Factors Associated with Stress Level of Doctors (A Study with Special Reference to Dindigul District)

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Abstract - **Doctors are the key professionals in the society and who experience high level of stress due to their profession itself. There are several factors which create stress such as excess of work, threat of infectious disease, insufficient rewards, work life imbalance and so on. Doctors who come from different walks of life face different level of stress. Hence, this research paper makes an attempt to measure the factors associated with stress level of doctors. Factors including demographic and professional details are taken into consideration.**

Index Terms - **Stress, Doctors, and work imbalance.**

INTRODUCTION

Stress is a factor that causes various health problems including high blood pressure, headache, heart diseases, obesity and so on. Stress at workplace will create adverse effects both psychologically and physiologically and it will lead to decrease the employee's productivity. The combination of various factors like long working hours, dealing with serious issues of patients may create additional stress. This research paper attempts to find out the factors associated with stress level of doctors. The factors include gender, age, staying with family, employment of attendants, experience, monthly earnings, working hours and average number of patients.

SCOPE OF THE STUDY

This study was conducted to find out the factors associated with stress level of doctors. Data has been collected from two hundred and thirty-three doctors who practice allopathic medicine. This study was conducted only in Dindigul district.

METHODOLOGY

This research paper deals with the data collected from both the primary and secondary source. Primary data have been collected with the help of questionnaire as well as interview schedule and the secondary data have been collected from books, magazines, journals, and websites. After collecting the data, the filled questionnaires were edited and made ready for coding. Data has been entered into an excel sheet for preparing master Table. This master Table has been used to analyse the data with the help of SPSS package.

FRAMEWORK OF ANALYSIS

Chi square test has been applied to find out the association between the selected variables and level of stress.

MEASUREMENT OF STRESS LEVEL

For measuring stress, twenty-one factors are identified and measured under a five-point Likert scale. Total scores for each statement were calculated. The scores allotted to each factor are shown below.

- Highly satisfied   - 5 points
- Satisfied   - 4 points
- Neither satisfied nor dissatisfied   - 3 points
- Dissatisfied   - 2 points
- Highly dissatisfied   - 1 point

The stress level of doctors has been classified into three categories namely, high level, moderate level, and low level. The respondents who have secured scores more than the arithmetic mean and standard deviation (72.75+10.87) have high level of stress. The respondents who have secured less than the arithmetic mean, and standard deviation (72.75-10.87) have low level of stress and those who have secured scores between these two (83.62 and 61.88) come under moderate level of satisfaction. The level of stress of doctors is depicted in the following Table.

LEVEL OF STRESS
TABLE 1

S. No	Stress Level	Number of Respondents	Percentage
1.	Low Level	32	13.73
2.	Moderate	172	73.82
3.	High Level	29	12.45
	Total	233	100.00

Source: Primary data

It is clear from the above Table that out of 233 respondents selected for the study 32(13.73%) respondents fall under the category of low level of stress, 172(73.82%) doctors fall under the category of moderate level of stress and 29(12.45%) respondents fall under the category of high level of stress. Thus, it is inferred that majority of the respondents fall under the category of moderate level of stress.

FACTORS ASSOCIATED WITH STRESS

Eight variables are identified to examine the association with the level of stress. These variables include demographic and professional details such as gender, age, staying with family, employment of attendants, experience, monthly earnings, working hours and average number of patients. Chi-square test has been used to study the association. The level of confidence chosen is five per cent.

GENDER AND LEVEL OF STRESS

Null hypothesis is formulated and tested with the help of chi-square test and the result is shown in the Table given below.

H_o: Gender is not associated with the level of stress
TABLE 2

S. No	Gender	Stress			Total
		Low	Moderate	High	
1.	Male	22(16.18%)	97(71.32%)	17(12.50%)	136(100.00%)
2.	Female	10(10.31%)	75(77.32%)	12(12.37%)	97(100.00%)
	Total	32	172	29	233

Source: Primary data

Calculated χ^2: 1.696, D.F: 2, P value: 0.428

Out of 233 respondents taken for the study 136 respondents are male and the remaining 97 respondents are female. The test result shows that the calculated chi-square value is 1.696 and P value is 0.428. Since the calculated P value is greater than 0.05, the formulated null hypothesis is accepted. Thus, it is concluded that there is no significant association between gender and level of stress.

