

## STRESS MANAGEMENT AMONG HEALTH CARE PROFESSIONALS

### ITS NOT STRESS THAT KILLS US, IT IS OUR REACTION TO IT -HANS SELYE

D. SHREEDEVI

Associate Professor, Apollo Institute of Hospital Administration, Apollo Health City, Apollo Hospitals Campus,  
Jubilee Hills, Hyderabad, Andhra Pradesh, India

#### ABSTRACT

Stress has become significant due to dynamic social factors and changing needs of life styles. Stress can have a major impact on relations in organizations and also on work itself. Because of that, the concept of stress and elimination of it should be symbolized as an important guideline towards effectiveness and successfulness in the workplace. Each individual in stressful situation responds and also reacts differently, and because the source of stress is not always the content of work or work itself, each individual must also know how to avoid these situations and be able to control them. Stress is not always negative for the individual and is not always causing negative situations, negative mood or in worst cases psychological disorders or even physical illness. The study shows that although stress is present in the workplace, it is still managed in different ways. This study has been able to identify the proportion of the participants who were affected by work related stress. The study highlights the need for better understanding and management of work related stress both at the organizational and individual level.

**KEYWORDS:** Burnout, Clinical Staff, Emotional Exhaustion, Eustress, Non-Clinical, Vulnerability

#### INTRODUCTION

Now a day's stress is a part of every employed person. It is defined as an applied force or system of forces that tends to strain or deform a body. It is also defined as any emotional, physical, social, economic, or other factor that requires a response or change. It can be both positive (Eustress) and negative stress.

Work related stress affects a person's life and has implications on the person's mental and physical well being. This in turn contributes to poor health, low morale and poor productivity of the work force in an organization. Healthcare is very important in people's life, therefore stress among healthcare professionals can bring harm to all population. Sickness, absenteeism, serious neglect or clinical errors are commonly associated with work in highly stressful environments

Work related stress is pervasive in the healthcare industry due to inadequate staffing levels, unachievable targets or goals, long work hours, exposure to infectious diseases and hazardous substances, threat of malpractice, litigation and other factors related to specific areas of work. If the challenges of everyday life become too big and insurmountable, they can lead to stressful situations, which may be manifested in people's life and work. It is important to identify its causes, to face them and consequently control them.

#### IMPORTANCE OF THE STUDY

Stress levels in healthcare professionals have been shown to be of high prevalence in many countries and the need to tackle this issue is due to many reasons like personal cost to the individuals and financial cost to organizations.

The study is undertaken

- To derive a better understanding of stress and burnout in the workplace through comprehensive study, to reduce the risk of poor quality care which leads to poor patient satisfaction and also
- To explore interventions that will reduce the stress experienced by healthcare professionals and increase the effectiveness of both organizational and individual interventions.

### OBJECTIVES OF THE STUDY

- To assess and evaluate the stress levels among the healthcare professionals in a busy corporate hospital
- To compare the stress levels among various clinical and non-clinical professionals
- To suggest and recommend measures to overcome the stress levels

### SCOPE OF THE STUDY

- The scope of the study is limited to the information given by the employees in the selected hospital.
- The study is confined to few randomly selected healthcare professionals from some of the departments due to time constraints.

### RESEARCH METHODOLOGY

The study was conducted among the healthcare professionals of a selected hospital. The data was collected by distributing the “stress assessment questionnaire”.

- **Sample Design:** Convenience simple random sampling is adopted. The samples of the staff were randomly assigned manually from various departments and wards of the hospital based on the staff availability.
- **Sources of Data**

#### Primary Data is

- Collected by distributing the stress assessment questionnaire randomly from various departments and wards to both the clinical staff comprising of doctors and nurses and the non clinical staff comprising of paramedics like laboratory staff, radiology staff , pharmacy staff etc.
- Interview and observation methods were also used for data collection.

