

STRESS AND FATIGUE: THEIR IMPACT ON HEALTH AND SAFETY IN THE WORKPLACE

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Abstract

Stress is one of the many causes of fatigue in the workplace. Everyone would accept stress as having a potentially negative influence on product quality and on personal health and safety. Fatigue should be considered as one of the many causes that may lead to impairments in an employee. Whatever the cause of such impairment (fatigue, medication, illness, and life events) employers need to be implementing a system to recognize this impairment and its causes, and to assess its possible consequences. People at work can be at increased risk of harm because of impaired health and fitness. This impairment can arise from a number of causes, including fatigue. The practical result for employers is that the need to ask themselves about an employee's ability to work safely. The purpose of this article is to stimulate employers and employees into thinking about stress, fatigue and impairment as they apply to their workplace, and to their own personal lives, and to suggest some mechanisms to help interested parties make reasonable and practical decisions about workplace health and safety. This article was discussing about the interrelationship between work, stress and fatigue and how to manage stress, fatigue for quality of productivity and healthy life.

Key words: *Stress, Fatigue, workplace and impact*

INTRODUCTION

Stress is a result of social relationship in such a way that a person may undergo stress because of the people in his social circle. A person may undergo the stress especially when he assumes a danger to his social respect. Stress is possesses both negative and positive outcomes. Stress is normally a response to the danger. When a person perceives danger, automatically signal a transferred to the mind and reaction to that danger is generated. In positive sense, stress pulls us towards a necessary reaction and solution against the threat posed to us. While in negative sense, stress is a barrier which reduces productivity and plays a major role in creating hurdles to achieve our target. In an organization, stress brings behavioral changes which ultimately decrease the cooperation between the employees of an organization.

Stress is an important contributing factor to an individual's quality of life, and high levels of stress, if not managed, can negatively affect an individual's emotions, health, and implicit well-being (Lolitha *et.al.*2016). Stress is linked to the six leading causes of death: heart disease, accidents, cancer, liver disease, lung ailments, and suicide. It is also associated with an individual's absenteeism from work, increased medical expenses, loss of productivity, insomnia, fatigue, cognitive impairment, depression, and other mental or

neurological illnesses, hypertension, arthritis, ulcers, asthma, migraines, immune system disturbances, skin diseases, aggression and relational conflict, and substance abuse and increases the negative effects of aging

The human body is designed to experience stress and react to it. Stress can be positive (eustress), such as a getting job promotion or being given greater responsibilities, keeping us alert and ready to avoid danger. Stress become negative (distress), when a person faces continuous challenges without relief or relaxation between challenges. As a result, the person becomes overworked and stress related tension builds.

Work related stress is common in many organizational contexts. Works related stress refers to stress caused by or made worse by work. It occurs when a person perceives the work environment in such a way that his or her reaction involves feelings of an ability to cope. (Healthand Safety Authority, 2011)

Although a high level of stress has been observed in teachers generally, the higher education sector is a relatively new focus and concern. There is strong evident to believe its workforce could represent a particularly vulnerable occupational group. For example, in Malaysia, a study involving 300 members of academic staff in one university reported that job stress was one of the significant factors reducing job satisfaction among staff (Ahsan, *et al.* 2009).

Herr *et al*, 2004 said in the context of the workplace, the individual's attributes are interests, transferrable skills, career motives and values, personality preferences, career orientation, self-concept and sense of self-efficacy. The work environment include individual's expectation and perceptions regarding workload, control over one's work, tangible and intrinsic rewards of work, the relationship and sense of community among co-workers, perceptions of fairness in the workplace and the role of personal and organizational values. If the fit between and individual and his environment is incompatible, the result is stress. Similarly, lack of fit between the demands placed on individuals and their abilities to meet those demands can result in stress. Though, there are evidences that burnout occurs as a result of complex interaction between individual characteristics and issues in the work environment, research has not systematically considered the role of person variables in this direction especially studying the manifestation of burnout among of education lecturers.

