

# Prevalence of Depression, Anxiety and Stress Disorders among Nursing College Students in Mosul University / Iraq

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**Abstract:** *High levels of depression, anxiety, and stress (DAS) can adversely influence the academic and clinical performance of nursing students, psychological well-being, and physical health. Large numbers of studies have recognized the factors that related by depression, anxiety, and stress. The purpose of the study is to determine the prevalence of depression, anxiety, and stress and their levels among undergraduate nursing students in the Mosul University /Mosul/ Iraq. A confidential questionnaire was done in this cross-sectional survey study which is carried out using a depression anxiety stress scale DASS reported by Lovibond and Lovibond (1995a) carried out from 22<sup>th</sup> of January- 20<sup>th</sup> of March 2020. Among 800 nursing students analyzed, the age distribution shows that (83%) and (67%) respectively in the third class in morning and evening courses are between age group 22-25 years, 84% and 87% are female in the third class with significant p values. About the prevalence of moderate stress (26%) of third and 25% of second class respectively of morning and evening courses and mild anxiety 26% and 28% respectively of morning and evening courses. Finally, moderate depression was seen among 24% of the fourth class of morning and 35% of second class evening courses. The DAS and their levels among learner nursing students in the Mosul University, Mosul, Iraq had a high prevalence in comparison with others. Prospect research can localize on the need to set up social and mental health screening and hold up services, such as psychotherapy centers in nursing colleges.*

**Keywords:** *depression, anxiety, stress, undergraduate nursing students.*

## 1. INTRODUCTION:

Extensive journalism exists on the concepts of DAS among colleges and universities students including worldwide nursing students. Nursing learning and training are highly demanding and, as a result, preceding research shows a high prevalence rate of DAS among nursing students [1]. The various stressors recognized include: a hospital setting, work with

sick and dying patients, association with peers and faculty, examinations, amplified assignments and workload, and require leisure time [1,2].

Social hold up and coping protect individuals from depression and stress [2,3,4,5]. College students experience high levels of DAS compared with the general population [1]. The lifetime prevalence of DAS in young adults and adolescents ranges from 5% to 70% worldwide [1]. Anxiety is the majority of the mental health problems reported by academy students. Most learner students transitioning to adulthood run into stressful situations that may be accountable for a high rate of DAS among them [1,6].

Turner 2007 distinguished that around three-quarters of learner students practice DAS [7]. The results from Labrague et al. 2017 study have detected moderate levels of stress among students [8]. The prevalence of depression 23.8% to 69.2%, anxiety 50 to 56.59% and stress reaching as high as 80.5% indicates the severity of the symptoms [4,5,9]. In latest years, a study in Nepal was conducted to scan the frequency of depression among nursing students was showed that 40% of students had depression categorized: mild 27%, moderate 9%, and severe 1.4% [1]. Likewise, Sigdel and Pokharel (2015) resulted that 69.2% of nursing students had depression. Among them, 40% mild depression, 11.7% moderate depression, and 17% severe depression. A further study in Nepal reports 77.5% of nursing students had moderate stress [1,10]. Ratanasiripong et. al 2015 argued that in low or middle socioeconomic countries, students may practice high levels of DAS due to the imperfect possessions for psychotherapy [11].

In Mosul City, no nationwide data are existing on the prevalence of DAS particularly among nursing students with limited psychotherapy services to students. The study aims to identify the prevalence of DAS in undergraduate nursing student along all grades of the morning and evening courses and to determine the frequency of different levels of DAS symptoms.

## **2. MATERIALS AND METHOD:**

In order to achieve the objectives of the study the investigator use cross section study design to determine the prevalence of DAS and their association with sociodemographic among nursing student in Mosul university. The study done from 22<sup>th</sup> of January to 20<sup>th</sup> of March 2020. There were a total of 800 students in the first, second, third, and final year. The chosen student were included by random sampling technique in which any student may be included in morning or evening courses.