**Secondary Data:** It was collected through various books, journals, hospital records and websites.

- **Analytical Tools**

The data obtained are analyzed, graphically represented and interpreted by classifying the responses depending on the frequency of occurrence on the 5point and 3point scale and also the responses are collated to see the proportion of the responses. The analytical tool used is fish bone diagram for the root causes. Analysis was also done by using Pareto charts method.

### LIMITATIONS OF THE STUDY

- The study is conducted in a busy, corporate hospital hence the sample may not be representative for a less busy, semi-urban or rural or a public sector hospital.

- The sample collected were from randomly selected departments/wards hence the study cannot be generalized to grass root employees of the hospital and staff working in other departments /wards
- Due to the busy nature of the hospital and time constraint a larger representative sample could not be collected from the other settings and departments in the hospital.
- A large proportion of the non-clinical staff did not complete the questionnaire. This could significantly affect the reliability of the results in this group.
- A small proportion of the clinical staff (mostly) doctors were apprehensive of filling the questionnaire, stating that the questions were too direct hence affecting the reliability of the results.

## **REVIEW OF LITERATURE**

Numerous recent studies have explored work stress among health care personnel in many countries. Investigators have assessed work stress among medical technicians, radiation therapists, social workers, occupational therapists, Physicians and health care staff across disciplines.

Ruth Atukunda, Peter Memiah have made annual assessment to evaluate the quality of care at 18 HIV health facilities. Questions to determine stress management and HIV care among health workers were graded from 0–5 (lowest to highest score). The results of the study showed that majority of the health facilities (67%) did not have policies or practices in place to relieve stress faced by staff in providing care for persons with HIV/AIDS. Less than half of the health facilities (44.4%) had policies on PEP, confidential HIV testing and counseling as well as referral for care and treatment for staff that are found to be HIV positive. They concluded evaluating and addressing issues associated with stress, burnout, as well as providing HIV care services among health workers in HIV settings is imperative for provision of good quality of care.

William C. Bailey, D. Kay Woodiel, M. Jean Turner, and Jenifer Young, B.S. have examined the relationship of financial stress to personal and work stress and its negative impact on personal and work satisfaction. A survey of 187 professional mental health staff working in behavioral hospitals determined that financial stress scores from personal and work areas explained 50% of the variance in their overall stress. Financial stress scores also explained 30% of the negative variance in personal and work satisfaction. The study indicates as much as 50% of overall stress could be reduced by improved financial management, thus contributing significantly to their personal and work satisfaction which counterbalances stress which lowers productivity. Kakunje has identified the factors that contribute for stress among health care professionals and suggested that to manage stress requires the utilization of basic resiliency skills such as developing an attitude of optimism and hope, overcoming the daily effects of stress, and maintaining appropriate levels of fun and enjoyment in life. Balch CM, Freischlag JA, Shanafelt TD have analysed that Surgeons train for many years and work long hours, often dealing with stressful situations. As a result, some surgeons may experience burnout, which in some cases may lead to depression and/or drug dependency. Identifying and effectively managing causes of stress as well as determining the optimal work-life balance is critical for obtaining personal and professional career satisfaction. This article explores causes of surgeon burnout and reviews results from the American College of Surgeons Burnout Survey. Strategies for personal and professional growth, wellness and renewal are also discussed. Uma, T., has identified ten reasons of stress among students. The results of the study show that 60% of the students are frequently neglecting their diet and 70% of the students are frequently becoming rude which is the outcome of stress. The study suggests possessing positive attitude and following meditation to manage the stress. Stress is always carried out in three phases. The first phase, called an alarm phase, prepares an individual for the action. The second stage, called a resistant phase, is adaptation to stress. However, if

the stress is acting on, it leads to tiredness and to the third stage, called a phase of exhaustion.

### **Stress in the Working Environment**

“Every profession is not equally stressful. Many problems occur mainly because of the nature of work, rather than because of the organization of work. In some areas of profession, such as in medicine, police and judiciary, teaching, social work, acting and advertising, there are existent pressures in general. People spend more and more time at work, therefore the leaders of organizations should identify and prevent stress among employees. Today's working environment is very cold and demanding in economical and psychological context. People are emotionally, physically and spiritually exhausted. However, stress in the workplace can cause huge financial losses and reduce profitability.