AGE AND LEVEL OF STRESS

Null hypothesis is formulated and tested with the help of chi-square test and the result is shown in the Table given below.

H_o: Age is not associated with the level of Stress
TABLE 3

S. No	Age	Stress			Total
		Low	Moderate	High	
1.	Up to 30 years	5(8.77%)	46(80.70%)	6(10.53%)	57(100.00%)
2.	31 – 40 years	7(10.29%)	50(73.53%)	11(16.18%)	68(100.00%)
3.	41 – 50 years	4(10.00%)	28(70.00%)	8(20.00%)	40(100.00%)
4.	Above 50 years	16(23.53%)	48(70.59%)	4(5.88%)	68(100.00%)
	Total	32	172	29	233

Source: Primary data

Calculated χ^2: 12.423, D.F: 6, P value: 0.053

The percentage of respondents with high level of stress is found to be high among respondents who are in the age group of 41-50 years. The percentage of respondents with low level of stress is found to be high among respondents who are in the age group of above 50 years. The test result shows that the calculated chi-square value is 12.423 and P value is 0.053. Since the calculated P value is greater than 0.05, the formulated null hypothesis is accepted. Thus, it is concluded that there is no significant association between age and level of stress.

STAYING WITH FAMILY AND LEVEL OF STRESS

Null hypothesis is formulated and tested with the help of chi-square test and the result is shown in the Table given below.

H_o: Staying with family is not associated with the level of stress
TABLE 4

S. No	Staying with Family	Stress			Total
		Low	Moderate	High	
1.	Staying	32(15.38%)	153(73.56%)	23(11.06%)	208(100.00%)
2.	Not staying	0(0.00%)	19(76.00%)	6(24.00%)	25(100.00%)
	Total	32	172	29	233

Source: Primary data

Calculated χ^2: 6.868, D.F: 2, P value: 0.032

The percentage of respondents with high level of stress is found to be high among respondents who are not

staying with their families. The percentage of respondents with low level of stress is found to be high among respondents who are staying with their families. The test result shows that the calculated chi-square value is 6.868 and P value is 0.032. Since the calculated P value is less than 0.05, the formulated null hypothesis is rejected. Thus, it is concluded that there exists a significant association between staying with family and level of stress.

EMPLOYMENT OF ATTENDANTS AND LEVEL OF STRESS

Null hypothesis is formulated and tested with the help of chi-square test and the result is shown in the Table given below.

H_o: *Employment of attendants is not associated with the level of stress*

TABLE 5

S. No	Employment of Attendants	Stress			Total
		Low	Moderate	High	
1.	Appointed	12(8.63%)	102(73.38%)	25(17.99%)	139(100.00%)
2.	Not Appointed	20(21.28%)	70(74.47%)	4(4.25%)	94(100.00%)
	Total	32	172	29	233

Source: Primary data

Calculated χ^2: 15.030, D.F: 2, P value: 0.001

The percentage of respondents with high level of stress is found to be high among respondents who have appointed attendants at home. The percentage of respondents with low level of stress is found to be high among respondents who have not appointed attendants at home. The test result shows that the calculated chi-square value is 15.030 and P value is 0.001. Since the calculated P value is less than 0.05, the formulated null hypothesis is rejected. Thus, it is concluded that there exists a significant association between employment of attendants and level of stress.

EXPERIENCE AND LEVEL OF STRESS

Null hypothesis is formulated and tested with the help of chi-square test and result is shown in the Table 6.

H_o: *Experience is not associated with the level of stress*

TABLE 6

		Stress	Total

S. No	Experience	Low	Moderate	High	
1.	Up to 5 years	7(9.86%)	56(78.87%)	8(11.27%)	71(100.00%)
2.	6 – 10 years	5(12.19%)	31(75.62%)	5(12.19%)	41(100.00%)
3.	11 – 15 years	1(2.78%)	27(75.00%)	8(22.22%)	36(100.00%)
4.	Above 15 years	19(22.35%)	58(68.23%)	8(9.42%)	85(100.00%)
	Total	32	172	29	233

Source: Primary data

Calculated χ^2: 12.695, D.F: 6, P value: 0.048

The percentage of respondents with high level of stress is found to be high among respondents who are having eleven to fifteen years of experience. The percentage of respondents with low level of stress is found to be high among respondents who are having more than fifteen years of experience. The test result shows that the calculated chi-square value is 12.695 and P value is 0.048. Since the calculated P value is less than 0.05; the formulated null hypothesis is rejected. Thus, it is concluded that there is a significant association between experience and level of stress.