Although, work activity has a strong and long formative potential upon human, it can also be an important source of stress with major consequences for both the individual and the organization he works in. Work environment affects employee's physical, emotional and social health, producing states of depression, irritability, substance ingestion, and somatization. Deterioration of health drives to diminution of employee's job performance, translated in difficulties in concentration, decision making, assertive communication, difficulties in team work and human relations management. The tasks those universities teachers are expected to undertake have changed significantly in recent years and increasingly their work is perceived as pressured. (Veronica, 2014)

Pressure at the workplace is unavoidable due to the demands of the contemporary work environment. Pressure perceived as acceptable by an individual, may even keep workers alert, motivated, able to work and learn, depending on the available resources and personal characteristics. However, when the pressures become excessive or otherwise unmanageable it leads to stress. Stress can damage an employees' health and the business performance. Work related stress can be caused by poor work organization (the way we design jobs and work systems, and the way we manage them), by poor work design, poor management, unsatisfactory working conditions and lack of support from colleagues and supervisors.

Research findings show that the most stressful type of work is that which values excessive demands and pressures that are not matched to workers' knowledge and abilities, where there is little opportunity to exercise any choice or control, and where there is little support from others.

Employees are less likely to experience work-related stress when demands and pressures of work are matched to their knowledge and abilities, control can exercised over their work and the way they do it, and support is received from supervisors and colleagues and participation in decisions that concern their job is provided.

PROBLEM STATEMENT

Academic stress had been prevalent in universities all around the world. This shows that the academic environment no longer provides the low-stress working environment that the academician once enjoyed (Makhbul & Sheikh, 2013). Malaysian public academics are also faced with increased stress due to the rapid development in the Malaysian tertiary education (Idris, 2009)

Increasing numbers of private universities in Malaysia has caused a great competition and expectation that forces the education providers to offer synergy and value-added services to their students. High expectation form students, financial constraint, countless job responsibilities and 'education as business' orientation adopted by private universities, are among stressors to its academicians. Thus cause dangerous health complication; hypertension, heart attack, migraine, depression, eating disorder, besides some consider migrating and leaving their job.

There have been instances in University whereby lectures slum after stressful activities. Lecturers are being saddles with lots of workloads, inadequate lecture halls, keeping pace with Institutional demands, and other, appears to high ten the stress experience of the lectures. Ignoring the risk of this prevailed stress means risking one's health which may result into untimely death (Bada & Falana, 2012)

Study done by Mkumbo (2014) was reported that significant proportion of academic staff had experiencing high stress and three factors have been identified as particularly associated with work stress among academic staff. These are lack of staff involvement in institutional reform processes, lack of necessary support systems related to their work and high workload levels. These results indicate that work stress is a common phenomenon

among institutions of higher education with its associated consequences such low job satisfaction, which is likely to affect staff's productivity. Bassey and Effiom (2010) found that student behavior was the greatest source of stress to academic staff and limitation of funds for research were the highest sources of stress. The observation studied done by Chilty (2005) found that cognitively or intellectually prolonged stress of Universities lectures causes decreased mental capacity, perpetual and reduced problem solving skills. It may not be surprising that stress has significant effect on behavioral, cognitive and physiological reactions as well as with emotionally (Hogan, Carlson & Duo, 2002).

The purpose of this article is to stimulate employers and employees into thinking about stress, fatigue and impairment as they apply to their workplace, and to their own personal lives, and to suggest some mechanisms to help interested parties make reasonable and practical decisions about workplace health and safety. The gained result is not entirely purpose to change the whole academicians job scope in the industry, but as a guide be it university or the government, in designing or developing new policy for their respective institutions.

DEFINING STRESS AND FATIGUE

Stress - *The awareness of not being able to cope with the demands of one's environment; and when this realization is of concern to the person, in that both are associated with a negative emotional response.* (Adapted from Cox1.)

There are many definitions of stress. Just as there are many definitions of fatigue, of mental health and upset. These terms describe a wide range of experiences and not entirely clear cut.

Stress is a negative experience/feeling, associated with new physical symptoms. These including increased heartbeat, swiftness of breath, dry mouth, upset stomach and sweaty palms and over the longer term, more serious digestive upset, cramp and raised blood pressure/cardiovascular disease.

Psychological symptoms range from racing thoughts and speech, lack of impulse control, and feelings of being overpowered, losing control and fearfulness generally. People behave differently to their 'normal' behavior when under stress. They may be angrier, more confrontational, show less time for others and impose an urgency on situations which is unrealistic for those around them.

Other characteristics can include fatigue, proneness to upset, withdrawal, self-neglect and depression. There is no telling which way a person will react to the stress situation, but each person will behave differently to their previous non-stressed state.