### **Factors of Stress**

The factors of stress which can have an effect on people can fall into the following groups: external environment, organizational structure and culture, characteristics of work and relations in organization, personality factors, and circumstances at home. Organizational structure can be an important factor in this because stress occurs on all working levels because of “the hierarchy of positions and scope of competences and responsibilities”. Those on higher positions have been exposed to stress the most, because making demanding decisions fits in with most stressful conditions.

### **Effects of Stress**

Stress cannot always be seen something negative. On one hand, it may increase the workload fervor, encourages creativity and activities, while on the hand it can overburden and destroy people’s physiological and mental system. The consequences are reflected in disease state, dissatisfaction, unethical behavior, errors, reduced operation and absence from work.

## **DATA ANALYSIS AND INTERPRETATION**

Among the 100 clinical staff and the 50 non-clinical staff who received the questionnaire, 87 clinical and 26 non-clinical amounting to a total of 113, completed and returned the questionnaires. A higher proportion of the clinical staff completed the questionnaire (87%) compared to the non clinical staff (52%). The burnout questionnaire consists of 9 questions and the responses were collated to see the proportion of the responses. The responses were on a 5- point scale i.e. not at all, rarely, sometimes, often, and very often. Stress related questionnaire if further sub-divided into high work load with 9 questions, emotional exhaustion, vulnerability and physical symptoms of stress with 8 questions each and organizational commitment with 4 questions on a 3-point scale i.e., yes, no, sometimes.

The data obtained are analysed, and interpreted under the following headings by both clinical and non-clinical professionals.

- Reported Burnout
- Reported high workload stress
- Reported emotional exhaustion
- Reported vulnerability
- Reported physical exhaustion
- Reported poor organizational commitment

**Reported Burnout among Healthcare Professionals**

Burnout was assessed using the “stress assessment questionnaire for healthcare professionals”.

- **Reported Burnout by the Clinical and Non-Clinical Healthcare Staff**

**Table 1**

Response	Clinical Staff		Non-Clinical Staff	
	No. of Cumulative Response	Percentage (%)	No. of Cumulative Response	Percentage (%)
Not at all	254	33	90	39
Rarely	158	20	30	13
Sometimes	213	28	41	18
Often	68	9	24	11
Very Often	75	10	43	19

Source: Primary data

The table 1 shows the total number of responses received for all the questions under this category by both clinical and non-clinical staff. The proportion or percentage of people who reported the frequency of the burnout experience is also shown. 10% of the clinical staff reported feeling burned out “very often” and 09% has reported “often” .A total of 19% of the clinical staff have reported about being burned out frequently. A significant proportion of the non-clinical staff 19% reported burned out very often and 11% of them reported often.30% of the non-clinical staff have reported about being burned out frequently. The high prevalence of the symptoms of burnout has personal and organizational implications.

**Reported High Workload among Healthcare Professionals**

The reported high workload was assessed using the “stress assessment questionnaire for healthcare professionals”.

- **High Workload Stress Reported by the Clinical and Non-Clinical Healthcare Staff**

**Table 2**

Response	Clinical Staff		Non-Clinical Staff	
	No. of Cumulative Response	Percentage (%)	No. of Cumulative Response	Percentage (%)
Yes	227	33	70	30
No	279	41	144	62
Sometimes	174	26	19	8

Source: Primary data

33% of clinical staff and 30% of the non-clinical staff reported being over worked. Clinical staff felt that they have been loaded with too many jobs.

**Reported High Emotional Exhaustion among the Healthcare Staff**

The reported high emotional exhaustion was assessed using the “stress assessment questionnaire for healthcare professionals”

- **High Emotional Exhaustion Reported by the Clinical and Non-Clinical Healthcare Staff**

Table 3

Response	Clinical Staff		Non-Clinical Staff	
	No. of Cumulative Response	Percentage (%)	No. of Cumulative Response	Percentage (%)
Yes	152	22	22	11
No	371	54	142	68
Sometimes	170	24	44	21

Source: Primary data

22% of the clinical and 11% of the non-clinical staff reported having symptoms of emotional exhaustion. A small proportion of staff has experienced emotional exhaustion. Clinical staff feels emotionally drained from their work.