MONTHLY EARNINGS AND LEVEL OF STRESS

Null hypothesis is formulated and tested with the help of chi-square test and result is shown in the Table 7.

H_o: *Experience is not associated with the level of stress*

TABLE 7

S. No	Monthly Earnings (Rs)	Stress			Total
		Low	Moderate	High	
1.	Up to 30000	6(15.79%)	29(76.32%)	3(7.89%)	38(100.00%)
2.	30001-50000	14(20.58%)	45(66.18%)	9(13.24%)	68(100.00%)
3.	Above 50000	12(9.45%)	98(77.16%)	17(13.39%)	127(100.00%)
	Total	32	172	29	233

Source: Primary data

Calculated χ^2: 5.660, D.F:4, P value: 0.226

The percentage of respondents with high level of stress is found to be high among respondents who are earning more than `50,000 per month. The percentage of respondents with low level of stress is found to be high among respondents who are earning between `30,001 and `50,000. The test result shows that calculated chi-square value is 5.660 and P value is 0.226. Since the calculated P value is greater than 0.05, the formulated null hypothesis is accepted. Thus, it is

concluded that there is no significant association between monthly earnings and level of stress.

WORKING HOURS AND LEVEL OF STRESS

Null hypothesis is formulated and tested with the help of chi-square test and result is shown in the Table 8.
H_o: *Working Hours is not associated with the level of stress*

TABLE 8

S. No	Working Hours	Stress			Total
		Low	Moderate	High	
1.	Up to 8 hours	19(18.81%)	72(71.29%)	10(9.90%)	101(100.00%)
2.	8 – 10 hours	12(13.19%)	72(79.12%)	7(7.69%)	91(100.00%)
3.	Above 10 hours	1(2.44%)	28(68.29%)	12(29.27%)	41(100.00%)
	Total	32	172	29	233

Source: Primary data

Calculated χ^2: 17.828, D.F: 4, P value: 0.001

The percentage of respondents with high level of stress is found to be high among respondents who are working for more than ten hours per day. The percentage of respondents with low level of stress is found to be high among respondents who are working up to eight hours per day. The test result shows that calculated chi-square value is 17.828 and P value is 0.001. Since the calculated P value is less than 0.05 the formulated null hypothesis is rejected. Thus, it is concluded that there exists a significant association between working hours and level of stress.

AVERAGE NUMBER OF PATIENTS AND LEVEL OF STRESS

Null hypothesis is formulated and tested with the help of chi-square test and the result is presented below.
H_o: *Average Number of Patients is not associated with the level of stress*

TABLE 9

S. No	Average Number of Patients	Stress			Total
		Low	Moderate	High	
1.	Up to 50	21(13.21%)	124(77.99%)	14(8.80%)	159(100.00%)
2.	51 – 100	8(18.60%)	30(69.77%)	5(11.63%)	43(100.00%)
3.	Above 100	3(9.68%)	18(58.06%)	10(32.26%)	31(100.00%)
	Total	32	172	29	233

Source: Primary data

Calculated χ^2: 14.152, D.F: 4, P value: 0.007

The percentage of respondents with high level of stress is found to be high among respondents who treat more than 100 patients per day. The percentage of respondents with low level of stress is found to be high among respondents who treat between 51 and 100 patients per day. The test result shows that the calculated chi-square value is 14.152 and P value is 0.007. Since the calculated P value is less than 0.05, the formulated null hypothesis is rejected. Thus, it is concluded that there is a significant association between average number of patients treated per day and level of stress.

CONCLUSION

Eight variables are selected to test their association with the level of stress. Factors like staying with family, employment of attendants, experience, working hours and average number of patients have a significant association with the level of stress and the remaining three factors such as gender, age and monthly earnings do not have any significant association with the level of stress.