

## Original Article

## MEASURING STRESS IN YOUNG DOCTORS

Rubina Aslam, Nabeel Ibad, Ahsan Numan and Saad Bashir Malik

**Objective:** To aim of our study is to determine the level of stress in young doctors categorizing it on yearly and specialty basis and also to determine personal factors like gender and marriage. So that we can counter this problem to improve patient care/ clinical management and finally health care delivery system.

**Material and Methods:** A cross sectional survey of resident doctors in different specialties was conducted in Jinnah Hospital Lahore. The questionnaire we used i.e. AKUADS along with a performa for the collection of data of the participants. AKUADS is a self reporting scale in urdu language which has been designed and validated for study in our population.

**Results:** There were 200 postgraduate resident doctors of which 52 % male and 48 % female were recruited in the study. Mean age was 27 years, minimum age was 23 years, and maximum age was 36 years. Of the randomized data, 32 % are from 1st year resident, 24% from 2nd year, 33% from 3rd year and 11% from 4th year. 56% were from medicine and allied and 44 % were from surgery and allied. In our participants who had scored less than 19 i.e. not suffering from depressive and anxiety symptoms on AKUADS were 58% (67.3% male and 47.9% female). Participants scoring between 20 to 40 i.e. mild were 34% (25%male and 43.8% female). Participants scoring between 41 to 60 i.e. moderate were 6% (7.7% male and 4.2% female). Participants scoring between 61 to 80 i.e. severe were 2% (0%male and 1% female).

**Conclusions:** Frequency of high degree of anxiety and depressive symptoms can be considered as bad indicator of deteriorating health care system and need for urgent concern and action to change the current situation.

**Keywords:** Depression, anxiety, doctors, AKUADS.

### Introduction

In recent years, there has been a trend of higher level of occupational stress, same is with doctors worldwide and in Pakistan as well.<sup>1,2,3</sup> In work settings people compare their job demands and their investment with the reward they receive. When job demands are high and rewards are low, one may experience inequality or imbalance between their investment and reward which can develop feelings of distress and a long standing period of stress eventually leads to burnout.<sup>4,5</sup> How stress is processed determines how much stress is felt and how close the person is to develop symptoms of anxiety and depression. Processing of stress depends on level of stress on an individual and his coping abilities i.e. one individual can experience few stressors but is unable to process the stress well and thus experience psychological problems.

Stress is associated with negative outcome at organizational level such as lack of concentration, poor time keeping, poor productivity, difficulty in comprehending new procedures, lack of cooperation, irritability, aggressiveness, resentment and increased tendency to make mistakes.<sup>6,7</sup>

Common factors associated with stress among young doctors which has been identified by previous studies are time pressure, lack of support from supervisor and co workers, severity of patients problems, contact with chronic or terminally ill patients, long working hours, frequency of on call duties and work home interference.<sup>8</sup> It can lead to alcohol and drug abuse and deterioration in relationship with family and friends.<sup>9</sup> In addition stress at workplace environment and job dissatisfaction are important factors. Changes in expectation of government, society and patients towards medical profession, no feedback for good work and negative media coverage also contributes to stress among doctors.<sup>9</sup>

The aim of our study is to determine the level of stress in young doctors categorizing it on yearly and specialty basis and also to determine personal factors like gender, marriage, So that we can counter this problem to improve patient care/ clinical management and finally health care delivery system.

### Material and Methods

A cross sectional survey of resident doctors in different specialties was conducted in Jinnah Hospital

Is a tertiary care Hospital with 1250 number of indoor beds, four ICU, 24 hour medical and surgical emergency facility and outpatient department with a daily on average turnover of more than 2000 patients.

The questionnaire we used i.e. AKUADS along with a performa for the collection of biodata of the participants i.e. Age, gender, marital Status, specialty, year of residency; was distributed to doctors in the indoor departments of Jinnah Hospital Lahore randomly to all willing participants. AKUADS is a self reporting scale in urdu language which has been designed and validated for study in our population. Cut off value of AKUADS is less than 19, with a range of mild 20 to 40; moderate 41 to 60 and severe 61 to 80 for anxiety and depressive symptoms.

The biodata collection was made anonymous to encourage participation. Data collection team collected both questionnaire and biodata upon completion on same day. Data was analyzed using the statistical package for the social sciences (SPSS 17).

## Results

There were 200 postgraduate resident doctors of

which 52 % male and 48 % female were recruited in study. Mean age was 27 years, minimum age was 23 years, and maximum age was 36 years and standard deviation was 2.084 (**Table1**).