#### Reported Symptoms of Vulnerability among Healthcare Staff

The reported symptoms of vulnerability were assessed using the “stress assessment questionnaire for healthcare professionals”.

#### Reported Symptoms of Vulnerability among Clinical and Non-Clinical Health Care Staff

Table 4

Response	Clinical Staff		Non-Clinical Staff	
	No. of Cumulative Response	Percentage (%)	No. of Cumulative Response	Percentage (%)
Yes	336	49	109	54
No	209	31	70	34
Sometimes	135	20	24	12

Source: Primary data

49% of the clinical and 54% of the non-clinical staff reported signs of vulnerability. A significant proportion of the non clinical staff is vulnerable at the work place.

#### Reported Physical Symptoms of Stress among Healthcare Professionals

The reported physical symptoms of stress were assessed using the “stress assessment questionnaire for healthcare professionals”.

- **Physical Symptoms of Stress among Clinical and Non-Clinical Health Care Staff**

Table 5

Response	Clinical Staff		Non-Clinical Staff	
	No. of Cumulative Response	Percentage (%)	No. of Cumulative Response	Percentage (%)
Yes	170	24	27	13
No	472	66	146	71
Sometimes	75	10	32	16

Source: Primary Data

24% of the clinical and 13% of the non-clinical staff reported having physical symptoms of stress. This could be due to the fact that they don't have mental exhaustion as compared to the clinical staff.

**Reported Organisational Commitment among Healthcare Professionals**

The reported organizational commitment was assessed using the “stress assessment questionnaire for healthcare professionals”.

- **Organisational Commitment among Clinical and Non-Clinical Healthcare Professionals**

**Table 6**

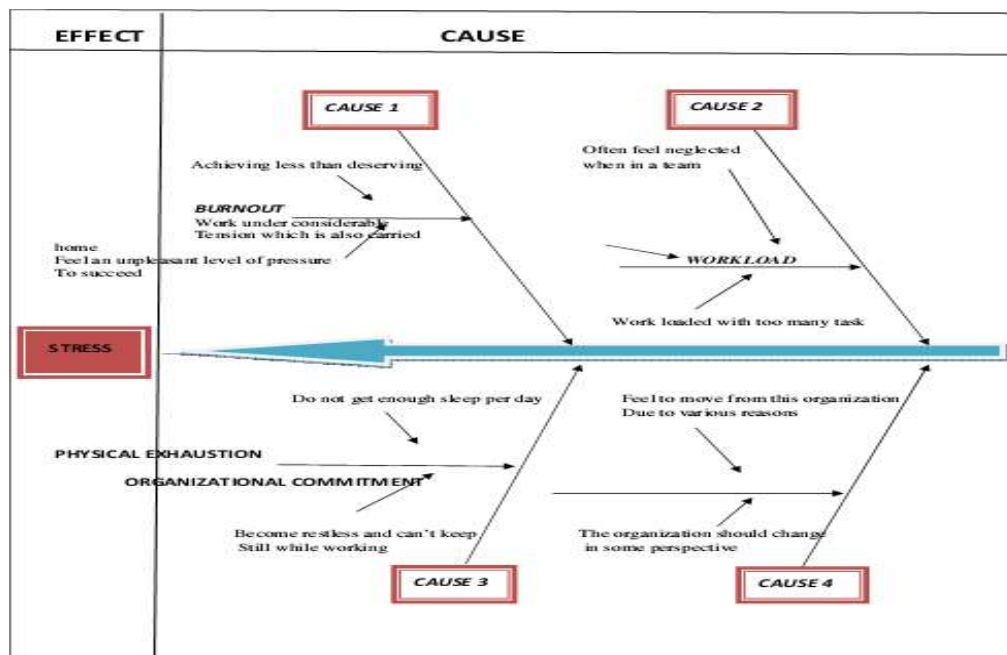
Response	Clinical Staff		Non-Clinical Staff	
	No. of Cumulative Response	Percentage (%)	No. of Cumulative Response	Percentage (%)
Yes	78	23	16	16
No	201	58	68	67
Sometimes	64	19	18	17

