Anxiety, Depression and Resilience among University Staff in Herat, Afghanistan – 2021

Rahim Bakhsh FAQIRYAR[1], Mohammad Hakim NIAZMAND[2], Helena HANIF[1], Abdul Fattah NAJM[3], Aziz-ur-Rahman NIAZI[4]

[1] Faculty of Education, Herat University, Herat, Afghanistan

[2] Faculty of Veterinary Sciences, Herat University, Herat, Afghanistan

[3] International Assistance Mission, Herat Office

[4] Faculty of Medicine, Herat University, Herat, Afghanistan

Abstract

Anxiety and depression are the two most common mental illnesses in the world. Multiple risk factors contribute in developing anxiety and depression; the latter leading to suicide. The aim of this study is to identify the prevalence and associated factors of anxiety and depression, and assess their association with the level of resilience among academic and non-academic staff of Herat University. This cross-sectional study was conducted between November 1st and December 28th 2021. Sociodemographic data was collected using a structured questionnaire. Data on depression and anxiety was collected using the validated Dari version of DASS-42 questionnaire. Data on resilience was obtained using the 10-item Connor-Davidson Resilience Scale (CD-RICS-10). Statistical analyses were performed in IBM SPSS Statistics (version 27). A total of 210 university staff including 154 (73.3%) male and 56 (26.7%) female, with a mean age of 37.67 ± 9.62 years were included in the study. Of All participant in this study, 58.6% and 54.8% had anxiety and depression, respectively. There was a significant association between resilience with depression and anxiety. A significant association was found between depression, anxiety and resilience with economic status, general health condition, concern about food shortage, losing house, and losing job. While no significant association was found between depression, anxiety and resilience with gender, marital status, and losing family member in childhood. The prevalence of mental illnesses is considerably high among Herat University staff. The leadership of Herat University and public health authorities should implement strategies to tackle this important public health challenge.

Keywords: Anxiety, depression, resilience, Herat, Afghanistan

INTRODUCTION

Inclusion of mental health in the Sustainable Development Goals highlights the important role it plays in international development goals (World Health Organization, 2021). According to Dattani et al. (2021), in 2017, more than 10% of global population (792 million) suffered with a mental illness. Anxiety and depression are the two most common mental illnesses, accounting for 3.8% and 3.4% of the world population, respectively (Dattani et al., 2021).

A systematic review and meta-analysis of global prevalence of common mental health illnesses by Steel et al. (2014) revealed that during the last twelve month preceding to the study, at least 20% of adults had a history of mental illness. In a recent study focusing on the prevalence of common mental illnesses in South Asia, the prevalence of anxiety was reported to be 25.8% and depression accounted for 26.4% (Naveed et al., 2020).

According to the World Health Organization (2017), a total of 4.0% and 3.3% of Afghan population lived with anxiety and depression, respectively. The National Mental Health Survey and Assessment of Mental Health Services in Afghanistan reported that 2.8% and 4.9% of Afghan population lived with anxiety and depression, respectively (Kovess-Masfety & Sabawoon, 2018). It is worth noting that multiple risk factors rather than one individual factor

contribute in developing mental illnesses (Gobel & Cohrdes, 2021).

There is a negative correlation between mental illness with the level of resilience in a community; the greater the severity of mental illness, the lower the resilience. Additionally, resilience also serves as predictor of mental health; the higher the level of resilience, the lower the prevalence of mental illnesses (Farber & Rosendahl, 2018; Konaszewski et al., 2021; Rayani et al., 2021; Wu et al., 2020).

Recent socio-economic developments in Afghanistan may have altered the level of mental illnesses and resilience in the country. The aim of this study is to identify the prevalence and associated factors of anxiety and depression; and assess their association with the level of resilience among academic and non-academic staff of Herat University.

MATERIAL AND METHODS

Study design, duration and location: This cross-sectional study was conducted between November 1st and December 28th 2021 at Herat University.

