

# Work-related stress and its global concern: A report with special reference to Teachers' stress in India

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## Abstract

Today, work-related stress has to be recognized as a collective problem with major implications for the wellbeing of workers, their families and society as a whole. In 2010, ILO has enlisted the post-traumatic stress disorders (PTSD) thereby creating for the first time the possibility of diseases such as cardiovascular disease, cancer and diabetes being recognized as having an occupational origin. This indicates the vulnerability and severity of work-related stress.

The paper highlights the international survey reports on job stress, their underlying factors, coping strategies with a special reference to work-stress experienced by teachers. In India, nationwide stress survey across different occupation is not available till date. However, individual researches on teachers' stress at different pockets of India have been discussed here.

Teaching job is no more static and dogmatic. Teachers have realized that 'change' in globally competitive education market is inevitable. Concept of 'job security' is a fuss today. Traditional focus of the universities has been changed to benchmark for world standard. There is a paradigm shift on teachers' attitude towards teaching and research. This is the time to investigate how the negative consequences of stressed teachers are affecting the academics and students learning, in particular.

**Keywords:** Autonomous Nervous System, Coping Strategies, Globalization, Higher Education Sector, Homeostasis, Musculoskeletal Disorders, Occupational Stress, Post-traumatic Stress Disorders

## 1. Introduction

Globalization has brought ample opportunities as well as massive challenges to Indian higher education sector. Teaching is not merely a service to the nation, in contrast to the Indian traditional value system, rather a full-fledged profession functions in a structural framework. There is a substantial change in the notion of teaching, teachers' well-being and academic environment. Internationalization of Indian academic institutions will bring new complexities – unseen or foreseen. On one hand, commercialization of education sets forth new challenges to the growth and career advancement of many teachers working in private institutes in particular, but, on the other hand ample scope is waiting for quality teachers to access global lucrative education market.

In contrast to our common perception that teaching is not a stressful occupation, but, worldwide studies have consistently found that work-related stress affects lives of significant numbers of teachers causing psychological, physiological and behavioral impacts. Johnson and others (1980) made an exhaustive study in the USA and found that teaching is considered as one of more stressful occupation than 26 other occupations.

The paper aims to investigate the nature and prevalence of occupational stress, neurobiology of stress, global concern to stress-related studies and work-stress experienced by teachers, Indian higher education teachers in particular.

## 2. Work-Stress and its Nature

The term "stress" was first used by Hans Selye in 1936 to define stress in biological terms as "a non-specific response of the body to any demand or change". His research led to the study of stress in brain functions. He also defined "stressors"

as events that trigger a physiological and psychological response from the organism. Stress can define a negative condition or a positive condition that responds to a stressor and that can have an impact on a person's mental or physical health and wellbeing. Today health is acknowledged as a combination of biological, psychological (thoughts, emotions, and behaviour), and social (socio-economical, socio-environmental, and cultural) factors. The United States National Institute for Occupational Health and Safety (NIOSH) defines work-related stress as (1999) '*the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the worker*'.

Cary Cooper, professor of organizational psychology and health at the University of Manchester's business school, noticed work place is experiencing a constant and rapid change to cope up the highly flexible world. Since 1980's, workplace is transforming to hot house culture through statutory constraint of IR, Merger & Acquisition, strategic alliance, joint venture, process re-engineering and alike. Seven European country's workers are experiencing less job satisfaction in the year of 1995 in comparison to 1985. Work life balance is highly disturbed (UK found highest divorce Rate-1,71,000 in 1991). The working pattern is showing that both work in 'excess of contract hours' and 'work at weekend' has increased and loyally, morale and job security perception have been decreased at a high rate.

Numerous studies are available to identify the 'stressors' which causes stress. Noteworthy, Cox *et al.* (2000) <sup>[8]</sup> identified ten types of stressors or stressful characteristics of work, which again are divided into two groups: 'content of work' and 'context to work' (See Table 1).