In our participants who had scored less than 19 i.e. not suffering from depressive and anxiety symptoms on AKUADS were 58% (67.3% male and 47.9% female). Participants scoring between 20 to 40 i.e. mild were 34% (25%male and 43.8% female). Participants scoring between 41 to 60 i.e. moderate were 6% (7.7%male and 4.2% female). Participants scoring between 61 to 80 i.e. severe were 2% (0%male and 1% female).

42% of postgraduate residents are having anxiety and depressive symptoms which is more than the general population i.e. 20%16. Percentage of anxiety and depressive symptoms is higher in females (53%) then in males (33%). AKUADS score among married and single is 40% and 44% respectively which is almost similar but more single fall in moderate range (8.8%) of AKUADS as compared to married (2.3%). Post graduate residents among medicine and allied (50%) are having more anxiety and depressive symptoms than PGR of surgical and allied (31.8).

**Table-1:** Current job status, speciality and scoring of AKUADS.

Job Status	Frequency	Per%	Valid Percent	CumulativePer%
Valid PG 1st Year	64	32.0%	32.0%	32.0%
PG 2nd Year	48	24.0%	24.0%	56.0%
PG 3rd Year	66	33.0%	33.0%	89.0%
PG 4th Year	22	11.0%	11.0%	100.0%
Total	200	100.0%	100.0%	
<b>Speciality</b>				
Medicine and allied		56.0%	56.0%	56.0%
Surgery and allied		44.0%	44.0%	100.0%
Total	200	100.0%	100.0%	
<b>Scoring of AKUADS</b>				
Valid Normal Score < 19)	116	58.0%	58.0%	58.0%
Mild (score 20 - 40)	68	34.0%	34.0%	92.0%
Moderate (score 41 - 60)	12	6.0%	06.0%	98.0%
Severe (Score 61 - 80)	02	01.0%	01.0%	99.0%
Very severe (score 81- 100)	02	01.0%	01.0%	100.0%
Total	200	100.0%	100.0%	

## Discussion

Lifetime risk for depression is in range 10-20%. As there is a current perception that medical professionals especially young doctors are suffering from increased stress; most of our attention has been on young doctors co-relating with their demographic profile. Studies on doctor's depressive symptomatology in developed world indicate results as 19.3% in the US, 15.5% in Canada and 18.0% in the UK and 15.1% in Turkey.<sup>17-20</sup> However the frequency of anxiety and depressive symptomatology is better in postgraduate residents i.e. 30%.<sup>16</sup> In our study however we find that 42% of young doctors scored equal or more than 20 on AKUAD. This shows a high percentage of anxiety and depressive symptoms among young doctors in Pakistan. In a study conducted in Agha Khan university Karachi using AKUADS showed that emergency physician perceive more stress than non emergency doctors due to more stressful working conditions, work overload and lack of resources<sup>11</sup> with a result that 41% scoring equal or more than 20 (cut off value) in AKUADS which is comparable to our result. This indicates that in third world country like Pakistan, frequency of depressive symptoms among doctors is much more than in developed countries.

52.1% female postgraduate resident participants scored more than or equal to 20 on AKUADS as compared to 32.7% male postgraduate resident participants showing that frequency of anxiety and depressive symptoms is more in female than male postgraduate residents. Comparing our study with that conducted by University of Leeds on female young doctors it was found that 46% of participants were having depressive symptoms. This difference shows that depressive symptoms in female postgraduate residents is more prevalent third world countries like Pakistan than in developed countries.

AKUADS score of 1st year and 3rd year resident shows more frequency of depressive and anxiety symptoms during which doctors undergo more stress of criticism, work load and exam stress which is reflected by another study showing 1st year as predictor of depression<sup>12</sup>. Relatively high level of stress in doctors has been assessed in a Norwegian study which shows that medical community exhibits a relatively high level of certain mental health problems particularly depression, substance abuse and suicide.<sup>13</sup> Frequency of anxiety and depressive symptoms among post graduate residents of medicine and allied (50%) is more than postgraduate residents of surgical and allied (31.8%) despite the fact that working hours in surgical residency training is more than medicine training. This difference can be due to chronic illness and more

turnovers of patients in medicine as compared to surgical department, hence reflecting that more work load, poor prognosis of chronic illness, unsatisfactory treatment outcome leads to more stress among doctors.

