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A Study on Job Stress among Private Medical Practitioners in Vellore District, Tamilnadu

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ABSTRACT

The main objective of this study is to ascertain the level of stress among the private medical practitioners at Vellore District of Tamilnadu, India. The primary and secondary data was used. The primary data was collected by the researcher with the help of structured questionnaire. The Cochran's sample size equation and his correction equation (1977) for categorical data were applied to determine the optimum sample size (335). Multi-stage random sampling method was used. Statistical Package for Social Science (SPSS) tools such as: Factor analysis, cluster analysis, discriminant analysis, chi-square test, analysis of variance and regression analysis were used to analyse the data. Based on test result. It is found that out of 335 respondents, 119 (35.5%) respondents had high job stress, 121 (36.1%) respondents had moderate stress and 95 (28.4%) respondents had low job stress. It is also found that only two variables i.e., fear of assault during night visits (0.214) and visiting in extremely adverse weather conditions (0.177) have significant effect on job stress among private medical practitioners.

Key words: Job stress, private medical practitioners, health and system

INTRODUCTION

Indian healthcare is at a critical juncture, as it focuses on pertinent issues of consumerism, cost effectiveness and quality. Indian healthcare is annually growing at the rate of 15% which is faster than most of the other service sectors. Stress in workplace has become an increasingly hot topic over the past few decades. Stress in the workplace reduces productivity, increases management pressures and makes people ill in many ways, evidence of which is still increasing. Workplace stress affects the performance of the brain, including functions of work performance memory, concentration and learning.

Today's organisational life is characterised by stress and strain. Employees experience stress at work that has negative consequences both to the individual and the organisation. Stress may be referred to as an unpleasant state of emotional and physiological arousal that people experience in situations that they perceive as dangerous or threatening to their well-being. The word stress means different things to different people. Some people define stress as events or situations that cause them to feel tension, pressure, or negative emotions such as anxiety and anger. Others view stress as the response to these situations. This response includes physiological changes such as increased heart rate and muscle tension as well as emotional and behavioural changes. However, most psychologists regard stress as a process involving a person's interpretation and response to a threatening event.

The private hospitals are increasing in numbers vastly due to a number of factors including government policies of concessional land allotment and relaxation in custom duties on import of medical equipment, rapid influx of medical technology, growing deficits of public sector hospitals and an increasing middle-income class. Private hospitals can provide the required healthcare services to India's growing population. Private sector hospitals in India are facing the immense pressure for cost-reduction and better treatment. In order to become efficient and competitive, these hospitals have to provide medical services of international standard at affordable prices.

Stress is the excitement, feeling of anxiety and physical tension that occurs when the demands place on an individual are thought to exceed his ability to cope. This most common view of stress is often called distress or negative stress. The physical or psychological demands from the environment that cause this condition are called stressors.

Makin *et al.* (1988) observed that job satisfaction and occupational stress among general practitioners. A random sample of 101 general practitioners in the Greater Manchester area. The highest levels of job satisfaction were reported for 'intrinsic' job factors such as freedom to choose method of working, amount of responsibility and amount of variety, rather than 'extrinsic' factors such as rate of pay and hours of work. They concluded that the major sources of stress for the general practitioners are not medical, but social. Unpredictable interruptions, especially outside 'normal' working hours, are the greatest source of stress.

Cooper *et al.* (1989) identified that sources of job stress associated with high levels of job dissatisfaction and negative mental wellbeing among general practitioners in England. Data was collected from each general practitioner on his or her degree of job satisfaction and mental health. Multivariate analysis disclosed four job stressors that were predictive of high levels of job dissatisfaction and lack of mental wellbeing, these were demands of the job stressors and their patients expectations, interference with family life, constant interruptions at work and home and practice administration. They conclude that there may be substantial benefit in providing a counselling service for general practitioners and other health care workers who suffer psychological pressure from their work.

Tharakan (1992) hypothesized that professional woman and non-professional working woman would differ in their job-related stress and level of job satisfaction. A sample of 90 technocrat-working women (doctors, engineers and lawyers) was compared with 90 non-technocrat-working women (clerks, officers and teachers) on these variables. The Occupational Stress Indicator (OSI) Scale developed by Williams and Cooper (1998) was administered to measure occupational stress and job satisfaction. Professional working women experienced greater work-related stress than non-professional working women because the expectations of the former were much higher than those of the later.