The questionnaire is consisting of two parts, information related to socio-demographic data of the sample and information related to psychological problems of students. The Depression Anxiety Stress Scales (DASS) (Lovibond and Lovibond (1995a) [12]. An oral consent was taking from participated students at the time of data collection with no exclusion criteria. 800 students out of 850 were distributing the self-administered questionnaire (response rate 94.1%). Then socio-demographic and educational variables were considered.

In addition to that all the information needed to evaluate the different levels of DAS were collected through the use of DASS-21 English version which is comprised of three subscales i.e, DASS-D for Depression, DASS-A for Anxiety DASS-S for Stress, measuring the symptoms related to DAS experienced over the past week. The tool is a four point-Likert scale. Each had seven items. Then measured as the following table:

Level	Depression	Anxiety	Stress
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
Extremely Severe	28 +	20 +	34 +

The DASS-S score was from 0 to 21 which doubled to calculate the concluding score for the stress subscale, which is 42. The reliability and validity of the DASS were re-tested in the present study. Opinions of experts in community medicine, community nursing, and psychologist about the questionnaire were taken and their acceptance was received. After correction of scale; deficiency areas were detected & taken as a sound base for the construction of the final form of the questionnaire. Computer feeding and statistical analysis were carried out as a descriptive and analysis of data as the proportion of DAS using SPSS version 23.

### 3. RESULTS:

Table (1) shows that the age distribution of students shows that 83% and 67% respectively in the third class in morning and evening education was in the age group 22-25 years, 84% and 87% are female in the third class with significant p values in age and gender distribution.

Table (2) portrays that 26% of third and 25% of second class respectively of morning and evening were moderately stressed. Regarding anxiety, 26% and 28% respectively of morning and evening had mild form.

### 4. DISCUSSION:

The prevalence of psychological problems such as DAS has been growing worldwide among the general population and university students in particular nursing students [1,13,14]. A large number of learner students are young people who may undergo a transition from the protected domestic life to an independent life of a college, failure to adapt may cause DAS [15,16]. DASS-21 is the most commonly used tool to recognize the prevalence of DAS in research [12].

The countries such as Australia, Hong Kong, Spain, and United States, have a parallel prototype of the prevalence of stress ranging from 20% to 26.5%, depressive symptoms were found to be in the range of 12.9% to 24.3%, whereas the students experiencing a high prevalence of anxiety ranging from 24.7% to 39.9% [2,17,18,19]. A study in Australia reports that levels of DAS were higher among students than that in a general population [9].

The literature reveals that the prevalence of DAS has been advanced in the Republic of China, Sri Lanka, India, Brazil, and Saudi Arabia than in developed countries. The prevalence of depression 23.8% to 69.2%, anxiety 50 to 56.59%, stress ranging from as low as 10.91% to high as 80.5% [20,21,22,23,24]. These percentages are similar to this study due to fear of failure, a pressure to succeed, grade competition among students, and in addition to

the limited resources for psychotherapy.

## 5. CONCLUSIONS:

Undergraduate nursing students encountered significant rates of depression, anxiety, and stress compared to morning and evening education with significant p values in age and gender distribution. About a quarter of third and second class respectively of morning and evening were moderately stressed. Moderate depression is seen among almost a quarter of the fourth class of morning and third of second class evening education.

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## 6. REFERENCES:

- [1] Samson, P., and Riedel. (2018). Stress, Anxiety, and Depression: Role of Campus Connectedness, Social Support, and Coping Among Nepalese Nursing Students. Walden Dissertations and Doctoral Studies Collection, Walden University.
- [2] Beiter, R., Nash, R, McCrady, M, Rhoades, D, Linscomb, D, Clarahan, M, and Sammut, S. (2015). The prevalence and correlates of depression, anxiety, and stress in a sample of college students. *Journal of Affective Disorders*. 173, p.p 90-96
- [3] Ratanasiripong, P. (2012). Mental health of Muslim nursing students in Thailand. ISRN Nursing, 2012.
- [4] AlFaris, E, Irfan, F, Qureshi, R, Naeem, N, Ashomrani, A, Ponnampereuma, G, vander Vleuten, C (2016). Health Professions' students have an alarming prevalence of depression symptoms: Exploration of the associated factors. *BMC Medical Education*, 16(279)
- [5] Rathnayake, S, & Ekanayaka, J. (2016). Depression, anxiety and stress among undergraduate nursing students in a public university in Sri Lanka. *International Journal of caring sciences*, 9(3), 1020-1032
- [6] Yehia, DBM, Jacoub, SM, & Eser, SM. (2016). Predictors of coping strategies among nursing college students at AL-Zaytoonah University of Jordan. *Journal of Education and Practice*, 7(15), 149-154
- [7] Turner JH (2007). Human emotions: A sociological theory. New York, NY: Routledge. Risal A, Sanjel S, & Sharma P P (2016). Study of depression among the nursing students in a university medical college of Nepal. *Kathmandu University Medical Journal*, 14(3), 264-268
- [8] Labrague L J, McEnroe-Petitte, D M, Gloe D, Thomas L, Papathanasiou, I V & Tsaras K. (2017). A literature review on stress and coping strategies in nursing students. *Journal of Mental Health*, 26(5), 471-480
- [9] Lovell GP, Nash K, Sharman R, & Lane BR (2015). A cross-sectional investigation of depressive, anxiety, and stress symptoms and health-behavior participation in Australian university students. *Nursing and Health Sciences*, 17(1), 134-142

- [10] Sigdel A,& Pokharel P. (2015). Prevalence of depression among certificate and nursing students of Chitwan District, Nepal. *Journal of Nepal Public Association*,6(1), 8-12
- [11] RatanasiripongP, Kaewboonchoo O, Ratanasiripong N, Hanklang S, & Chumchai P (2015).Biofeedback intervention for stress, anxiety and depression among graduate students in public health nursing. *Nursing Research and Practice*, 1-5
- [12] LovibondSH & Lovibond PF. (1995).Manual for depression anxiety stress scales. (2<sup>nd</sup> ed.). Sydney: Psychology Foundation Beiter, R., Nash, R.
- [13] Abdel Wahed,WY,& Hassan, SK. (2017).Prevalence and associated factors of stress, anxiety, and depression among medical Fayoum University students. *Alexandria Journal of Medicine*, 53(1), 77-84
- [14] Altiok, H O & Ustun, B (2013).The stress sources of nursing students. *Educational Sciences: Theory & Practice*,13(2),760-766
- [15] Ahmed, Z & Julius, SH. (2015).The relationship between depression, anxiety, and stress among women college students. *Indian Journal of Health and wellbeing*, 6(12),1232-1234
- [16] Bartlett,M,Taylor,H,&Nelson,J D. (2016).Comparison of mental health characteristics and stress between baccalaureate nursing students and non-nursing students. *Journal of Nursing Education*. 55(2), 87-90
- [17] Cheung, T,Wong, SY, Wong,KY, aw, LY, Ng, K, Tong, M K, Yip, PSF.(2016).Depression, anxiety, and symptoms of stress among baccalaureate nursing students in Hong Kong:A cross-sectional study. *International Journal of Environmental Research and Public Health*, 13(8), 779-804
- [18] Eckberg,N,Pidgeon,AM,&Magyar,H.(2017).Examining the psychosocial and academic factors predicting depression and anxiety symptomology across the first year and later year university students. *European Scientific Journal*,13(17),1-16
- [19] Pidgeon, AM,McGrath,S,Magya,HB,Stapleton,P & Lo, BCY.(2014).Psychosocial moderators of perceived stress, anxiety, and depression in university students: An international study. *Open Journal of Social Sciences*,2(11),23-31
- [20] Basu,M, Sinha,D,Ahamed,A,Chatterjee,S, & Misra, RN. (2016).Depression, anxiety stress among nursing students of Kolkata:A cross sectional study. *Journal of Preventive Medicine and Holistic Health*, 2(2),54-60
- [21] ChatterjeeS, SahaI, MukhopadhyayS, MisraR, ChakrobortyA&BhattacharyaA. (2014). Depression among nursing students in an Indian government college. *157 British Journal of Nursing*, 23(6), 316-320
- [22] LeiX, XiaoL, LiuY& LiY. (2016). Prevalence of depression among Chinese university students: A meta-analysis. *PLOS One*,11(4)
- [23] Patil NV,Mohite VR, Shinde M, SatweV, KadamS & ShiroleS (2016).Assessment of the level of depression, anxiety, and stress among 1st year RGNM students. *Indian Journal of Applied Research*, 6(7), 130- 132
- [24] Singh K, Junnarkar M & Sharma S. (2015).Anxiety, stress, depression, and psychosocial functioning of Indian adolescents.*Indian Journal of Psychiatry*,57(4),367-374