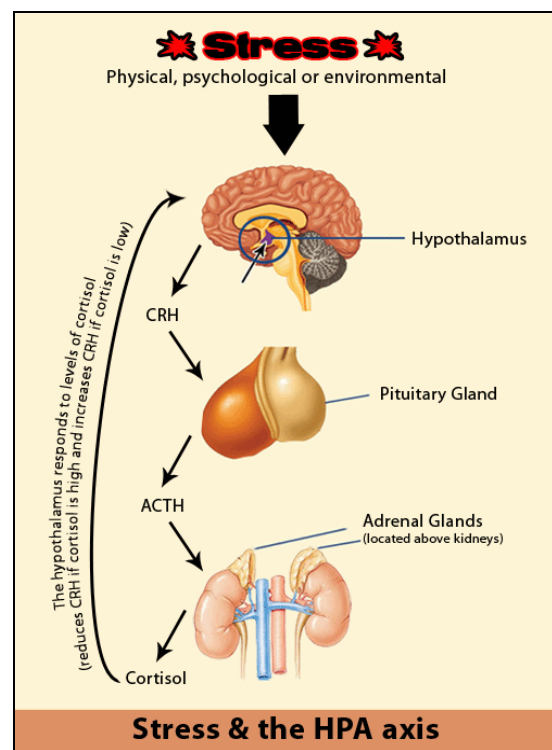
**Table 1:** Taxonomy of stressful characteristics of work by Cox *et al.* (2000)

Category	Conditions defining hazards
<b>Content of work</b>	
<b>Work-environment and work equipment</b>	Problems regarding reliability, availability, suitability and maintenance of both equipment and facilities
<b>Task design</b>	Lack of variety of short work cycle, fragmented or meaningless work, underuse skills, high uncertainty
<b>Workload/work-pace</b>	Work overload or under-load lack of control over pacing, high time pressure
<b>Work schedule</b>	Shift working, inflexible work schedule unpredictable hours long or unsocial hours
<b>Context of work</b>	
<b>Organizational culture/function</b>	Poor Communication, Low-level of Support for problem solving and personal development, lack of definition of organizational objectives
<b>Role in organizations</b>	Role ambiguity and role conflict, responsibility for people
<b>Career development</b>	Career stagnation and uncertainty, under-promotion, over-promotion, poor pay, job insecurity, low social value of work
<b>Decision latitude/control</b>	Low participation in decision making lack of control over work
<b>Interpersonal relationships</b>	Social and physical isolation, poor relationship with superiors, interpersonal conflicts, lack of social support
<b>Work-home interface</b>	Conflicting demands of work and home, low support at home, dual career problems

**3. Stress and Human Body**

Let us examine the neurochemistry and neurobiology of stress. Stress is largely a neurological phenomenon. Unstressed state of the mind is called ‘Homeostasis’. Anything that threatens this homeostasis is known as a stressor. When stimulus is perceived as a stressor, sympathetic branch of our Autonomous Nervous System (ANS) is activated and make an organism more adaptive to its environment. When a stressor acts upon the body, the endocrine system is triggered by the release of noradrenaline by the ANS. Noradrenaline stimulates the Hypothalamic-Pituitary-Adrenal axis (HPA) which processes the information about the stressor in the hypothalamus. During a stress response, the hypothalamus secretes various hormones, namely Corticotrophin-Releasing Hormone (CRH), which stimulates the body's pituitary gland and it initiates a release of hormones into the blood stream, namely, adrenocorticotrophic hormone (ACTH), which modulates a heavily regulated stress response system. CRH stimulates the cortex of the adrenal gland by binding to its ACTH-receptors, thus causing the adrenal gland to release glucocorticoids (chiefly, Cortisol, Corcosterone etc.). Cortisol along with other hormones such as, the body shunts resources away from unnecessary functions for immediate survival and triggers energy mobilization and glucose sparing necessary for dealing with the stressful stimuli on hand. Cortisol, a steroid hormone controls and conserves glucose in blood (gluconeogenesis). When body's stressor is no longer present or the threat is no longer perceived, the heightened levels of cortisol in the body's blood stream eventually circulate to the pituitary gland and hypothalamus to which cortisol can bind and inhibit, essentially turning off the HPA-axis (See Diagram 1). But, if stress Continues, body's HPA-axis cannot overcome a challenge and/or is chronically exposed to a threat that this system becomes overtaxed and can be harmful to the body and brain. A second major effect of cortisol is to

suppress the body's immune system during a stressful situation, again, for the purpose of redistributing metabolic resources primarily to fight-or-flight organs.