Pradhan and Khattri (2001) examined gender differences in the life stress, burnout and the life stress-burnout relationship in 20 couples engaged in the medical profession. The Maslach Burnout Inventory (Maslach and Jackson, 1981) was administered to the subjects. The analysis of the data revealed that there is a significant relationship between life stress with emotional exhaustion and depersonalisation. There is no gender difference between life stress and burnout.

Stebbing *et al.* (2004) examined the stressors and levels of job satisfaction in this potentially vulnerable group. In order to assess overall levels of satisfaction, they were asked whether doctors would recommend their research post to a colleague. They concluded that there was a statistically significant association between those who would not recommend their post to a colleague and those who had difficulties in arranging funding and in writing up. Further significant correlations were

found between dissatisfaction with the post and lack of help, support and advice from supervisors and colleagues, wanting to change supervisors, experience of the major categories of workplace bullying and having an inadequate clinical commitment. They found that stress and bullying are common in doctors undertaking research. These findings have important implications for medical training and for doctors choosing research projects. Setting up systems of support may have important benefits.

Sharma (2005) reported on role stress of doctors. Small amount of stress can have positive effects by energising people towards goals and excessive stress may seriously and negatively affect a person's health and job performance. Hospitals are no exception; doctors, nurses and other paramedical staff work under stress. Doctors are lifesavers and if they come under stress, their efficiency is reduced, directly affecting the lives of a large number of people whom they treat. The study was done in two private and two government hospitals of Jaipur. The following 10 role stresses were measured and analysed: Inter-Role Distance (IRD), Role Stagnation (RS), Role Expectation conflict (REC), Role Erosion (RE), Role Overload (RO), Role Isolation (RI), Personal Inadequacy (PI), Self-Role Distance (SRD), Role Ambiguity (RA), Resource Inadequacy (Rin). This study concludes that doctors, especially government doctors, experience various types of role stress.

Tyssen (2007) suggested that physicians' physical health is similar to the general population, although, female physicians tend to be in better health than other women. Some mental disorders such as depression and suicide appear to be more prevalent. Mental health problems are known to be associated with low work control (autonomy), time pressure and demanding patients. There is little difference between the genders early in their career but more female than male physicians seem to experience problems later on. Physicians seldom take sick leave and tend to make less use of primary health care and some screening facilities. Self-treatment is common-even for mental problems. As certain mental disorders appear to be common among physicians, specialist psychiatric services should be made more accessible for this group. A low-threshold facility for seeking help with such problems has recently been developed in Norway.

Wong (2008) found that there is good evidence to show that doctors are at higher risk of stress than the general population. There needs to be a cultural change within the profession for doctors and their employers to pay closer attention to how doctors deal with the demands of the job, how they look after their own mental health and attain wellbeing and a sense of balance between their working and personal lives. Doctors are expected to be conscientious, compassionate and self-sacrificing. However, we must remember that doctors need to nurture themselves, address their own spiritual needs and engage in self-care practices, in order to enable them to give their best to patients. Sometimes, doctors feel that their problems cannot be understood by people outside of the profession, therefore developing and maintaining a professional network is valuable. Some private doctors work in a single-handed practice, thus adding to a sense of professional isolation.

Baleh *et al.* (2009) concluded that physicians pursue the arduous task of becoming surgeons to change the lives of individuals facing serious health problems, to experience the joy of facilitating healing and to help support those patients for whom medicine does not yet have curative treatments. Despite its virtues, a career in surgery brings significant challenges that can lead to substantial personal distress for the individual surgeon and his or her family. Each surgeon should continuously map a career pathway that integrates personal and professional goals with the outcome of maintaining value, balance and personal satisfaction throughout his or her professional career. Being proactive in avoiding burnout is preferable to reacting to burnout after it has damaged one's professional life or personal wellness.

Based on the literature review, the researcher has evolved a conceptual model of Impact of Practitioner's Socio Economic Variables on Stress (Fig. 1).