Study participants: The participants of this study included lecturers, mid-level managers, and support staff of Herat University. A total of 423 staff were employed at Herat University at the time of the study.

Sample size calculation and sampling strategy: Sample size was calculated by Raosoft sample size calculator, using the following formula:

$$x = Z(c/100)^2 r(100-r)$$

$$n = Nx / ((N-1)E^2 + x)$$

$$E = \mathrm{Sqrt}[(N-n)x / n(N-1)]$$

In this formula, Z is the critical value, c is the confidence level, r is the fraction of responses, n is the estimated sample size, N is the population size, and E is the margin of error. The minimum estimated sample size was 202, using an error margin of 5% and confidence level of 95%. We added 10% to the estimated sample size to compensate for any possible incomplete or inappropriate responses.

Ethical consideration: The Ethics Committee of the Research Center of Herat University approved the study protocol (Approval number #200221). Prior to the conduct of interview, a written informed consent was obtained from each participant.

Survey instrument: Sociodemographic data including participant's age, gender, job category, education, marital status, economic status, general health, type of residence, concern about shortage of food in near future, concern about losing house, and concern about losing job were collected using a structured questionnaire. Data on depression and anxiety were collected using the validated Dari version of DASS-42 questionnaire (Shayan et al., 2021); and scored according to the instrument instruction. Data on resilience was obtained using the 10-item Connor-Davidson Resilience Scale and scored according to the instrument guideline (Connor & Davidson, 2003).

Statistical analyses: Statistical analyses were performed in IBM SPSS Statistics (version 27). Categorical variables are presented as numbers and percentages. Continuous variables with normal distribution are displayed as means ± standard deviation (SD); non-normal distribution is presented as median and interquartile range (IQR). The association between categorical variables are assessed using Chi-square test; and the linear association between two continuous variables were evaluated using bivariate Pearson correlation coefficient. The significance level was set to 0.05 in all analyses.

RESULTS

A total of 210 university staff including 154 (73.3%) male and 56 (26.7%) female was included in this study. The mean age of the participants was 37.67 ± 9.62 years. **Table 1** shows the sociodemographic characteristics of study participants.

All participant in this study, 58.6% and 54.8% had anxiety and depression, respectively. Median

Table1. Sociodemographic characteristics of study participants

Data		No	%
Gender	Male	154	73.3
	Female	56	26.7
Age	less than 35	109	51.9
	over 35	101	48.1
Job category	Support staff	35	16.7
	Managers	147	70
	Senior staff	28	13.3
Education	Illiterate	5	2.4
	School graduate	24	11.4
	Bachelor	59	28.1
	Master and PHD	122	54.8
Marital status	Married	178	84.8
	Single	32	15.2
Economic Status	Poor	50	23.8
	Good	145	76.2
Type of residence	Own	141	67.1
	Rented	69	32.9
Loss of family member in childhood	Yes	59	28.1
	No	151	71.9
General Health condition	good	116	55.2
	Fair	94	44.8
Concern about food shortage	Yes	169	80.5
	No	41	19.5
Concern about losing house	Yes	99	47.1
	No	111	52.9
Concern about losing job	Yes	139	66.2
	No	71	33.8

and IQR of anxiety and depression in this study was 10 (4-18) and 9 (5-18), respectively. **Table 2** displays number and percentage of participants in different categories of depression and anxiety.

Table 2. Number and percentage of participants according to different categories of depression and anxiety

Mental illnesses	**Normal** n (%)	**Mild** n (%)	**Moderate** n (%)	**Severe** n (%)	**Extremely Severe** n (%)
Depression	95 (45.2)	31 (14.8)	44 (21)	26 (12.4)	14 (6.7)
Anxiety	87 (41.4)	15 (7.1)	42 (20)	26 (12.4)	40 (19)

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This study found a significant association between resilience with depression and anxiety. **Table 3** displays the Chi-square results of this assessment.

