

Original research article

Stress, Anxiety & Depression In Resident Doctors – A Myth or Concern?

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Abstract

Introduction: Mental wellness is an important aspect of global health of an individual. Mental health issues not only impact personal and family life of individual but also have a significant impact on work performance. Medical Teaching and training is reported to be challenging and is stressful. Due to their nature of work, mental health of doctors is important not only for their personal front but is a concern for society to which they serve. This study was designed to find the level of stress, anxiety and depression in resident doctors and to find out the correlation between stress-depression as well as stress-anxiety.

Aims & Objective-1) To examine the level of stress, anxiety and depression among resident doctors of a medical college and teaching hospital. 2) To examine the relationship between anxiety and depression as well as stress and depression among resident doctors.

Material & Methods: For this purpose; residents who were pursuing their MD/MS courses in the institute were included in the study. Total number of subjects were fifty. DAS Scale was used for initial screening followed by application of Perceived Stress scale, HAM-A scale and HAM-D scales. The preset questionnaire was filled by resident doctors themselves and data was presented as mean, standard deviation, percentage and correlation was analyzed by using Pearson's Product moment correlation and partial correlation test. DAS scale screening results showed depression in 68%, anxiety in 70% and stress in 32% candidates. Final results after application of PSS scale, HAM-A & HAM-D scale revealed stress in 78% residents (low stress-26%, moderate stress-40% and high stress-6%), anxiety in 70% residents (mild -62%, mild to moderate- 4% and moderate to severe in 4%) and depression in 24% residents (mild -20%, moderate-0%, severe-2% and very severe 2%) respectively. Correlation testing found positive however insignificant correlation between anxiety-depression and stress-depression.

Conclusion: This study revealed significant level of stress, anxiety and depression in resident doctors. Considering the impact of issue, preventive and modulating measures can be considered to help resident doctors in dealing with their job expectations and responsibilities.

Keywords: Stress, anxiety, depression, resident doctors

Introduction

Mental health issues not only impact personal and family life of individual but also have a significant impact on work performance. Medical Teaching and training are reported to be challenging and is stressful [1]. Due to their nature of work, mental health of doctors is important not only for their personal front but is a concern for society to which they serve. It is particularly associated with more responsibilities ranging from patient care to academics. Residents are expected to complete their study/academic works as well as to fulfil an efficient clinician's job in their residency period, thus expected to fulfil multiple roles of educator, clinician, researchers and administrator by the completion of their programme [2]. Resident doctors studying or practicing in developing countries face additional challenges including inadequate health sector budget, low income, and uneven health-care distribution [3]. Psychological morbidity in medical students has been reported from various countries across the world however; very few Indian studies are available to document this burden [4]. Considering seriousness of depression, anxiety and stress among resident doctors, we are conducting this study to find the level of depression, anxiety and stress among resident doctors in a medical college and tertiary care teaching hospital.

Objectives Of The Study:

1. To examine the level of stress, anxiety and depression among resident doctors of a medical college and teaching hospital.
2. To examine the relationship between anxiety- depression as well as stress-depression among resident doctors.

Hypothesis Of The Study:

There will be significant relationship between anxiety and depression as well as stress and depression among resident doctors.

Material & Methods:

It is a descriptive cross-sectional study. Sample size of 50 was used by convenient sampling technique. Selection of sample was done by using purposive sampling technique. Permission from the institutional ethical committee was obtained before conducting the study. After explaining the purpose and method of study and taking informed consent, screening self-assessment questionnaire form was given to the residents (using DASS questionnaire). Those students whose results showed significant level of stress, anxiety and depression were further given HAM-A scale, HAM-D scales and Perceived stress questionnaires. Finally, data returned in the form of completely filled form was entered in the Microsoft excel sheet and subjected to statistical analysis.

Inclusion & Exclusion Criteria-

Inclusion: Resident doctors undergoing post-graduation training in Hospital.

Exclusion: Resident doctors who were already under treatment for any psychiatric disorder and chronic medical illnesses.

Tools For The Study: Following scales were used for the study.

- 1. DAS SCALE:** DAS scale comprises of 42 statements. It is a self-report instrument designed to measure the three related negative emotional states of depression, anxiety and stress. All statement are rated in subjective manner and scored from 0 to 3. It can be administered in adults who are literate.
- 2. HAM-A SCALE:** It has 14 items to measure the severity of anxiety symptoms. It measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety).
- 3. HAM-D SCALE:** The HAM-D is the most widely used clinician-administered depression assessment scale. It is a 17-item scale which measures the various symptoms of depression to assess the severity.

PERCEIVED STRESS SCALE: The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives.

Statistical Techniques Used:

Data obtained in this study through questionnaire was summarized and analyzed using statistical package. Data expressed as mean, Standard deviation, number and percentage as appropriate for qualitative variables. To find the correlation between anxiety & depression and stress & depression Pearson's product moment correlation and Partial correlation tests were used. Finally, hypothesis testing was done using 't test'. The results so obtained were interpreted and discussed in the light of problem factors to make results meaningful.

Result:

Total number of examined residents were 50, out of which 27 were female residents and 23 were male residents in the age range of 25-29 years with mean age 27 years.

DAS SCALE: DAS Scale was used as screening tool. Result of 36 candidates revealed positive screening test while 14 candidates were within normal range.