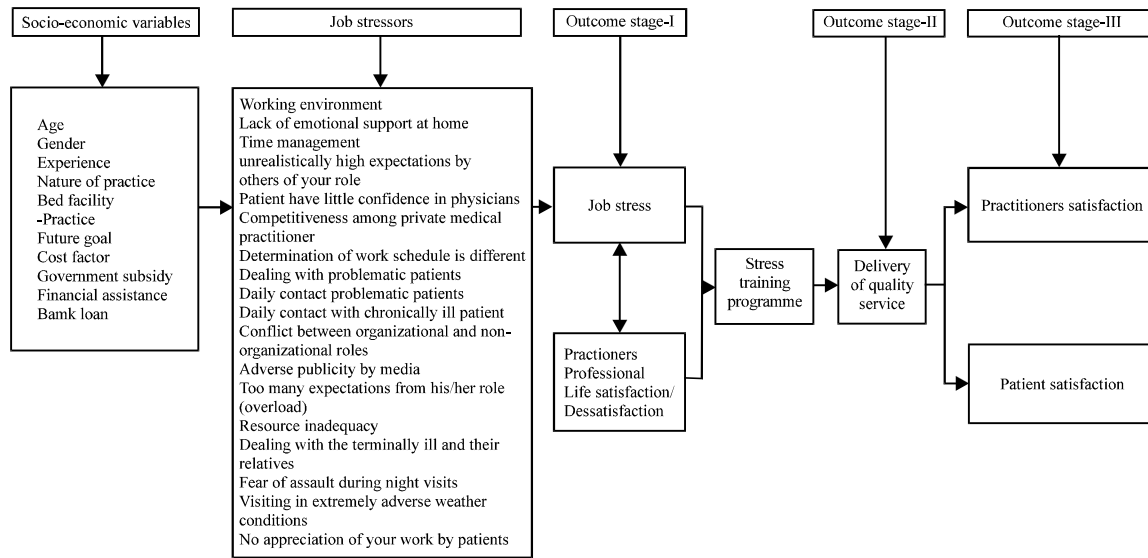


Fig. 1: Impact of practitioner's socio economic variables on stress (a conceptual model)

Indian healthcare infrastructure has evolved over the past six decades after the India's independence. The role of private sector has been critical in the provision of medical care services. The private sector is dominating the Indian healthcare delivery market includes changing consumer perception, increasing awareness about quality of medical care, greater penetration of insurance, increased purchasing power, changing demographic structure, etc. The study focuses on job stress among private medical practitioners on Indian health care system in Vellore district, Tamilnadu.

STATEMENT OF THE PROBLEM

The healthcare industry is highly fragmented and healthcare systems vary from country to country. It provides services including prevention, diagnosis and treatment of illness or other health issues and rehabilitation. Healthcare providers are suffering due to the rising costs and demand exceeding capacity, so they have started reaming up with private care providers to handle the excess demand.

The private medical practitioners in Vellore district, Tamilnadu, prefer to concentrate only on outpatient services and they do not focus on inpatient services as they have limited infrastructure and equipment technology when compared to the larger corporate hospitals. Thus limited infrastructure and equipment technology, less number of medical practitioners, supporting staff, high operating expenses and lack of awareness on government subsidies leading to stress among private medical practitioners which affect the health care system of the district.

The following are the objectives of the study:

- To study the influence of demographic variables on stress among private medical practitioners in Vellore district, Tamilnadu
- To ascertain the level of stress among the private medical practitioners in Vellore district, Tamilnadu

METHODOLOGY

The study describes the relationship between the Socio-economic profile and job stress among private medical practitioners in Vellore district. Both primary and secondary data were used. As on 1st April 2012 there were 675 private medical practitioners in Vellore district constituting the population frame for the study. The optimum sample size worked out to 335 is considered appropriate to make the sample efficient, representative and reliable. The Cochran's sample size equation for categorical data is applied to determine the optimum sample size.