**Diagram 1: Stress and HPA Axis**

*Source:* <https://ansperformance.com/what-is-stress-doing-to-your-body/>

**4. Stress and its Current Global Concern**

Today, work-related stress cannot be considered the problem of a few individuals. It has to be recognized as a collective problem with major implications for the wellbeing of workers, their families and societies as a whole. Work Stress

is recognized world-wide as a major challenge to workers' health and healthiness of their organizations (ILO 1986; 1992). The ILO list, updated in 2010, covers mental and behavioural disorders, including post-traumatic stress disorders (PTSD), thereby creating for the first time the possibility of other such diseases being recognized as having an occupational origin. It is evident that the incidence of non-communicable diseases (NCDs) such as cardiovascular disease, cancer and diabetes, musculoskeletal disorders (MSDs) are associated with high perceived work-related stress levels, high workload and demands, low social support, low job control, low job satisfaction, and monotonous work.

ILO publication (Workplace Stress: A collective challenge, 2016) figures out the prevalence of occupational stress across the world. Highlights are stated below:

The 4th *European Working Conditions Survey* (EWCS, 2007) revealed that an estimated 40 million people in the EU were affected by work-related stress. The report on psychosocial risks in Europe (2014) stated that 25% of workers experienced work-related stress for all or most of their working time, and a similar proportion reported that work affected their health negatively. In Europe the estimated cost of work-related depression is €617 billion a year. In 2002, the annual economic cost of work-related stress in the EU15 was estimated at EUR 20,000 million. Stress prevalence in EU15 in 2000 (28%) did not differ significantly from the levels reported in the previous survey carried out five years earlier. Quantitative work demands, low job control, harassment and violence are considered to be important sources of stress.

The *Stress in America* survey (2015) reveals that respondents rated their stress levels as 4.9 on a 10-point scale. The most commonly reported sources of stress include money (64%), work (60%), the economy (49%), family responsibilities (47%) and personal health concerns (46%). The World Health Organization has estimated that stress costs American businesses up to \$300 billion a year.

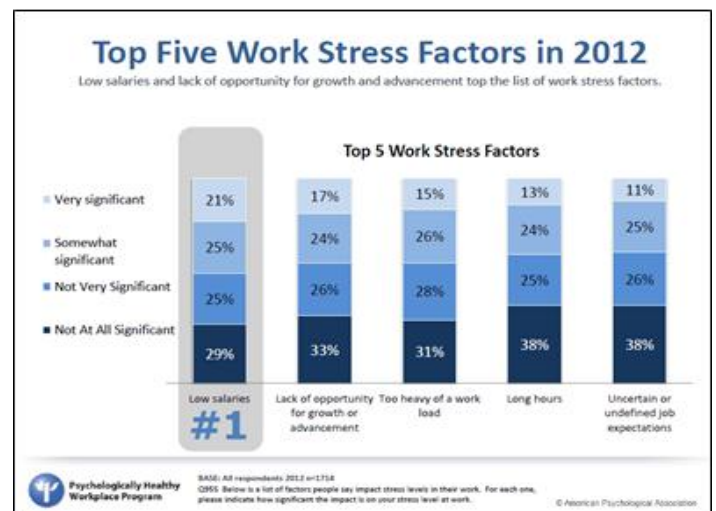
In Japan, the *Survey on the Prevention of Industrial Accidents* showed that thirty-two point four per cent of workers reported suffering from strong anxiety, worry and stress during the previous year. In the second *Korean Working Conditions Survey* (2010), overall fatigue increased from seventeen point eight per cent in 2006 to twenty-six point seven per cent in 2010.

The *South African Stress and Health Ghana* (2009-2010) explored the relationship between self-reported job stress and job satisfaction, and the prevalence of stress-related illnesses and risk factors among educators. The study found very high stress levels among educators. Work-related stress and lack of job satisfaction were associated with most stress-related illnesses (hypertension, heart disease, stomach ulcers, asthma, mental distress, and tobacco and alcohol misuse).

The magnitude of the negative impact of work-related stress and its health outcomes in an important part of the global working population is very evident owing to the wealth of the evidence based on the prevalence of associated physical and mental health disorders at country and regional levels collected over more than 20 years. Unfortunately, evidence also shows that the incidence and severity are increasing in the present context.

According to the European Risk Observatory Report (Milczarek *et al.*, 2009) [22], work-related stress represented in Europe between fifty and sixty per cent of all lost working days. In 2005, stress was experienced by 22% of EU workers. Although on average working hours in EU are decreasing, work intensity is growing. The highest stress level is observed among middle aged workers. The prevalence of stress among men and women is similar. Stress is especially prevalent in education and health, agriculture, hunting, forestry & fishing sectors. The well-being scores for self-employed workers are lower than for employed workers.

