Original Research Article

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Prevalence of depression and its associated factors among the doctors working in a private medical college, Trichy: a cross sectional study

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ABSTRACT

Background: Stress is one among the leading health problem throughout the world. Stress due to family problems and work related are often encountered. Among the various professionals, health care providers are found to be more depressed than others. This study was conducted with an objective to study the socio demographic characters of the study participants, to study the depression status of the study participants and to study the association between various factors and depression.

Methods: This descriptive cross sectional study done among the doctors working in a tertiary teaching hospital. A total of 150 participants were included in this study. Simple random sampling method was used to identify the study participants.

Results: Around 76% of the participants belongs to the age group of 20-30 years of age. 71.3% of the study population were junior residents. Nearly 64% were found to be depressed among which 8% were found to be on severely depressed. Statistical significant association was found between factors like designation and time spending with family with depression.

Conclusions: Since stress and burnout became the leading mental health problems, and health care providers posing as a vulnerable group by virtue of their profession. Hence behavioral therapy sessions and stress management programs are to be conducted frequently to screen as well to relieve from the mental health issues.

Keywords: Burnout, Diagnosis, Doctor, Doctor-patient relationship, Residents, Stress

INTRODUCTION

Health care professionals experience high levels of stress due to their work stress and when exceed their time limits.¹ Stress is defined as the action that gives psychological or physical demands on a person or any objects which unbalances the individual equilibrium.² Leiter and Maslach defined Burnout is an untoward negative reaction to constant exposure of occupational stressors relating to the disharmony between workers and their designated jobs. Hence, burnout is viewed as a psychological syndrome of chronic exhaustion, cynicism, and inefficacy, and as a response of prolonged exposure to chronic stressors in the workplace. These two factors viz. stress and burnout are the initial warning indicators

which lead to other emotional illness like anxiety disorders, addiction, depression, eating disorders and suicide. A healthy workplace is the one in which the workers should join up for a continual improvement to protect and promote the well-being of all the workers and World sustainability. Health Organization approximated around two million work related deaths in 2000.³ Several studies have shown that one third of the health care professionals experience stress or burnout at some point in their career.⁴ Stressors includes long working hours, demands on the medical practice, fatigue, lack of job satisfaction, job assurance, increased work load, low salary package, rotations of working hours. Low social support at work and violence against health care professionals are the other key stressors emerging

recently. Chronic exposures of these stressors predisposes the medical professionals to a variety of mental illness and dysfunction which includes emotional disturbances like depression, anxiety, sleep disturbances, fatigue, broken relationships, marital problems and early retirement. The prevalence of depression and burnout were higher among the medical professionals comparing to the general population and other professional groups. The risk factors associated with depression among the general population like low socio-economic status, illiteracy, unemployment are not applicable to doctors which seems to be interesting fact. These mental instabilities prone a greater risk of poor commitment, wrong diagnosis, poor doctor-patient relationship and lack of dedication.⁵ Health care professionals are also prone develop substance-use disorders by using narcotics and other abusive products. Nicotine dependence and other abusive substances like alcohol, cannabis, and benzodiazepines were also found to be used among the medical professionals.4 With the above limited data and the increasing incidence of mental illness among the medical professionals, we did this study with an objective to study the depressive status and its associated demographic factors.

METHODS

Study design: This was a descriptive cross sectional study.

Study area: This study was carried out in Trichy SRM Medical College Hospital, Trichy of Tamil Nadu district.

Study population: Residents and doctors including clinical and nonclinical departments of Trichy SRM medical college hospital

Sample size: Sample size was calculated based on the study in 2014 by Gong et al in china, showed that the prevalence of depression was 28%.² At 95% confidence interval with eight as absolute precision and 10% allowable error the sample size was calculated to be 138 and finally rounded off to 150 based on the formula S=4PO/L².

Sampling method: Consecutive sampling method (Simple random sampling method) was used to identify the study participants.

Study period: Two months form September 2019 to October 2019.

Data collection: was done using a structured pretested questionnaire. It includes sociodemographic variables and PHQ 9 questionnaire to collect details regarding depression.

Ethical approval: Not obtained.

Informed consent: Informed consent in the local language (Tamil) was obtained before the data collection.

Inclusion criteria: Residents including junior and senior residents and other faculties were included.

Exclusion criteria: Interns and those who were not willing to participate in the study were excluded.

