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Research Article

**FREQUENCY OF DEPRESSIVE ILLNESS AMONG DOCTORS
WORKING IN TERTIARY CARE HOSPITAL IN D.I.KHAN,
PAKISTAN****Dr Umar Badshah¹, Dr Adnan Khan², Dr Salman Khan³, Dr Shahab ud Din⁴, Dr Rida Fatima⁵, Dr Sana ullah shah⁶**

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Article Received: September 2019 **Accepted:** October 2019 **Published:** November 2019**Abstract:**

Objective: Depression is a significant public health problem worldwide. The objective of this study was to determine the frequency of depression among doctors and to evaluate the association of sociodemographic factors, as well as working hours, and specialty, with depression among doctors working in a teaching hospital in Dera Ismail Khan, Pakistan.

Methodology: This descriptive cross sectional study was conducted in a Teaching Hospital in Dera Ismail Khan, Pakistan in the month of October 2019. The study population was stratified proportionally according to hospital departments and a random sampling method was used to collect a sample of 137 participants. Data were collected with a questionnaire consisting of sociodemographic variables, and the Patient Health Questionnaire. Data was analyzed through SPSS version 25.

Results: Among 137 participants 69(50.4%) had depression. Higher rate of depression was found among female doctors (66.67%) as compared male doctors (45.7%).

Conclusion: Depression is highly prevalent among doctors and especially among female doctors. Prevalence rate being higher than the general population.

Keywords: depressive illness, doctor.

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INTRODUCTION:

Depressive disorder is a kind of illness that affects body, mood, and thoughts. It negatively affects the ways of eating and sleeping, the ways of feeling about oneself, and the ways of thinking about different things.[1] If treated, symptoms of depression can last for weeks, months, or years. Most people suffering from depression can be helped by providing appropriate treatment. [2]

Many studies have so far been conducted worldwide that have demonstrated that depression is an important public health problem among doctors and medical students. [3,4,5]

Depression is very common among physicians and its prevalence rises up to 30% in the first year after completion of graduation from the medical school. [6]

The prevalence rates of depression are reported to be higher when compared with community-based studies thus uncovering the fact that physicians constitute a professional group with high-risk of depression. [7]

Evidence from research suggests a variety of reasons, which include excessive working hours, sleep deprivation, poor social support, taking the responsibility of patients, death of a patient, and negative professional relationships result in problems as excess alcohol consumption or depression among doctors. [8]

In addition, there is a general assumption among doctors and medical faculty students that they can manage their problems on their own and do not need help from others thus they do not seek medical help when these services are much needed. [9]

It has been shown in different studies that among doctors there is only a small proportion who seek medical treatment when they develop depression and instead they indulge in self-medications. However, considering the nature of their professions, the mental health of doctors is not only important to them, but also is of concern to the whole society. Depression in doctors badly affects the quality of their service delivery causing problems in their work environment. [6]

Moreover, depression has negative effects on learning and academic success in a profession where postgraduate education is highly important. [10]

In a systemic review conducted in Pakistan, the overall prevalence of anxiety and depressive disorders in the community population was 34%. [11]

The objective of the present study was to determine the overall prevalence of depression among doctors and also to compare the frequency of depression among different specialty doctors. Although such studies have already been conducted worldwide, the purpose of this study was to provide data for Pakistani doctors who work in a different environment with limited resources and greater burden of work.

MATERIAL AND METHODS:

This cross-sectional study was carried out in a training hospital with 137 doctors in Dera Ismail Khan District, Pakistan in October 2019. The probable prevalence of depression was taken as 30%, and sample size was calculated with the help of WHO formula with 95% confidence interval and 8% margin of error. The study population was stratified proportionally according to hospital departments and a random sampling method was used to collect a sample of 137 participants. Data were collected with a questionnaire consisting of two parts. The first part of the questionnaire included sociodemographic variables, working hours, and working specialty. The second part consisted of Patient Health Questionnaire (PHQ-9).

PHQ-9 (Patient Health Questionnaire) is a self-reported depression scoring scale. This scale consists of nine items. Each of these nine items has a score ranging from 0-3 depending upon the severity of symptoms of depression. The maximum score on this scale is 27. The lowest score is 0. A score of 5 or above is considered as depression.

The purpose of the study was explained to the participants and their informed consent was obtained. The participants who requested their PHQ-9 scores were assured that their PHQ-9 score will be shared with them in a confidential way. After completion of the study was completed, feedback regarding the depression scores was returned in a sealed envelope to the participants who had requested it.

Data were analyzed using the SPSS version 25. Descriptively all the variables were analyzed by frequency and percentage. Estimation of parameter for proportion for population was given as confidence interval at confidence level of 95%. The difference in frequency of depression in doctors between sample and population was analyzed by chi-square goodness-

of-fit test. Association of depression with other variables like age, gender, working hours, and specialty was analyzed among doctors by Chi-square test of independence (association).

RESULTS:

Out of 137 participants 84(61.3%) had ages below 45 years while 53(38.7%) were aged above 45 years. 98(71.5%) participants were male and 39 (28.5%) were female. Doctors working in internal medicine were 38(27.7%), in general surgery were 40(29.2%), gynecology and obstetrics were 18(13.1%), pediatrics were 18(13.1%), and those working in emergency medicine were 23(16.8%). Participants having working hours less than 36 per week were 44(32.1%) and those having 36 or more than 36 working hours per week were 93(67.9%). 55(40.1%) were unmarried and 82(59.9%) were married.