A survey on stress and well-being among staff members in higher education made by University College Union, UK (Kinman and Wray, 2013) [15], found that perceived stress found in the 2008 survey has not been alleviated. The proportion of members from higher education who strongly agreed that their job is stressful has increased from 25% to 33% in the four years (2008).



The biggest 'well-being gaps' related to change management, role clarity and demands. Nearly three-quarters of the sample agreed or strongly agreed with the statement 'I find my job stressful'.

Australian Stress and Wellbeing Survey (2014), almost half of the respondents cited work demands (forty-eight per cent) as barriers to maintaining a healthy lifestyle (Casey & Liang, 2014). Consistent with the previous years' findings, just over seven in ten Australians (seventy-two per cent) reported that current stress was having at least some impact on physical health, with almost one in five (seventeen per cent) reporting that current stress was having a strong to very strong impact on physical health. Safe Work Australia estimated in 2008/2009 that work-related stress cost Australian society AU\$5.3 billion annually.

Hoel, Sparks & Cooper (2001) outline an overview of stress and violence at work has demonstrated that strong links exists between stress on the one hand, and various types of violence on the other, with violent behaviour of any kind being a common antecedent of stress. Taken together, different categories of physical assault, bullying and harassment, based on sex or race, account for a very substantial amount of what

may be considered work-related stress. Stress/violence may account for approximately 0.5–3.5% of GDP per year.

**5. Experiencing Stress in Teaching: A Report from Global Survey**

Teacher stress may be defined as a response syndrome of negative effect resulting from aspects of the teacher’s job and mediated by the perception that the demands made upon the teacher constitute a threat to his or her self-esteem or well-being (Kyriacou and Sutcliffe, 1978) [19]. Cooper who has studied well-being in 80 occupations said ‘Teaching is consistently among the top three most stressful professions’ (Wiggins, 2015). He said, anxiety, stress and depression were leading causes of sickness absence across many occupations, and in teaching these problems were “endemic”. Constant changes in education policy added to teachers’ stress levels, and he urged the government to take a “hands-free” approach to education.

A BBC Investigation (Percey Producer, 2015) [27] found that Stress levels among teachers in England’s classrooms are soaring. Workload was the top concern, with 89% citing this as a problem, followed by pay (45%), inspection (44%), curriculum reform (42%) and pupil behaviour (40%). In addition, 83% had reported workplace stress; 67% said their job has adversely impacted their mental or physical health; almost half of the three thousand respondents reported they had seen a doctor because of work-related mental or physical health problems; 5% had been hospitalised, and 2% said they had self-harmed.

The online survey was created by the American Federation of Teachers of more than 30,000 U.S. teachers finds that most of them report high levels of stress and low levels of autonomy, but it also shows that they are not ready to bail on the

classroom (Layton, 2015). Seven out of every 10 respondents said they “often” felt their work is stressful and nearly eight out of 10 indicated they recently felt physically and mentally exhausted at the end of the work day. More than half indicated that their general level of stress was high or very high, and more than one third said they often or always experienced levels of stress they found unacceptable. Members employed in academic roles reported poorer well-being in relation to all of the HSE stressor categories than academic-related staff, together with higher levels of stress and work-life conflict.

**6. Stress among Indian Teachers**

Nationwide stress survey among Indian teachers is not available till date. Researchers and academicians across the country pursuing stress research using various scales across different regions and timeframe which does not provide any comprehensive outlook. However, an attempt is made to make out the prevalence of occupational stress among the higher education teachers.

Approximately, 1.4 million teachers are engaged in formal higher education sector of India (Table 2) and catering to 30 million students. All India Survey on Higher Education (AISHE) 2012-13 (Provisional) report shows sex ratio of male to female teachers is 100: 64. This is interesting to note that nearly one third universities and 73% of colleges are privately managed (58% Private unaided and 14% Private aided) and the number is growing. Private educational establishments generally follow performance-driven growth policy and frame out their competitive strategies accordingly. Faculty members hold the prime responsibilities to expedite the strategies in achieving the institutional goals.