Source: Primary data

23% of the clinical and 16% of the non-clinical staff reported having feeling of poor organizational commitment. A high proportion of the staff does not have feeling of belonging to the hospital.

Overall, significant proportion of health care professionals, both clinical and non-clinical has reported work related stress. The figures for non-clinical staff seem to be lower than the clinical staff. The lack of organizational commitment will contribute to poor quality care to the patients, absenteeism and high staff turnover.

**Fish Bone Diagram for the Root Causes among Clinical Health Care Staff**



Source: Primary data

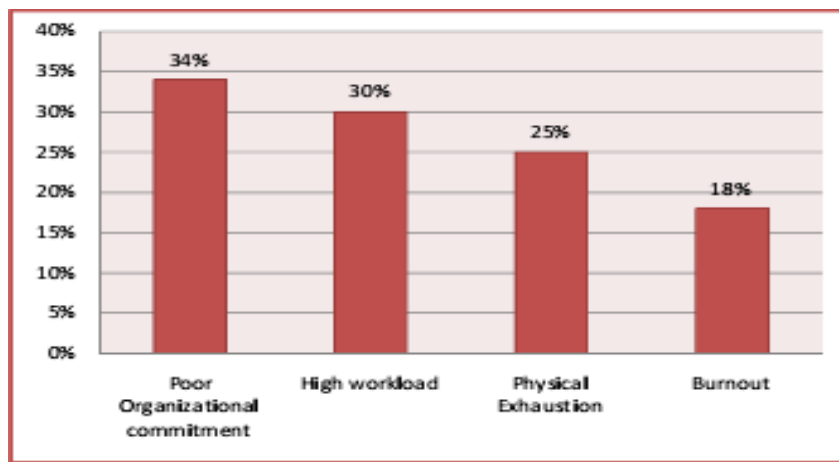
**Figure 1**

Cause and effect diagram is made in order to examine the effect or problem to find out the possible causes and to point out possible areas where data can be collected. The cause and effect diagram is used to explore all the potential or real causes. Causes are arranged according to their level of importance or detail, resulting in a depiction of relationships and hierarchy of events. This can help to search for root causes, identify areas where there may be problems and compare the relative importance of different causes. This diagram is also known as the fishbone diagram because it was drawn to

resemble the skeleton of a fish, with the main causal categories drawn as bones attached to the spine of the fish. Fish bone diagram for the root causes for both clinical and non-clinical staff is shown in figures 1 and 3 respectively.

**Pareto Chart of the Root Causes for Clinical Staff**

Pareto analysis is used to identify the most important problems to work on. Pareto analysis is also called 80/20 rule. This means that 80% of the problems are caused by 20% of the activities and it is this important 20% that should be concentrated on. A Pareto chart is a series of bars whose heights reflect the frequency or impact of problems. The bars are arranged in descending order of height from left to right. This means the categories represented by the tall bars on the left are relatively more significant than those on the right. The Pareto principle states that a small number of causes accounts for most of the problems. Focusing efforts on the vital few causes is usually a better use of valuable resources. The pareto charts for both clinical and non-clinical staff is shown in figures 2 and 4 below.