Table 3. Association between resilience with depression and anxiety

Parameter	Mental illnesses	Very Poor Resilience	Poor Resilience	High Resilience	Very High Resilience	Total	*P* Value
Depression	Normal	20 (15.9%)	25 (19.8%)	43 (34.1%)	38 (30.2%)	126 (100%)	<0.001
	Depressed	34 (40.5%)	28 (33.3%)	13 (15.5%)	9 (10.7%)	84 (100%)*	
	Total	54 (25.7%)	53 (25.2%)	56 (26.7%)	47 (22.4%)	210 (100%)	
Anxiety	Normal	15 (14.7%)	26 (25.5%)	33 (32.4%)	28 (27.5%)	102 (100%)	<0.003
	Anxious	39 (36.1%)	27 (25%)	23 (21.3%)	19 (17.6%)	108 (100%)*	
	Total	54 (25.7%)	53 (25.2%)	56 (26.7%)	47 (22.4%)	210 (100%)	

* Total number of moderate, severe and extremely severe cases

The sociodemographic contributors of depression, anxiety and resilience among study participants is displayed in **Table 4**. A significant association was found between depression, anxiety and resilience with economic status, general health condition, concern about food shortage, concern about losing house, and concern about losing job. While no significant association was found between depression, anxiety and resilience with gender, marital status, losing family member in childhood.

DISCUSSION

Recent economic and social insecurity in the country have caused socioeconomic distress among ordinary Afghan population, which in turn may have led to higher levels of anxiety and depression in the community. This study assessed the prevalence of anxiety and depression, and their association with resilience among staff of Herat University, after recent developments in Afghanistan.

The prevalence of anxiety among staff of Herat University in this study was 58.6%. This indicates a considerably significant surge in the level of anxiety in the community since 2017. In 2017, WHO reported a 4.0% prevalence and the National Mental Health Survey and Assessment of Mental Health Services in Afghanistan reported a 2.78% prevalence of anxiety in Afghan population (Kovess-Masfety & Sabawoon, 2018) This reveals a >15-fold increase in the level of anxiety among sampled-population. Another study by Niazi (2018) revealed a 67.9% anxiety prevalence among pregnant women in Herat city of Afghanistan, which is 9.3% higher than the result obtained in this study.

The findings of this study is considerably higher than results reported from Canadian farmers (50.7%), Malaysian university workers (50.1%), Afghan hypertensive outpatients (47.3%), and Japanese healthcare workers (10%) (Manaf et a., 2021; Awano et al., 2020; Hamrah et al., 2018; Jones-Bitton et al., 2020). A systematic review and meta-analysis conducted by Silva et al. (2021) reported an overall prevalence of 49.4% anxiety among teachers during the COVID-19 outbreak, while another systematic review by Ozamiz-Etxebarria (2021) reported a 17% prevalence of anxiety among teachers during COVID-19 outbreak. The difference between the results of this study and those reported herein may be attributed to recent socioeconomic constraint in Afghanistan.

Table 4. Association of sociodemographic factors with depression, anxiety, and resilience