Multi-stage random sampling method was used to select the respondents to study the job stress among Private Medical Practitioners. The primary data were collected from the private medical practitioners who have registered in Indian Medical Association of Vellore District (Between November 2012 and April 2013). The pilot study was conducted with 30 respondents to ensure the validity and reliability of the data collection instrument. The secondary data were collected from Indian Medical Association, World Health Organisation, various Journals, Bulletins, Magazines, Periodicals and Dailys. Statistical tools such as, factor analysis, cluster analysis, discriminant analysis, chi-square test, analysis of variance and regression analysis were used to analyse the data.

RESULTS AND DISCUSSION

Analysis of demographic background: The data gathered from the private medical practitioners concerning demographic background such as, gender, age, experience, education background, monthly income, hospital location are presented in Table 1.

It is acknowledged from Table 1 that the sample covers 335 private medical practitioners which consist of 88.9% male respondents and 11.1% female respondents. Age of the respondents are admits, that 15.8% of respondents are less than the age of 30 years, 35.2% of respondents come under the age of 31-40 years, 33.5% of respondents falls in the age of 41-50 years and rest falls above 51 years. Experience in medical practice shows that 23.3% of respondents have experience from 2-5 years, 28.6% of respondents have medical experience from 6-10 years, 31.9% of respondents have 11-15 years and remaining 16.2% of respondents have more than 16 years of experience in medical field. This study also asserts that 33.7% of respondent's education is merely MBBS, 26.5% of respondents have completed MD as additional degree, 20.3% of respondents were MS degree holders and 11% of respondents have completed super speciality courses. Monthly income shows that 11.3% of respondents earning monthly income of less than Rs.1,00,000, 40% of respondents earning monthly income more than 1,00,001 but less than 2,50,000. The 29.2% of respondent's monthly income ranges between 2,50,001-5,00,000 and rest 19.5% of respondent's monthly income falls more than 5,00,001. Specialization of the private medical practitioners shows that 20.3% of respondents are focussing on gynaecology treatment, 23.6% are focussing on Paediatrics and 59.1% are concentrating on adult care like ophthalmology, ENT, anaesthesia, cardiology and neurology and so on. Hospital location clearly shows that 12.2% of respondents are running their hospital in rural based areas and rest 87.8% are practising in urban areas.

Factor analysis: The factor analysis is applied to identify and define the underlying dimensions in the original variables. The respondents are asked to give their view for the 18 statements in the likert five point scale with the alternate option such as strongly disagree, disagree, neither agree nor disagree, agree and strongly agree. A closer examination of the correlation matrix may reveal what are the variables which do not have any relationship. So that all the 18 variables have been

Table 1: Analysis of demographic background

Particulars	Respondent	Percentage
Gender		
Male	298	88.9
Female	37	11.1
Age		
Less than 30 years	53	15.8
31-40 years	118	35.2
41-50 years	112	33.5
Above 51 years	52	15.5
Experience		
2-5 years	78	23.3
6-10 years	96	28.6
11-15 years	107	31.9
16 years and more	54	16.2
Educational qualification		
MBBS	113	33.7
MD	89	26.5
MS	68	20.3
Others	65	19.5
Monthly Income		
Less than 1,00,000	38	11.3
1,00,001-2,50,000	134	40
2,50,001-5,00,000	98	29.2
5,00,001 and above	65	19.5
Specialization		
Gynaecology	68	20.3
Paediatrics	79	23.6
Other adult care	198	59.1
Hospital location		
Rural	41	12.2
Urban	294	87.8

Source: Primary data

retained for further analysis. Further, two tests are applied to the resultant correlation matrix to test whether the relationship among the variables is significant or not.

The Table 2 shows KMO measure of sampling adequacy and Bartlett's test of sphericity. The Kaiser-Mayer-Olkin test is based on the correlations and partial correlations of the variables. The value of test statistic is 0.938 which means the factor analysis for the identified variables is found to be appropriate to the data. The test value is 2.536. Here the significant value is 0.000 which indicates that there exist significant relationships among the variables. The measure of KMO test and value of Bartlett's test indicate that the present data is useful for factor analysis. Since the factor loadings (coefficients) indicate how much weight is assigned to each factor. Factors with large coefficients for a variable are closely related to that variable. Thus the 18 variables in the data are reduced into four factor models namely High expectations, Poor interpersonal relations, Lack of recognition and Poor climate.