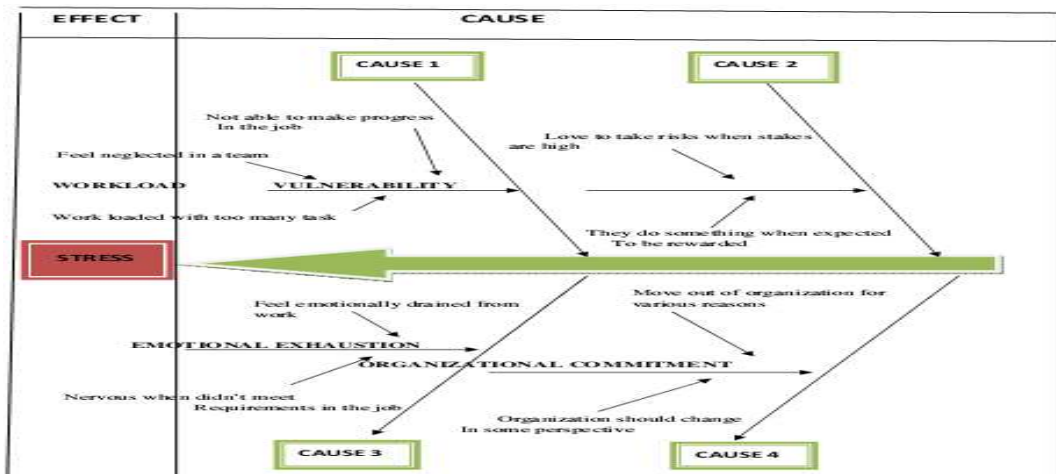
Source: Primary data

Figure 2

**INTERPRETATION OF THE RESULTS**

According to cause and effect analysis 18% of the clinical staff has reported burnout, 30% reported having high workload, 25% reported having physical exhaustion and 34% has reported poor organizational commitment. A significant number of staff reported poor organizational commitment due to various reasons followed by high workload stress.

**Fish Bone Diagram for the Root Causes for Non Clinical Health Care Staff**



Source: Primary data

Figure 3



### Pareto Chart of the Root Causes for Non Clinical Staff

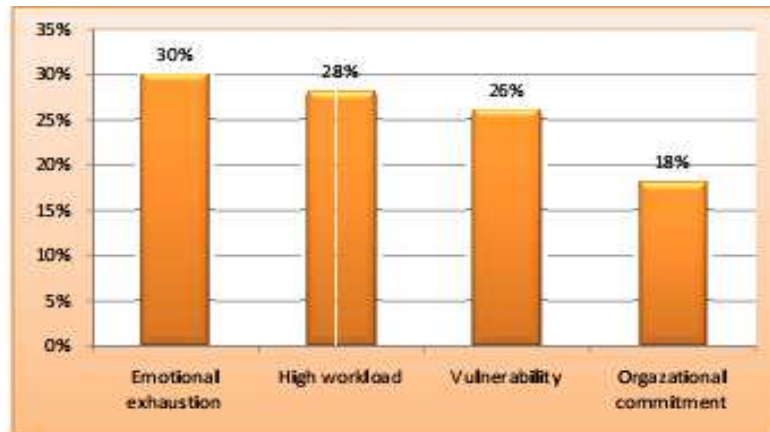


Figure 4

### INTERPRETATION OF THE RESULTS

According to Pareto analysis 28% of the Non-clinical staff have reported having high work load, 26% reported being vulnerable at work place, 30% reported emotional exhaustion and 18% reported poor organizational commitment. A significant number of staff reported emotional exhaustion followed by high work load. The study shows that although stress is present in the workplace, it is still managed in different ways. Thus, this means that stress is still manageable to a certain extent. The study highlights the need for better understanding and management of work related stress both at the organizational and individual level.

### SUGGESTIONS AND RECOMMENDATIONS

The suggestions and recommendations can be grouped into two categories i.e, at organizational level and individual level.

- **At Organizational Level**

The various ways of managing stress at organizational level are the following

**Screening:** Healthcare organizations should regularly conduct survey to identify burnout and stress related conditions in employees. The responses should be organized to avail an accurate picture of stress in the work environment. The screening should be conducted at least twice a year.

**Supervision and Mentoring:** Healthcare organizations should organize supervision and mentoring for the staff to regularly assess and manage workplace stress. Supervisors should be trained to assess among the staff and to provide relevant advice for the staff.