**Table 2: Male & Female Teachers engaged in Indian Higher Education Sector**

Types of Teacher	Professor and Equivalent	Associate Professor and Readers	Lecturer /Assistant Professor	Demonstrator /Tutor	Temporary Teacher etc.	Visiting Teacher	Total
Male	81513	121607	549493	22755	39612	8485	823465
Female	29341	62420	364955	30955	35075	5493	528239
Total	110854	184027	914448	53710	74687	13978	1351704

Source: AISHE, 2012-13(Provisional), MHRD, GOI, New Delhi, 2014

**Table 3 : Factors Responsible for Teachers Stress: Research from India**

Factor	Research Outcomes
<b>Factor intrinsic to job:</b>	(No Indian study noted)
<b>Career Development:</b>	Salary, inadequate resource and facilities (Jagadeesh, 2013) Professional and Competence Development (Arekkuzhiyil, 2014)
<b>Role in the Organization:</b>	Role ambiguity and Resource inadequacy Mehta and Kaur (2009) Role overload, Role conflict (Kumar and Srivastava, 2014) Work Role (Anita S.K. 2011) Role authority, Role overload, Role Stagnation, Role Erosion (Kavita, 2012)
<b>Relationship at work:</b>	Unreasonable Group and Political Pressure (Arun Kumar and Srivastava, 2014), interpersonal relationship (Arekkuzhiyil, 2014; Jagadeesh, 2013)
<b>Organizational Structure and climate:</b>	Work-life Balance, Lack of recognition, Work environment, Autonomy (Arekkuzhiyil, 2014) Organizational climate (Devi and Velayudham, 2003; Rattan Kaur, 2013).
<b>Extra-organizational sources:</b>	Gender and Marital Status (Nagra and Arora, 2013) Age, Qualifications, Experience and Marital Status (Nasreen Qusar, 2011) Age, Experience, Marital Status and Family Status (Abirami, 2012) Gender (Goyal and Zahid, 2004; Srivastav 2007; Kodavatiganti & Bulusu, 2011 Pabla 2012).
<b>Characteristics of the Individual:</b>	Attitude towards oneself and profession (Raju, 2000)

As indicated in the table, organized higher education sector of India consists of a gigantic manpower being engaged in teaching and research. Now, we are interested in investigating work-stress experienced by higher education teachers with the advent of globalized economy. Researchers have consistently concluded that teaching is a stressful occupation. As found in the noteworthy empirical researches across different part of the nation, factors responsible for teachers’ stress are summarized in the Table 3 with the help of Cooper and Marshall Classification, 1976 (for details See, Bhuin, 2016) [4].

The research results found in the table exhibits that role, relationship, organizational structure and extra-organizational sources are the major significant factors responsible for teachers stress in Indian higher education.

**7. Impact and Coping Strategies**

Stavroula L *et al.* (2003) in a World Health Organization (WHO) report wrote, ‘the goals of best practice objectives with regard to stress management are to prevent stress happening or, where employees are already experiencing stress, to prevent it from causing serious damage to their health or to the healthiness of their organization’. The author remarked, ‘a good employer designs and manages work in a way that avoids common risk factors for stress and prevents as much as possible foreseeable problems. Work in itself can be self-promoting activity as long as it takes place in a safe, development and health-promoting environment. Good management is stress management.’

Hoel, Sparks & Cooper (2001) [9] elaborated effects and cost of job stress on individual, organization and Society as a whole, and adopted interventions strategies in an ILO Report (Geneva, 2000). A summary has been presented here (See table 4).