Cluster analysis: The respondents can be classified into three categories based on choice criteria. They are classified into three segments because the difference between the coefficients is significant only on three cases on the hierarchical cluster. For the purpose of classification of respondents K-means cluster is used.

Table 2: KMO and Bartlett's test

Test	Values
Kaiser-meyer-olkin measure of sampling adequacy	0.938
Bartlett's test of sphericity	
Chi-square	2.536E3
df	153
Significance	0.000

Table 3: Final cluster centres

Parameters	Cluster		
	1	2	3
High expectations	2.31	4.00	2.92
Poor interpersonal relations	2.15	3.78	2.97
Lack of recognition	2.21	3.98	2.96
Poor climate	1.96	3.35	2.98
Average	2.16	3.78	2.96
Rank	III	I	II

Table 4: ANOVA

Criteria	Cluster		Error		F	Significance
	Mean square	df	Mean square	df		
High expectations	79.805	2	0.252	332	316.863	0.000
Poor interpersonal relations	69.855	2	0.279	332	250.241	0.000
Lack of recognition	84.746	2	0.418	332	202.736	0.000
Poor climate	53.817	2	0.417	332	129.029	0.000

The final cluster centre Table 3 shows the mean values for the three clusters which reflect the attributes of each cluster. For instance, the mean value of the high expectations, poor interpersonal relations, lack of recognition and poor climate for the first cluster are 2.31, 2.15, 2.21 and 1.96, respectively. The average score of the first cluster is 2.16 with third rank. The second cluster is ranked first with average score of 3.78. As far as the third cluster is concerned, average score is 2.96 with sec rank. It is revealed that first cluster respondents have low score, sec cluster respondents have high score and third cluster respondents have medium score for all the four factors. This means first cluster respondents have low job stress, second cluster respondents have high job stress and third cluster respondents have moderate stress.

The Table 4 shows that the difference exists among the three clusters in the mean values are significantly different. The F-value of the high expectations, poor interpersonal relations, lack of recognition and poor climate are 317, 250, 203 and 129, respectively. The significant value for all the four criteria is 0.000. This means that these factors have significant contribution on dividing practitioners into three segments on the basis of the above four criteria.

The Table 5 reveals that out of 335 respondents, 119 (35.5%) respondents have high job stress, 121 (36.1%) respondents have moderate stress and 95 (28.4%) respondents have low job stress.

Discriminant analysis: Reliability of the cluster classification and its stability across the samples has to be cross checked. Authors like Feild and Schoenfeldt (1975) and Rogers and Linden (1973) have recommended the use of discriminant analysis for cross validation.

Table 5: No. of cases in each cluster

Cluster	Value	Percentage
1	95.000	28.4
2	119.000	35.5
3	121.000	36.1
Valid	335.000	100.0
Missing	0.000	0.0

Table 6: Tests of equality of group means

Parameters	Wilks' Lambda	F	df		Significance
			1	2	
High expectations	0.344	316.863	2	332	0.000
Poor interpersonal relations	0.399	250.241	2	332	0.000
Lack of recognition	0.450	202.736	2	332	0.000
Poor climate	0.563	129.029	2	332	0.000

Table 6 consists Wilks' Lambda, F-statistic, its degree of freedom and level of significance. Wilks' Lambda is the ratio of the within-groups sum of squares to the total sum of squares. Wilks' lambda in this case ranges from 0.563-0.344. The small value of Wilks' lambda indicates that there is a strong group differences among mean values of four factors. The F-statistic is a ratio of between-groups variability to the within-groups variability. The significance value is 0.000 for all the four factors which indicates that the group differences are significant.

The Table 7 presents eigen values and canonical correlations for both the discriminant functions. The Eigen value is the ratio of the between-groups sum of squares to the within-groups sum of squares. Two discriminant functions formed when there are three clusters. The eigen value for function 1 is 4.968 and for function 2 is 0.129. The canonical correlation measures the association between two functions and four factors with regard to job stress among the private medical practitioners. The co-efficient of canonical correlation is very high for both the functions. Hence, there exists high relation between two functions and four factors.