**Organize Reflective Practice:** Healthcare professionals, particularly the clinical staff should have small groups where they could discuss their difficult experiences in practice. Sharing experiences is a good way of managing work related stress.

**Human Resource Management:** Health care Professionals need clear job description and should be assessed for suitability for the role through robust interviews. A personal specification should be issued to prospective employees regarding the type of job they are expected to perform, also mentioning the stress levels associated with it. Staff who can cope with crisis situations are the best to be employed in busy and stressful environments.

**Workload Assessment:** The health care organizations should be aware of the staffing needs of each department which should be reviewed at regular intervals. The head of the department should be able to work with the hospital management to reduce the employees' workload and increase the workforce within the financial constraints.

**Rewards and Career Progression:** Hard working and committed employees should be benefitted from financial rewards, holidays or career progression to keep their morale high.

**Compulsory Paid Annual Leaves:** Stress is unavoidable in any organization. However a leave from work is a good form of relaxation. Organizations should make sure that qualified employees have enough annual leaves which are mandatory and paid. Employees should be encouraged to take the leaves if they are stressed out due to work.

**Career Development and Education:** Teaching and learning session should be organized in the institution to improve the staff's understanding of the patient conditions and to promote continuing professional development (CPD).

**Exercise, Recreation and Health Advice at Work:** A dedicated department should operate in the hospital to promote healthy eating, exercise and recreation in individuals. e.g. gym and other recreation should be available for staff in the hospital campus. More organizational interventions could be identified by a dedicated department specific for the need of the healthcare professionals and the institution.

- **At an Individual Level**

Individual strategies, which are known as the most successful ones, are often physical activity, meditation and other methods of relaxing, healthy life style and time management. The following are the suggestions for improvement at an individual level to reduce stress levels in health care staff.

**Choose the Right Job or the Right Department:** As an individual the health care professional should choose their area of work depending on their ability to cope with stress.

**Time Management:** A busy work day should be organized by prioritizing the tasks. Employees should be able to schedule their work in a diary or notebook. Time management can effectively reduce stress.

**Develop Coping Strategies:** Stress is inevitable at work. Individuals should have coping strategies like reading, listening to music, other recreation etc to cope with stress.

**Share Stressful Experiences:** Sharing the stressful experiences with colleagues or family members could help to relieve stress significantly.

**Plan a Holiday:** One should be aware that taking a holiday from work at regular intervals is a good way of relieving work related stress.

**Yoga and Meditation:** The practice of yoga, meditation and other mindful exercises is highly advised to manage and prevent stress. Healthy way of living is also very important for conquering stress.

**Attend to Physical Health Needs:** Healthy diet is important to feel less stressed at work. A regular physical health review by the physician or by the occupational health department will be useful.

**Attend to the Mental Health Needs:** Individuals may need to see the physicians or psychiatrist if they are affected badly by work related stress, family related stress, financial difficulties or other forms of stress leading to anxiety disorders or depression. Medication or drug therapy is better avoided and talking therapies like counseling needs to be sought in such situations. Apart from preventive healthcare, effective stress management programs should be provided.

This programme provides a medical perspective of stress and is conducted by a medical professional. The programme includes a series of one-to-one sessions, with a clinical Psychologist highlighting the factors responsible for inducing stress, and the methodologies, which can be adopted to cope with this phenomenon practically.

## CONCLUSIONS

A certain level of stress can cause positive mood, challenge or opportunity. Fast pace of living, constant pressures on healthcare sector, lack of staff and waiting queues are factors that especially affect medical sector, which additionally makes achieving the quality of work more difficult. If organizations and also individuals, in healthcare, contribute to restraining stress, then relationships and communication improves, conflicting situations are reduced, and the quality and amount of successfully completed work increases. Individuals will need to be supported by the organizations to be educated about stress, its harmful effects and its management. Individuals should be able to access the facilities offered by the organizations to manage stress at the workplace.