Level of stress anxiety and depression has also been studied in general practitioners and consultants which is found to be high than general population i.e. 29% experiencing clinical symptoms on HAD scale.<sup>14</sup> Comparing to our result, it is obvious that anxiety and depressive symptoms are more common in young doctors than senior colleagues who may be due to low pay, increased workload, poor work place atmosphere, poor hospital management and little training in functional domains adding on to further stress and frustration among young doctors.<sup>1</sup> During training young doctors are taught about assessment and management of underlying pathophysiology but little emphasis is paid on organizational and ethical dilemmas, communication skills which they come across on daily basis. Moreover among doctors a strong hierarchical system is still in place instead of mutual support and team work<sup>15</sup>.

## Conclusion

Frequency of high degree of anxiety and depressive symptoms can be considered as bad indicator of deteriorating health care system and need for urgent concern and action to change the current situation. We need to identify factors which are leading to more stress among young doctors in third world countries as compared to developed countries. Factors like low pay, increased workload, poor work place atmosphere, poor hospital management, increased criticism, hierarchical system and little training in functional domains need special consideration. Attention needs to be paid on aspects of communication, ethical and organizational dilemmas in training of young doctors which is clearly lacking in third world countries.

*Department of Psychiatry  
AIMC/Jinnah Hospital, Lahore.  
[www.esculapio.pk](http://www.esculapio.pk)*

ed workload, poor work place atmosphere, poor hospital management, increased criticism, hierarchical system and little training in functional domains need special consideration. Attention needs to be paid on aspects of communication, ethical and organizational dilemmas in training of

young doctors which is clearly lacking in third world countries.

*Department of Psychiatry  
AIMC/Jinnab Hospital, Lahore.  
[www.esculapio.pk](http://www.esculapio.pk)*

## References

1. Edwards N, Kornacki MJ, Silversin J. Unhappy doctors: What are the causes and what can be done. *BMJ* 2002;324:835-8.
2. Smith R. Why are doctors so unhappy? *BMJ* 2001;322:1073-4.
3. Mechanic D. Physician discontent. *JAMA* 2003;290:941-6.
4. Barnett RC, Brennan RT, Gareis KC. A closer look at the measurement of burnout. *J Appl Biobehav Res* 1999;4: 65-78.
5. Wood BD, Killion JB. Burnout among healthcare professionals. *Radiology Management* 2007; 48: 30-5.
6. Umehara K, Ohya Y, Kawakami N, Tsutsumi A, Fujimura M. Association of work-related factors with psychosocial job stressors and psychosomatic symptoms among Japanese pediatricians. *J Occup Health* 2007; 49: 467-81.
7. Gabbe SG, Melville J, Mandel L, Walker E. Burnout in chairs of obstetrics and gynecology. *Am J Obstet Gynecol* 2002; 186: 601-12.
8. Firth-Cozens J. Source of stress in women junior house officers. *BMJ*. 1990 Jul 14;301(6743):89-91.
9. J Coll Physicians Surg Pak. Correlation of serum Cortisol levels and stress among medical doctors working n emergency departments. *Sep 2006;16(9):57-80*.
10. Brewin, Chris B, Firth-Cozens, Jenny. Dependency and self criticism as predictors of depression in young doctors. *Journal of Occupational Health Psychology*, 1997; 2(3): 242-246.
11. T Reider and V Per. Mental health problems among Young Doctors: An updated review of Prospective Studies 2002, Vol 10, No.3, 154-165.
12. Caplan RP. Stress, anxiety and depression in hospital consultants, general practitioners and senior health service managers. *BMJ*. 1994 Nov 12;309(6964):1261-3.
13. Imran N, Jawaid M, Haider II, Masood Z. Bullying of junior doctors in Pakistan: A cross sectional survey. *Singapore Med J* 2010;51(7):592-5.
14. Newsletter of the Colorado Physician Health Programme; Depression and suicide among doctors.
15. Gallery WE, Whitley TW, Klonis LK, et al. A study of occupational stress and depression among emergency physicians. *Ann Emerg Med* 1992;21:5864.
16. Lloyd S, Streiner D, Shannon S. Burnout, depression, life and job satisfaction among Canadian emergency physicians. *J Emerg Med* 1994;12:55965.
17. Burbeck R, Coomber S, Robinson SM, et al. Occupational stress in consultants in accident and emergency medicine: a national survey of levels of stress at work. *Emerg Med J* 2002;19:234238.
18. B Erdur, A Ergin, I Turkcuer, I Parlak, N Ergin, B Boz. A study of depression and anxiety among doctors working in emergency units in Denizli, Turkey *Emerg Med J* 2006;23:759763. doi: 10.1136/emj.2006.035071.