The Table 8 describes the correlation between factors and discriminant functions. The structure matrix which helps to study the usefulness of each variable in the discriminant function. An asterisk indicates the largest absolute correlation with one of the canonical functions. The strongest correlation for poor climate with function 2 and for high expectations, poor interpersonal relations and lack of recognition with function1. So the two functions may be $Z_1 = 0.613*$ high expectations, $+0.551*$ poor interpersonal relations, $+0.495*$ lack of recognition and $Z_2 = 0.729*$ poor climate. Both these two functions are significant discriminant functions which will explain the stress among the private medical practitioners.

To identify the stress among the private medical practitioners, four factors are used. By using these four factors, respondents are segmented into three categories namely respondents with high stress, respondents with medium stress and respondents with low stress. It means there are three categories in each factor. The study of canonical discriminant function is useful to segment the respondents and their level of stress.

Chi-square: The chi-square analysis is done to find out whether the socio-economic variables have impact on stress among the private medical practitioners or not.

Table 7: Eigen values and canonical correlations

Function	Eigen value	Variance (%)	Cumulative (%)	Canonical correlation
1	4.968	97.5	97.5	0.912
2	0.129	2.5	100.0	0.337

Table 8: Structure matrix

Parameters	Function	
	1	2
High expectations	0.613*	-0.566
Poor interpersonal relations	0.551*	0.081
Lack of recognition	0.495*	-0.222
Poor climate	0.378	0.729*

Table 9: Chi-square value for socio-economic variables

Socio-economic variables	Chi square value	Significant value	Significant or not significant
Age	10.503	0.231	Not significant
Gender	0.600	0.741	Not significant
Marital status	2.978	0.226	Not significant
Monthly income	15.526	0.017	Significant
Experience	13.538	0.095	Not significant
Nature of practice	3.057	0.217	Not significant
Bed facility	18.859	0.042	Significant
Average No. of patients	10.171	0.426	Not significant
Type of medical practice (inpatient and outpatient)	15.036	0.001	Significant
Nature of clinical building	10.753	0.005	Significant
Clinic attached with house	2.549	0.280	Not significant
Government subsidy	7.826	0.020	Significant
Potential to enhance practice	10.225	0.037	Significant
Basis for selection of present profession	9.309	0.157	Not significant
Future goal	14.299	0.026	Significant
Cost factor	23.705	0.003	Significant
Financial assistance	13.507	0.001	Significant
Bank loan	8.978	0.011	Significant
Amount reinvested	23.342	0.003	Significant

Source: Primary data

From the chi-square (Table 9) it is clear that 9 socio-economic variables such as monthly income, bed facility, type of medical practice, nature of clinical building, government subsidy, potential to enhance practice, future goal, cost factor, financial assistance, bank loan and amount reinvested have significant association with stress and eight variables do not have significant association with stress.

Analysis of variance: The analysis of variance is used to find out the influence or impact of socio-economic variables such as monthly income, bed facility, potential to enhance practice, future

goal, cost factor and reinvestment on job stress. The analysis of variance is used to test whether the means of more than two quantitative populations are equal or not. For *post hoc* analysis Duncan method is used. If the significant value is less than 0.05, then it is presumed that categories in socio-economic variable are differing on the mean values of factor in dependent variable.

The Table 10 reveals that there are significant differences between all the six socio-economic variables and high expectations (Factor-1). Significant differences are existed between socio-economic variables excluding bed facility and poor interpersonal relations (Factor-2). In the case of lack of recognition (Factor-3) significant differences are found with socio-economic variables excluding potential to improve practice. As far as poor climate (Factor-4) is concerned, significant differences are observed with potential to improve practice and cost factor.

Regression analysis: Here 18 independent variables are used to estimate the values of a dependent variable (Job stress).