Table (1):Demographic Characteristics of Study Sample

Type of study		Morning grades				Evening grades				X <sup>2</sup>	P value
Grades		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>		
	18-21	81	47	14	1	35	34	7	28	298.867	.049
	22-25	17	49	83	76	52	50	67	42		
	26-29	1	4	3	22	8	13	18	16		
	30-33	1	0	0	1	4	1	6	8		
	34-37	0	0	0	0	0	1	2	5		
	38-41	0	0	0	0	0	0	0	1		
	42-45	0	0	0	0	1	1	0	0		
	Total	100	100	100	100	100	100	100	100		
Gender	Male	33	27	16	20	60	70	87	65	52.856	0.000
	Female	67	73	84	80	40	30	13	35		
Marital status	Not married	91	81	93	76	68	64	69	63	7.391	0.946
	Married	8	18	7	22	32	29	25	29		
	Divorce	0	1	0	0	0	3	3	6		
	Widow	1	0	0	2	0	4	3	2		
Working status	Not employed	91	89	92	89	66	62	77	71	13.75	0.317
	Not skilled	4	4	3	0	12	8	3	9		
	Skilled	3	3	1	8	14	15	12	12		
	employed	2	4	4	3	8	15	8	8		
Original Living	Town	74	89	81	85	88	76	82	77	0.784	0.376
	Rural	26	11	19	15	12	24	18	23		
Current Living place	Hotel	4	3	3	2	1	1	2	3	15.566	0.077
	With family	82	89	85	88	92	88	88	84		
	With relative	6	2	2	1	5	5	2	3		
	Universal	8	6	10	9	2	6	8	10		
House	Own	73	77	74	75	74	72	80	73	0.157	.6992
	Rent	27	23	26	25	26	28	20	27		

Table (2): Point Prevalence of Stress, Anxiety and Depression among Study Sample

Type of study		Morning grades				Evening grades			
Grades		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
Stress	Extremely Severe	1	0	2	4	1	1	1	4
	Severe	14	16	18	15	3	14	13	9
	Moderate	17	21	26	16	8	25	13	13
	Mild	9	12	19	19	10	17	20	14
	Normal	59	51	35	46	78	43	53	60
	Total	100	100	100	100	100	100	100	100
Anxiety	Extremely Severe	13	22	16	15	9	31	17	19
	Severe	13	5	18	11	13	14	14	5
	Moderate	22	14	21	20	14	19	10	17
	Mild	19	26	13	24	25	13	28	23
	Normal	33	33	32	30	39	23	31	36
	Total	100	100	100	100	100	100	100	100
Depression	Extremely Severe	5	4	7	5	2	8	0	9
	Severe	10	13	8	7	5	12	10	6
	Moderate	21	19	23	24	14	34	24	12
	Mild	20	13	21	17	21	14	18	20
	Normal	44	51	41	47	58	32	48	53
	Total	100	100	100	100	100	100	100	100