Data		Depression		Anxiety		Resilience	
		No*	**%**	**No***	**%**	**No**	**%**
Gender	Male	63	40.9	80	51.9	73	47.4
	Female	21	37.5	28	50	34	60.7
	p-Value	0.389		0.462		0.06	
Age	less than 35	38	34.9	50	45.9	61	56
	over 35	46	45.5	58	57.4	46	45.5
	p-Value	0.075		**0.026**		0.085	
Job category	Support staff	24	68.6	27	77.1	24	68.6
	Managers	11	39.3	11	39.3	15	53.6
	Senior Staff	49	33.3	70	47.6	68	46.3
	p-Value	**0.001**		**0.003**		0.057	
Education	Illiterate	4	80	3	60	3	60
	School graduate	16	66.7	21	87.5	17	70.8
	bachelor	18	30.5	25	42.4	28	47.5
	Master and PHD	46	37.7	59	48.4	59	48.4
	p-Value	**0.018**		0.200		0.206	
Marital status	Married	75	42.1	96	53.9	89	50
	Single	9	28.1	12	37.5	18	56.3
	p-Value	0.097		0.064		0.324	
Economic Status	Poor	26	52	33	66	32	64
	Good	58	36.3	75	46.9	75	46.9
	p-Value	**0.035**		**0.013**		**0.025**	
Type of residence	Personal	56	39.7	66	46.8	68	48.2
	Rented	28	40.6	42	60.9	39	56.5
	p-Value	0.511		0.038		0.163	
Loss of family member in childhood	Yes	23	39	34	57.6	28	47.5
	No	61	40.4	74	49	79	52.3
	p-Value	0.489		0.166		0.316	
General Health condition	good	26	22.4	41	35.3	47	40.5
	Fair	58	61.7	67	71.3	60	63.8
	p-Value	**<0.001**		**<0.001**		**<0.001**	
Concern about food shortage	Yes	73	43.2	94	55.6	94	55.6
	No	11	26.8	14	34.1	13	31.7
	p-Value	**0.039**		**0.011**		**0.005**	
Concern about losing house	Yes	53	53.5	63	63.6	64	64.6
	No	31	27.9	45	40.5	43	38.7
	p-Value	**<0.001**		**<0.001**		**<0.001**	
Concern about losing job	Yes	63	45.3	81	58.3	78	56.1
	No	21	29.6	27	38.00	29	40.80
	p-Value	**0.019**		**0.004**		**0.026**	

* Total number of moderate, severe and extremely severe cases

Our results indicate that the prevalence of depression among sampled population was 54.8%. A 2017 report of WHO revealed the prevalence of depression in general Afghan population was 3.3%, and the National Mental Health Survey and Assessment of Mental Health Services in Afghanistan reported the prevalence of depression 4.9% (Kovess-Masfety & Sabawoon, 2018) This indicates an approximately 15-fold increase in the prevalence of depression since 2017 among the sampled population. This is consistent with the finding of Hamrah et al (2018) among Afghan hypertensive outpatients (58.1%) and a study by Niazi (2018) revealed a 46.2% prevalence of depression among pregnant women in Herat, Afghanistan. This shows that the level of depression in our otherwise healthy participants is comparable to that of hypertensive and pregnant women, in Afghanistan. The prevalence of depression in this study is significantly higher that findings of studies from Canadian farmers (34.0%), Malaysian public university workers (28.7%), Japanese healthcare workers during COVID-19 (27.0%) (Manaf et a., 2021; Awano et al., 2020; Hamrah et al., 2018; Jones-Bitton et al., 2020). Two systematic reviews among teachers during COVID-19 pandemic revealed a 28.9% and 19.0% prevalence of depression (Ozamiz-Etxebarria et al., 2021; Silva et al., 2021). The considerably higher rate of depression among our participants and research conducted elsewhere may be related to recent economic and social insecurity among sampled population. In fact, our study found that a significant association exists between depression, anxiety and resilience with economic status, concern about food shortage, losing house, and losing job. While no significant association was found between depression, anxiety and resilience with gender, marital status, and losing family member in childhood.

Our results also found a significant association between depression and anxiety with the level of resilience among study participants. This is in align with the findings of other similar studies from the United Kingdom, Pakistan, Norway, China, and the USA that revealed an association between mental illnesses and resilience (Bitskika et al., 2013; Eggerman & Panter-Brick, 2010; Hjemdal et al., 2011; Mujeeb & Zubair, 2012; Song et al., 2021). This shows that the resilience of our study participants were considerably lower than other studies conducted elsewhere.

CONCLUSION

The prevalence of anxiety and depression among staff of Herat University is alarmingly high; and a significant association existed between anxiety and depression with resilience. A prompt and timely intervention is mandatory to tackle this challenge.

Conflict of Interest

The authors declare no conflict of interest.

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