Table 10: ANOVA for socio-economic variables and job stress

Socio-economic variables	High expectations (Factor-1)	Poor inter-personal relations (Factor-2)	Lack of recognition (Factor-3)	Poor climate (Factor-4)
Monthly income				
F	3.517	5.926	6.254	2.034
Sig.	0.015	0.001	0.000	0.109
Bed facility				
F	3.608	2.500	3.323	1.992
Sig.	0.003	3.031	0.006	0.079
Potential to improve Practice				
F	4.706	5.088	2.858	3.200
Sig.	0.010	0.007	0.059	0.042
Future goal				
F	3.459	6.167	5.466	0.864
Sig.	0.017	0.000	0.001	0.460
Cost factor				
F	4.471	3.872	2.837	4.364
Sig.	0.002	0.004	0.024	0.002
Reinvestment				
F	3.094	4.731	7.137	0.998
Sig.	0.016	0.001	0.000	0.409

Table 11: Model summary

Model	R	R ²	Adjusted R ²	Standard error of the estimate
1	0.528 ^a	0.279	0.238	0.699

Table 12: ANOVA

Parameters	Sum of squares	df	Mean square	F	Significance
Regression	59.690	18	3.316	6.792	0.000 ^a
Residual	154.292	316	0.488	-	-
Total	213.982	334	-	-	-

Table 13: Coefficients

Parameters	Unstandardized coefficients		Standardized coefficients		Significance
	Beta	SE	Beta	t	
Constant	0.586	0.175	-	3.347	0.001
Fear of assault during night visits	0.214	0.048	0.261	4.484	0.000
Visiting in extremely adverse weather conditions	0.177	0.050	0.224	3.568	0.000
Adverse publicity by media	0.013	0.046	0.018	0.277	0.782
No appreciation of your work by patients	0.047	0.040	0.069	1.172	0.242
Unrealistically high expectations by others of your role	-0.031	0.045	-0.044	-0.683	0.495
Dealing with problematic patients	-0.097	0.044	-0.137	-2.210	0.028
Conducting surgery	0.062	0.049	0.092	1.284	0.200
Working environment (including surgery set up)	-0.018	0.048	-0.027	-0.386	0.700
Time management	-0.002	0.046	-0.003	-0.047	0.963
Lack of emotional support at home, especially from spouse/life partner	-0.097	0.044	-0.151	-2.219	0.027
Daily contact with chronically ill patients	0.062	0.045	0.087	1.357	0.176
Dealing with the terminally ill and their relatives	0.123	0.047	0.168	2.598	0.010
Competitiveness among private medical practitioners	0.046	0.043	0.068	1.068	0.286
Too many expectations from his/her role (overload)	-0.005	0.043	-0.007	-0.115	0.908
Resource Inadequacy	-0.004	0.044	-0.005	-0.081	0.936
Conflict between organizational and non-organisational roles	0.007	0.045	0.010	0.157	0.875
Determination of work schedule is difficult	0.060	0.045	0.086	1.337	0.182

The model summary, Table 11 shows the R value, R^2 value, adjusted R^2 value and standard error of the estimate. The R is the correlation, its value is 0.528. The R^2 is degree of determination, its value is 0.279. The degree of determination shows the extent to which independent variables influence on job stress of private medical practitioners. Here, the job stress is determined to an extent of 27.9% by the independent variables.

The ANOVA, Table 12 shows that the significant value is less than 0.01 which means dependent variable that is job stress of the private medical practitioners is significantly predicted by independent variables at 99% of confidence level.

The coefficients in Table 13 shows the regression coefficients which can be used to write the regression equation. The multiple regression equation describes the average relationship between these variables and this relationship is used to predict or control the dependent variable. Out of 18 independent variables, only two variables have significant effect on job stress of private medical practitioners. Therefore, job stress = 0.586 + 0.214 (Fear of assault during night visits) + 0.177 (Visiting in extremely adverse weather conditions).