Table 1:

Residents	DAS SCALE		
	Depression	Anxiety	Stress
Total	34(68%)	35(70%)	16(32%)
Male	16(32%)	16 (32%)	8(16%)
Female	18(36%)	19(38%)	8(16%)

DAS scale results showed depression in 68% candidates; out of which 32% were male and 36% female. Scoring revealed mild depression in 14%, moderate in 20%, severe in 16% and very severe in 18% candidates.

Anxiety was found in 70% candidates; out of which 32% were male and 38% female. Scoring revealed mild anxiety in 4%, moderate in 18%, severe in 16% and very severe in 32% candidates.

Stress was found in 32% candidates; out of which 16% were male and 16% female. Scoring revealed mild stress in 8%, moderate in 8%, severe in 10% and very severe in 6% candidates.

Residents with positive screening test were further subjected to separate scales for stress, anxiety & depression. All candidates with positive DAS scale (even in single sub-scale) were further assessed separately for all three subscales. It was done with purpose to increase the specificity of scales under question as DAS scale has inter-related items. Detailed discussion of results of PSS, HAM-A and HAM-D scales are as follows-

Perceived Stress Scale: revealed overall stress to be present in 78% participants with low stress in 26%, Moderate in 40% and high stress in 6% candidates.

HAM-Anxiety Scale: revealed overall anxiety in 70% residents with mild anxiety in 62% candidates, mild to moderate anxiety in 4% candidates, moderate to severe anxiety in 4% candidates. Out of 35 candidates with positive DAS test for anxiety scale; only 2% revealed normal HAM-A test.

HAM –Depression scale: revealed overall depression in 24% with mild depression in 20 %, severe depression in 2%, very severe depression in 2 % candidates.

Separate assessment of variables through Perceived stress scale, HAM-A and HAM-D scale revealed stress in 78% residents (low stress-26%, moderate stress-40% and high stress-6%), anxiety in 70 % residents (mild -62%, mild to moderate- 4% and moderate to severe in 4%) and depression in 24% residents (mild -20%, moderate-0%, severe-2% and very severe 2%) respectively.

Discussion

Screening result revealed significant level of stress, anxiety and depression in 72% residents. Stress was found in 32%, anxiety in 70% and depression in 68% residents. The prevalence of depression is significantly higher compared to that among the general population of the same age group of students in India as per study conducted by Sahoo *et al* which is 18.5% [5].

The prevalence of depression was at par compared to a meta-analysis survey done by Mata *et al* spanning multiple countries [6], where prevalence of depression was found to be 28.3% among medical and surgical residents. This result was also significantly higher than studies done by Zaman *et al* who showed 21% [7], Demir *et al* [8] showed 16.0%, and Gu *et al* [9] reported 17.3% .

The stress level was comparable to that found in a study done in New Delhi by Saini *et al* [10] whose results showed it to be 32.8 % and was less than Cohen and Patten [2] who reported it to be 34%, and Kasi *et al* [11] reported 55%.

Anxiety level was significantly higher in our study group compared to similar study done by Dave *et al* who found it to be 36.6% [3].

However; further application of Perceived stress scale (PSS), Hamilton-Anxiety (HAM-A) and Hamilton- Depression (HAM-D) tests revealed depression 24%, stress in 78% and anxiety in 70% residents. The result of anxiety was comparable in both sets of questionnaires (DAS scale & HAM-A scale), however stress was significantly higher in PSS compared to DAS scale and depression results were significantly lower in HAM-D test compared to DAS scale. Possible explanation for these differences could be presence of inter-related items in DAS scale as well as selection bias by the residents as they were given separate test sets which they had to opt themselves as sub scale examination. The prevalence of stress, anxiety and depression in residents were significantly higher compared to study done by Sahoo *et al* [5] who found depressive symptoms in 18.5%, anxiety in 24.4%, and stress in 20% of the general population. The higher level of stress in the residents could be attributed to their job responsibility, and at the same time pursuance of academic work.

Correlation statistics showed positive correlation for stress-depression and anxiety-depression, values-0.002 and 0.02 respectively, however further on application of t test, these values were insignificant, this result was contrast to study done by Doyle et al; who found strong positive correlation between these variables [12].

Conclusion:

Mental well-being of resident doctors is an important part of their global health and is a prerequisite for optimal utilization of their potential. This study showed significant level of stress, anxiety and depression in resident doctors. There was positive however insignificant correlation between stress-anxiety and stress-depression. Considering seriousness and impact of issue, measures can be introduced in the form of post graduate induction program at the start of the residency course, stream lining of duties of residents and positive mental health trainings during their study period to help managing stress and improve their professional and personal well-being.

Limitations: The current research faced certain constraints and limitations, as in the most researches. We intended to take a bigger sample size (about 100) for the study however due to busy schedule of residents, time constraints, difficulty in getting forms filled and covid restrictions; sample size could not be increased. Purposive sampling technique was adopted for the selection of the sample.

Suggestions: To make further research more elaborative and meaningful demographic profile of participants can be added to measure the correlation between stress-anxiety-depression and these variables. Research can be further extended to compare these parameters among resident doctors of clinical and non-clinical department and different residency years. These variables can also be studied and compared between resident doctors of private and government sectors.

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