Statistical analysis: Data entered in MS excel and analysis were carried out in SPSS version 25.

RESULTS

Table 1 explains the sociodemographic characters of the study participants. Around 76% (114) of the participants belongs to the age group of 20-30 years of age. 71.3% (107) of the study population were junior residents, hence 51% (77) were experience less than 1 year.

Table 1: Socio demographic variables of the study participants.

Variables	Frequency (n=150)	Percentage
Age		
20-30	114	76
30-40	30	20
More than 40	6	4
Gender		
Male	87	58
Female	63	42
Designation		
Professor	3	2
Associate professor	6	4
Assistant professor	16	10.7
Senior resident	11	7.3
Post graduate	7	4.7
Junior resident/tutor	107	71.3
Working hours		
Less than 5 hours	12	8
5-8 hours	104	69
More than 8 hours	34	23
Work experience		
Less than 1 year	77	51.4
2-5 years	56	37.3
6-10 years	12	8
More than 10 years	5	3.3
Department		
Clinical	126	84
Non clinical	24	16

Figure 1 depicts the depressive status among the study participants. Depression among the study participants are assessed by PHQ9 questionnaire. Around 64% (96) of the study participants were found to be depressed, in which 40% (60) were on mild depression, 16% (24) on moderate

depression, 8% (12) were found to be on severe depression.

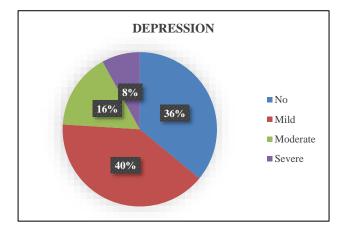


Figure 1: Categorization of depression among the study participants.

Table 2 explains the association between demographic factors and depression. The factors like designation and time spending with family were found to be associated with depression and is statistically significant. Other factors like job assurance, job satisfaction, duration of work, age, experience, department and gender were not statistically associated with depression.

Table 2: Association between socio demographic variables and depression.

Socio	Depression		Chi-			
demographic factors	Yes	No	Square value	P value		
Designation						
Residents	67	45	3.35	0.08		
Faculties	29	9				
Time spending with family						
Yes	35	33	8.47	0.006		
No	61	21				

P value less than 0.05 significant

DISCUSSION

This study shows 76% of the study participants were ranged from 20 to 30 years of age group, 58% of the participants were male doctors and 51% of the participants were experienced less than one year; whereas a study done by Boron et al in 2012 showed that only 8% were belonged to less than 30 years of age, 71% were male doctors and 65% of the doctors were experienced more than 15 years. This finding is contradictory, as the current study involves more junior doctors than the professors. Similarly, a study done by Wilson W et al in 2020 showed that around 50% of the study participants belongs to the age group of 18-29 years of age and 48% were junior resident doctors and the mean age of the residents was 28.9 years.

This study assessed the mental health status of the study participants by PHQ-9 scale and categorized as no depression (36%), mild depression (40%), moderate depression (16%) and severe depression (8%). A similar study was done by Wilson et al in 2020 showed that 3.7% of their study participants were on high level stress and depressive symptoms which requires treatment was seen around 11.4% of their study participants.

This study shows 56% of the study participants had mild to moderate depression and 8% had severe depression. A study done by Atif et al in Pakistan shows 24.8% had mild to moderate depression and 1% had severe depression.⁸

This study shows the statistical association between factors like designation and time spent with family with depression, whereas the study done Kumar in 2016 shows low monthly income and the number of years spent in emergency units were significantly associated to the anxiety of doctors in the multivariate regression analysis.⁹

CONCLUSION

Depression and burnout among the health care providers is a global problem. They become the vulnerable population only because of their profession. The prevalence of depression was much higher when compared to general population. Once depression sets in leads to increased medical errors, poor doctor patient relationship and poor quality of care. Hence we would recommend behavioural therapy sessions and stress management programs frequently in batches for the health care providers. This study shows among 150 doctors 96 doctors were found to be depressed. We recommended them to attend the stress management sessions which was being conducted frequently in our institution. The limitations in this study were, this study includes only the doctors and no other health care providers and low sample size. Hence it cannot be generalized to the health providers as a whole. Physical violence on health care providers is also a key factor which affects the mental health of the health care providers. This study missed to through light on that issue.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

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