LIMITATIONS OF THE STUDY

- The scope of the study was limited to Vellore district of Tamilnadu, only
- The study was restricted the allopathic medical practice alone. The medical practices such as Dental science, Homoeopathy, Unani, Ayurveda, Siddha were excluded from the study
- The independent variables included in the study are restricted to select variables only

CONCLUSION

The majority of demographic background of the respondents shows that 88.9% are male, 35.2% of the respondents are in the age group of 31-40 years, 31.9% of the respondents are in the age group of 31-40 years, 31.9% of the respondents are having experience in the range of 11-15 years, 33.7% of respondents' education is MBBS, 40% of respondents' and monthly income ranges between 1,00,000-2,50,000. As far as specialisation is concerned that 59.1% of respondents practicing adult care. Majority of the respondents (87.8%) are running their hospitals in urban areas. The result of factor analysis shows that stress among the private medical practitioners are influenced by high expectations, poor interpersonal relationship, lack of recognition and poor climate. Cluster analysis reveals that 35.5% of respondents have high job stress, 36.1% of respondents have moderate stress and 28.4% of respondents have low job stress. Further reliability of the cluster classification and its stability across the samples are confined by performing discriminant analysis. Chi-square analysis shows that 11 socio-economic variables such as monthly income, bed facility, type of medical practice, nature of clinical building, government subsidy, potential to enhance practice, future goal, cost factor, financial assistance, bank loan and amount reinvested have significant association with stress. Anova reveals that there are significant differences between socio-economic variables such as income, bed facility, scope for improvement, future goal, cost factor and reinvestment and high expectations (Factor-1). Multiple regressions describes that only two variables namely, fear of assault during night visits and visiting in extremely adverse weather conditions have significant effect on job stress. It is suggested that the private medical practitioners need to have personal expectations and to improve their interpersonal skills to reduce the level of job stress considerably. The hospital authorities should create congenial atmosphere and ensure proper recognition to the practitioners. It is also suggested that the Government need to take necessary steps to provide financial assistance, subsidies and bank loan which will help the practitioners to improve the overall infrastructure facilities. This study concludes that the synchronised efforts of practitioners, hospital authorities and government can reduce the level of stress among the practitioners and eventually that efforts help to improve the quality of healthcare system and patients' satisfaction.

REFERENCES

- Balch, C.M., J.A. Freischlag and T.D. Shanafelt, 2009. Stress and burnout among surgeons: Understanding and managing the syndrome and avoiding the adverse consequences. *Arch. Surg.*, 144: 371-376.
- Cooper, G.L., U. Rout and B. Faragher, 1989. Mental health, job satisfaction and job stress among general practitioners. *Br. Med. J.*, 298: 366-370.
- Feild, H.S. and L.F. Schoenfeldt, 1975. Ward and hook revisited: A two-part procedure for overcoming a deficiency in the grouping of persons. *Educ. Psychol. Meas.*, 35: 171-173.
- Makin, P.J., U. Rout and C.L. Cooper, 1988. Job satisfaction and occupational stress among general practitioners: A pilot study. *J. R. Coll. Gen. Pract.*, 38: 303-306.
- Maslach, C. and S.E. Jackson, 1981. *The Maslach Burnout Inventory*. Consulting Psychologist Press, Palo Alto, CA., USA.
- Pradhan, M. and P.R. Khattri, 2001. Intra-psyche and extra psychic predictors of burn out in doctors: Gender differences. *J. Commun. Guide Res.*, 18: 129-136.
- Rogers, G. and J.D. Linden, 1973. Use of multiple discriminant function analysis in the evaluation of three multivariate grouping techniques. *Educ. Psychol. Meas.*, 33: 787-802.

- Sharma, E., 2005. Role stress among doctors. *J. Health Manage.*, 7: 151-156.
- Stebbing, J., S. Mandalia, S. Portsmouth, P. Leonard and J. Crane et al., 2004. A questionnaire survey of stress and bullying in doctors undertaking research. *Postgraduate Med. J.*, 80: 93-96.
- Tharakan, P.N., 1992. Occupational stress and job satisfaction among working women. *J. Indian Acad. Applied Psychol.*, 18: 37-48.
- Tyssen, R., 2007. Health problems and the use of health services among physicians: A review article with particular emphasis on Norwegian studies. *Ind. Health*, 45: 599-610.
- Williams, S. and C.L. Cooper, 1998. Measuring occupational stress: Development of the pressure management indicator. *J. Occup. Health Psychol.*, 3: 306-321.
- Wong, J.G.W.S., 2008. Doctors and stress. *Med. Bull.*, 13: 4-7.