Among 137 participants 69(50.4%) had depression while 68(49.6%) had no depression. The observed frequency of depression in a sample of doctors was compared to the expected frequency of the population by chi-square goodness-of-fit test at alpha 0.05. The observed counts of depression were not a good fit to the expected counts. In other words the difference

between the observed and expected counts for depression frequency among doctors was statistically significant. The expected counts were taken from a study by mirza I, et al, Pakistan. (Table1)

Association of depression with other variables was analyzed through chi-square test of association. The presence of depression was not associated to age ($p > 0.05$). Table 2

Out of 94 male participants 43(45.7%) were depressed, while 26(66.67%) out 39 female participants were depressed. Thus a significant association was found between depression and gender among participants (p value < 0.05) which means that greater number of female doctors were depressed as compared to male doctors . Table 3

Association between depression and specialty was not statistically significant (p value > 0.05). Table 4

A statistically insignificant association was seen between working hours and depression among study participants (p value > 0.05). (Table 5) Association between depression and marital status was also found to be showing no statistical significance (p value > 0.05). Table 6

Table 1: Comparison of observed (sample) to expected (population) frequency of depression among Doctors in D.I.Khan, Pakistan (n=137)

Depression	Observed frequency	Expected frequency	Pearson Chi-Square Value	Degree of freedom	Significance (p-value)
No	68	90.4	16.350	1	0.000
Yes	69	46.6			
Total	137	137			

Table 2: Association between presence of depression and age groups of Doctors in D.I.Khan, Pakistan (n=137)

Age in years	Depression		Rows Totals	Pearson Chi-Square Value	Degree of freedom	Significance (p-value)
	Yes	No				
<45	43	41	84	.059	1	0.808
≥45	26	27	53			
Column Totals	69	68	137	Chi-square test of independence (association)		

Table 3: Association between presence of depression and gender of Doctors in D.I.Khan, Pakistan (n=137)

Gender	Depression		Rows Totals	Pearson Chi-Square Value	Degree of freedom	Significance (p-value)
	Yes	No				
Male	43	55	94	5.796	1	0.016
Female	26	13	39			
Column Totals	69	68	137	Chi-square test of independence (association)		

Table 4: Association between presence of depression and Specialty of Doctors in D.I.Khan, Pakistan (n=137)

Specialty	Depression		Rows Totals	Pearson Chi-Square Value	Degree of freedom	Significance (p-value)
	Yes	No				
Internal medicine	15	23	38	9.186	4	0.057
General surgery	16	24	40			
Gynaecology & obstetrics	13	5	18			
Pediatrics	10	8	18			
Emergency medicine	15	8	23			
Column Totals	69	68	137	Chi-square test of independence (association)		

Table 5: Association between presence of depression and working hours of Doctors in D.I.Khan, Pakistan (n=137)

Working hours/week	Depression		Rows Totals	Pearson Chi-Square Value	Degree of freedom	Significance (p-value)
	Yes	No				
<36	26	18	44	1.974	1	0.160
≥36	43	50	93			
Column Totals	69	68	137	Chi-square test of independence (association)		

Table 6: Association between presence of depression and Marital status of Doctors in D.I.Khan, Pakistan (n=137)

Marital Status	Depression		Rows Totals	Pearson Chi-Square Value	Degree of freedom	Significance (p-value)
	Yes	No				
Unmarried	30	25	55	0.642	1	0.423
Married	39	43	82			
Column Totals	69	68	137	Chi-square test of independence (association)		

DISCUSSION:

In our study 50.4% of doctors were depressed showing results which are quite higher than the previous studies conducted on doctors. According to a study conducted by Firth-Cozens J et al. in 2002 the prevalence of depression among doctors was found to be 30%. The results of our study also uncover the fact that the prevalence of depression among doctors is higher than the general population (34%) as depicted by the study conducted by Mirza I et al in Pakistan.

Association of depression with other research variables revealed that gender is the only variable showing a significant association with depression among doctors. Female doctors showed a higher prevalence of depression (66.67%) as compared to male doctors (45.7%). This finding is consistent with studies conducted in the past ((Hsu and Marshall, 1987; Khuwaja et al., 200; Reuben, 1985; Newbury-Birch and Kamali, 2001). There are many reasons which can explain the higher rates of depression in women, but certain personality factors are important to be mentioned here e.g women are more sensitive to emotional demands of the patients and being more empathetic increases their depression risk (Theorell, 2000; Firth-Cozens, 2001). Moreover, there are a number of other factors, such as lack of role models, roles attributed to gender in society, the obligation to handle both a professional and domestic role, and voluntary or involuntary marginalization by male colleagues also predisposes women at an increased risk for depression (Robinson, 2003; Theorell, 2000).

No significant association of depression among doctors was found with other variables like working hours, specialty, age, and marital status.

Only a few (5%) doctors requested feedback regarding their PHQ-9 scores. Despite the fact that names of doctors were not requested neither in

questionnaire nor in the PHQ-9 still they showed great degree of hesitation due to stigma of being diagnosed as having depression.

In order to bring a positive change in the mental health of doctors, attitudes that favor the extreme working conditions and self-sacrifice which are common in the current medical education must be changed (Myers, 2003). Some suggested strategies to improve mental health of doctors include development of support mechanisms and risk management, increasing personal and psychological skills of doctors (Myers, 2003). Some studies have shown promising results cognitive behavioral techniques for lowering stress among doctors (Gardiner et al., 2004).

CONCLUSION:

Depression is highly prevalent among doctors and especially among female doctors. Prevalence rate being higher than the general population. Doctors should be provided with opportunities to share problems, and programs regarding help-seeking behavior should be developed. Prevention strategies should be developed including components for decreasing behaviors and attitudes related to the stigmatization of depression.

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