depression among students of Lorestan University of Medical Sciences, 2016, *J Res Med Dent Sci*, 6(1), 285-294, doi: 10.24896/jrmds.20186147

- Khurshid, S., Parveen, Q., Yousuf, M. I. & Chaudhry, A.G. (2015). Effects of depression on students' academic performance. *Sci.int.(Lahore)*,27(2),1619-1624 (Special issue).
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Kumar, K. S., Srivastava, S., Paswan, S., & Dutta, A. S. (2012). Depression-symptoms, causes, medications and therapies. *The Pharma Innovation*, 1(3, Part A), 37- 51.
- Kurupparachchi, K. A. J. M., Somarathne, S., Madurapperuma, B. D., & Talagala, I. M. M. (2012). Factors associated with psychological distress among B. Sc. Undergraduates of the Open University of Sri Lanka.
- Lamis, D. A., & Lester, D. (2013). Gender differences in risk and protective factors for suicidal ideation among college students. *Journal of College Student Psychotherapy*, 27(1), 62-77. <https://doi.org/10.1080/87568225.2013.739035>
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the depression anxiety stress scales*. 2<sup>nd</sup>. Ed. Sydney: Psychology Foundation of Australia.
- Musumari, P. M., Tangmunkongvorakul, A., Srithanaviboonchai, K., Techasrivichien, T., Sugimoto, S. P., Ono-Kihara, M., & Kihara, M. (2018). Grit is associated with lower level of depression and anxiety among university students in Chiang Mai, Thailand: A cross-sectional study. *PloS One*, 13(12). <https://doi.org/10.1371/journal.pone.0209121>
- Mutalik, N. R., Moni, S., Choudhari, S. B., & Bhogale, G. S. (2016). Depression, Anxiety, Stress among College Students in Bagalkot: A College Based Study. *International Journal of Indian Psychology*, 3(4), 179-186.
- Norton, P. J. (2007). Depression anxiety and stress scales (DASS-21): Psychometric analysis across four racial groups. *Anxiety, stress, and coping*, 20(3), 253-265.
- Othieno, C. J., Okoth, R. O., Peltzer, K., Pengpid, S., & Malla, L. O. (2014). Depression among university students in Kenya: Prevalence and sociodemographic correlates. *Journal of Affective Disorders*, 165, 120-125. <https://doi.org/10.1016/j.jad.2014.04.070>

- Rab, F., Mamdou, R. & Nasir, S. (2008). Rates of depression and anxiety among female medical students in Pakistan. *EMHJ - Eastern Mediterranean Health Journal*, 14 (1), 126-133, 2008  
<https://apps.who.int/iris/handle/10665/117416>
- Ramteke, I. V., & Ansari, J. (2016). Stress, and anxiety among first year and final year engineering students. *International Journal of Advanced research in Education & technology*, 3(4),17-21
- Raphelson, S. (2018). *Afghanistan's lone psychiatric hospital reveals mental health crisis fuelled by war*. Retrieved from <https://www.npr.org/2018/02/14/585494599/afghanistans-lone-psychiatric-hospital-reveals-mental-health-crisis-fueled-by-wa>
- Reavley, N., & Jorm, A. F. (2010). Prevention and early intervention to improve mental health in higher education students: a review. *Early Intervention in Psychiatry*, 4(2), 132-142. doi:10.1111/j.1751-7893.2010.00167.x
- Rizvi, F., Qureshi, A., Rajput, A. M., & Afzal, M. (2015). Prevalence of depression, anxiety and stress (by DASS scoring system) among medical students in Islamabad, Pakistan. *Journal of Advances in Medicine and Medical Research*, 69-75..
- Salem, G. M., Awad Allah, M. B. A., & Said, R. M. (2016). Prevalence and predictors of depression, anxiety and stress among Zagazig University students. *Med J Cairo Univ*, 84(2), 325-334.
- Sarokhani, D., Delpisheh, A., Veisani, Y., Sarokhani, M. T., Manesh, R. E., & Sayehmiri, K. (2013). Prevalence of depression among university students: a systematic review and meta-analysis study. *Depression Research and Treatment*, 2013. <https://doi.org/10.1155/2013/373857>
- Shortt, T. (2018). Alcohol consumption, depression, anxiety and stress levels amongst university students. Dublin Business School, School of Arts, Dublin. Retrieved from [https://esource.dbs.ie/bitstream/handle/10788/3485/ba\\_shortt\\_t\\_2018.pdf?sequence=1&isAllowed=y](https://esource.dbs.ie/bitstream/handle/10788/3485/ba_shortt_t_2018.pdf?sequence=1&isAllowed=y)
- Singh, M., Goel, N. K., Sharma, M. K., & Bakshi, R. K. (2017). Prevalence of depression, anxiety and stress among students of Punjab University, Chandigarh. *National Journal of Community Medicine*, 86(11), 666-671.

- Tomoda, A., Mori, K., Kimura, M., Takahashi, T., & Kitamura, T. (2000). One-year prevalence and incidence of depression among first-year university students in Japan: A preliminary study. *Psychiatry and clinical neurosciences*, 54(5), 583-588. <https://doi.org/10.1046/j.1440-1819.2000.00757.x>
- Tuyen, N. T. H., Dat, T. Q., & Nhung, H. T. H. (2019). Prevalence of depressive symptoms and its related factors among students at Tra Vinh University, Vietnam in 2018. *AIMS Public Health*, 6(3), 307-319. doi: 10.3934/publichealth.2019.3.307
- Ventevogel, P., & Kortmann, F. (2004). Developing basic mental health modules for health care workers in Afghanistan. *Intervention*, 2(1), 43-54.
- Wahed, W. Y. A., & Hassan, S. K. (2017). Prevalence and associated factors of stress, anxiety and depression among medical Fayoum University students. *Alexandria Journal of Medicine*, 53(1), 77-84.
- Wang, Y. H., Shi, Z. T., & Luo, Q. Y. (2017). Association of depressive symptoms and suicidal ideation among university students in China: A systematic review and meta-analysis. *Medicine*, 96(13). doi: 10.1097/MD.00000000000006476
- Wani, M. A., Sankar, R., Binshad, M., Nargees, S., & Anicham, J. (2016). A Study of Suicidal Tendency among Annamalai University Students. *The International Journal of Indian Psychology*, Volume 3, Issue 3, No. 1, 15-20.
- World Health Organization. (2017a). *Depression and other common mental disorders: global health estimates*. Geneva: Author.
- World Health Organization. (2017b). Depression in India. Retrieved from [http://www.searo.who.int/india/depression\\_in\\_india.pdf](http://www.searo.who.int/india/depression_in_india.pdf)