## REFERENCES

1. Kakunje A. Stress among Health Care Professionals - The Need for Resiliency. *Online J Health Allied Scs.* 2011;10(1):1,
2. Sharma E. Role Stress among doctors. *Journal of Health Management.* April 2005;7(1):151-156.
3. Familoni OB. An overview of stress in medical practice. *Afr Health Sci.* 2008; 8(1):6-7.
4. Balch CM, Freischlag JA, Shanafelt, Stress and Burnout among Surgeons. *Arch Surgery.* Apr 2009; 144(4):371-376.
5. Chatterjee S, Choudhury N. Medical communication skills training in the Indian setting: Need of the hour. *Asian J Transfus Sci [serial online]* 2011
6. Sharma E. Role Stress among doctors. *Journal of Health Management.* April 2005; 7(1):151-156.
7. Familoni OB. An overview of stress in medical practice. *Afr Health Sci.* 2008; 8(1):6-7.
8. Balch CM, Freischlag JA, Shanafelt, Stress and Burnout among Surgeons. *Arch Surgery.* Apr 2009;144(4):371-376.
9. Chatterjee S, Choudhury N. Medical communication skills training in the Indian setting: Need of the hour. *Asian J Transfus Sci [serial online]* 2011 [cited 2011 Apr 5];5:8-10.
10. Peterson, U, Demerouti, E., Bergtrom, G., Asberg, M. and Nygren, A. (2008). Work characteristics and sickness absence in burnout and non-burnt groups: A Study of Swedish health care workers. *International Journal of Stress Management*, 15(2), 153-172.
11. Peterson, U, Demerouti, E., Bergtrom, G., Samuelsson, M., Asberg, M. and Nygren, A. (2008). Burnout and physical and mental health among Swedish health care workers. *Journal of Advanced Nursing*, 62 (1), 84-95.
12. Nathalie Embriaco, Laurent Papazian, Nancy Kentish-Barnes, Frederic Pochard and Elie Azoulay, Burnout syndrome among critical care healthcare workers, Lippincott Williams & Wilkins, 2007.
13. Bonnie M. Jennings, *Work Stress and Burnout Among Nurses: Role of the Work Environment and Working Conditions*, NCBI

14. Rowe MM. Hardiness, stress, temperament, coping, and burnout in health professionals. *Am J Health Behav.* 1997; 21(3):163–71.
15. Weinberg A, Creed F. Stress and psychiatric disorder in healthcare professionals and hospital staff. *Lancet.* 2000;355(Feb 12):533–7. [[PubMed](#)]
16. AbuAlRub RF. Job stress, job performance, and social support among hospital nurses. *J Nurs Scholarsh.* 2004;36(1):73–8. [[PubMed](#)]
17. Aiken LH, Clarke SP, Sloane DM, et al. Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *J Am Med Assoc.* 2002; 288(16):1987–93. [[PubMed](#)]
18. Allen J, Mellor D. Work context, personal control, and burnout amongst nurses. *West J Nurs Res.* 2002;24(8):905–17. [[PubMed](#)]
19. Bakker AB, Le Blanc PM, Schaufeli WB. Burnout contagion among intensive care nurses. *J Adv Nurs.* 2005; 51(3):276–87. [[PubMed](#)]
20. Decker FH. Occupational and non-occupational factors in job satisfaction and psychological distress among nurses. *Res Nurs Health.* 1997; 20:453–64. [[PubMed](#)]
21. Ruth Atukunda, Peter Memiah, Constance Sibongile Shumba, Care for the caregiver: Stress relief and burnout among health workers in HIV care. *GJMEDPH* 2013; Vol. 2, issue 2.
22. William. C. Bailey, D. Kay Woodiel, M. Jean Turner, and Jenifer Young, B.S, The Relationship of Financial Stress to Overall Stress and Satisfaction, Personal Finances and Workers Productivity, 1998, Vol.2.No.2.
23. Uma Devi.T,“Consequences of Stress–With Reference to Engineering College students, *Business Vision*, Vol: 7 No.1 January-March, 2011.