**Table 4:** Summary of Hoel, Sparks & Cooper Report (ILO, Geneva, 2000)

<b>(Effects, Cost and Interventions of Work-related Stress)</b>			
	<b>Individual</b>	<b>Organization</b>	<b>Society</b>
<b>Effects</b>	<p><u>Effects on mental and physical health</u></p> <ul style="list-style-type: none"> <li>• Mental illness</li> <li>• Coronary heart disease</li> <li>• Certain types of cancer</li> <li>• psychosomatic symptoms, migraine, stomach ulcers, allergies</li> </ul> <p><u>Behavioural and attitudinal effects:</u></p> <ul style="list-style-type: none"> <li>• Reduction in job-satisfaction and commitment</li> <li>• Increased propensity for accidents</li> <li>• ‘Poor lifestyle habits’, e.g. increased smoking and alcohol consumption, less attention to good diet etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Greater sickness</li> <li>• Absenteeism, impaired performance and productivity</li> <li>• Higher turnover Rates</li> <li>• Workplace violence</li> </ul>	<ul style="list-style-type: none"> <li>• Health Care and Medical expenses</li> <li>• Unemployability</li> <li>• Domestic Violence</li> <li>• Breakdown in relationships and to divorce.</li> </ul>
<b>Cost</b>	<ul style="list-style-type: none"> <li>• Loss of income</li> <li>• Additional expenditure</li> <li>• Human costs</li> </ul>	<ul style="list-style-type: none"> <li>• Sickness absence</li> <li>• Premature retirement</li> <li>• Replacement costs</li> <li>• Grievance and litigation/compensation costs</li> <li>• Damage to equipment and production resulting from accidents and Mistakes</li> <li>• Reduced performance/productivity</li> <li>• Loss of public goodwill and reputation</li> </ul>	<ul style="list-style-type: none"> <li>• Accidents and ill-health</li> <li>• domestic abuse of women</li> <li>• Violence to society</li> </ul>
<b>Interventions</b>	<p><b>Few effective interventions:</b></p> <ul style="list-style-type: none"> <li>✓ Employee Assistance Programmes and Counseling</li> <li>✓ Absenteeism Management</li> <li>✓ Stress Management course for those most at risk</li> <li>✓ Training of management in identification of stress</li> <li>✓ Ergonomics</li> <li>✓ A reduction of noise</li> <li>✓ Job-redesign introducing semi-autonomous teams</li> <li>✓ People Management Skills</li> </ul>		

Undoubtedly, students are the most affected community as a consequence of teachers’ stress. The negative effects include

irritability, anger, fatigue, anxiety, depression, headaches, loss of concentration, sleep disturbances, persistent negative

thoughts, low appetite, gastrointestinal problems, musculoskeletal problems, blood pressure, heart disease, stroke, cancer, suicide, etc. to highlight a few from the exhaustive list (for details, see Nagra & Arora, 2013). Job stress is considered to be a factor that may affect organizational effectiveness by lowering organizational systems, Efficiency, Congenial Climate, Dynamism and Adaptability, Interpersonal Harmony, Effective Leadership, Morale, Job Satisfaction and Commitment (Srivastava, 1999). Sharma and Gupta (2009) classified combined effects of stress among the academicians as –i) problem solving skills are impaired, ii) communication skills suffer iii) learning and memory suffer and iv) motor skills are impaired.

Claxton (1989) commented that stress in teachers can be more insidious than any other profession by its ‘fuzzy’ nature: it arises from vague system of rules and returns; it is often self-inflicted; and unlike the business or medical profession, the debilitating effects are not often counterbalanced by moments of exhilaration and satisfaction. Claxton and other researchers identified following coping strategies suitable for teaching personnel:

- I. Optimal working environment (Harmonious atmosphere, interdependence and cohesive)
- II. Informal Support Network (Concern and share failure stories without fear)
- III. Clearness Committee ( Helping the ‘focus person’ to discover his/her own solution)
- IV. Avoid counterproductive coping strategies (disengagement, suppression of conflicting activities, alcohol, tobacco and drug and defensiveness)
- V. Physical activity, entertainment and personal interest (sports, hobbies, musical instruments, etc.)

With the aim of helping teachers battle the stress of teaching crowded classrooms, the National Council for Teacher Education (NCTE) has introduced yoga covering topics such as introduction to yoga, yogic text, yoga and personality development, stress management and self-development, among others from academic year 2015-16 in teacher training institutes across the country to help them develop a calm mind, which will in turn boost their efficiency levels (Pednekar, 2015).

## 8. Conclusion

World-wide survey on occupational stress has indicated the significance and stature of occupational stress as an alarming danger of employee health. Developed economies have already earmarked the presence of stress and designated professional bodies are working on policy intervention and strategy developments. However, in India, like many developing countries, no nationwide occupation-specific study has been located. This is the time to recognize the danger face of occupational stress and adopt adequate measure to combat stressors.

There is no clear guideline of any systematic evaluations of stress intervention programmes in general. Intervention emphasizes on an investigation of the particular circumstances and with an ongoing, long-term focus. This is important to establish a baseline measure prior to the

implementation of any intervention and adopt Analytical Approach rather statistical Generalization (Hoel, Sparks & Cooper, 2000).

Stress in teachers can be insidious due to its ‘fuzzy’ nature. Globalization in education has brought new challenges and opportunities for teachers. This is the time to investigate how the negative consequences of stressed out teachers are affecting the academics, students’ learning, knowledge creation and education as a whole. Policy makers, academicians, and institutional top management may ponder the knife-edge problem of occupational stress and opt for adopting adequate long run prevention and intervention strategies.

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