When we are aware of our feelings, thoughts and behaviors as well as our bodily reactions, we can assess ourselves as either relaxed, under slight pressure which we are coping with, under pressure we are finding challenging but acceptable, or under excessive pressure which is causing us stress.

Fatigue - *The temporary inability, or decrease in ability, or strong disinclination to respond to a situation, because of inadequate recuperation from previous over-activity, either mental, emotional or physical.*

Fatigue

Fatigue is defined as:

The temporary inability, or decrease in ability, or strong disinclination to respond to a situation, because of previous over-activity, mental, emotional or physical.

Fatigue can compromise health and safety at work, and is a common outcome of stress and shift-work. It is almost impossible to measure except in specialized situations. General methods for preventing fatigue are outlined. People at work can be at increased risk of harm because of impaired health and fitness. This impairment can arise from a number of causes, including fatigue. The practical result for employers is that they need to ask themselves about an employee's ability to work safely.

Fatigue refers to mental or physical exhaustion that stops a person from being able to function normally. It is more than simply feeling tired or drowsy. Fatigue is caused by prolonged periods of physical and/or mental exertion without enough time to rest and recover.

Fatigue is generally caused by:

- spending long periods of time awake
- having an inadequate amount and/or quality of sleep over an extended period.

Factors both in and outside of the workplace can be a source of fatigue. Fatigue can be a major source of stress among employees, and fatigue can significantly affect an employee's capacity to function. It can impact on an employee's performance and productivity, and increase the potential for workplace

What's the difference between stress and fatigue?

Stress and fatigue might seem the same, but they are different and the difference is important. Fatigue as a result of stress. Fatigue is defined as condition when a person is unable respond to a situation because of previous emotional, mental or physical over-activity. This includes a person's state of health where there may be a temporary inability to act, a decrease in ability to respond, or a strong disinclination to take any action at all.

According to Mkumbo (2014) "second approach defines stress with respect to the reactions individuals produce in response to pressures exerted on them. These reactions may be expressed in form of physical or emotional manifestations. They include such reactions as headaches, muscular tensions and stomach ailments, anxiety, frustrations, etc. Stress can contribute to fatigue. Impairment from this cause being unable to carry on working safely through fatigue, has obvious implications for workplace safety.

Fatigue is different than being tired or feeling drowsy. We normally feel tired or drowsy at the end of the day, when our body needs to sleep to rejuvenate. Although you may feel tired or drowsy as a result of fatigue, it is a chronic feeling of lack of motivation or energy. If you are feeling tired and sleep or rest does not take this feeling away, you may be suffering from stress related fatigue.

Fatigue is a symptom, rather than a sign. A symptom is something that we feels and describes, such as a headache or dizziness, while a sign is something the doctor can detect without talking to the patient, such as a rash. Fatigue is a non-specific symptoms, it may have several possible causes.

Fatigue referred to as tiredness, exhaustion, lethargy, and listlessness, describe a physical and/or mental state of being tired and weak. Although physical and mental fatigue is different, the two often exist together- if a person is physically exhausted for long enough, they will also be mentally tired. When somebody experiences physical fatigue, it means they cannot continue functioning at their normal levels of physical ability. Mental fatigue, however, is more slanted toward feeling sleepy and being unable to concentrate properly.

Workers who report that they are stressed incur healthcare costs that are 46 percent higher than for non-stressed employees, according to the National Institute for Occupational Safety and Health (NIOSH).And 60 to 90 percent of doctor visits are attributed to stress-related illnesses and symptoms.(Humana, 2006). Left untreated, prolonged stress can raise the risk for developing Chronic and costly diseases. Among them: heart disease, diabetes and even some cancers, which can collectively account for a vast amount of all healthcare costs.

Stress can also lower the immune system and play a role in a person's susceptibility to more colds, flu and other infectious diseases. Additionally, people who are stressed are more likely to experience pain-related conditions, and a host of other ailments, from teeth grinding and chest tightness to fatigue. In fact, an APA survey found that 53 percent of workers reported fatigue due to work stress (American Psychological Association, 2008)

How do I know when my stress levels are climbing?

We can't expect to live the modern-day, fast-paced lifestyle without being exposed to some stressors along the way. But what we can do is realize when we are becoming overloaded and learn to manage our stress more effectively. Indications that we aren't coping with stress include:

A) Personal symptoms:

1. Raised blood pressure
2. Poor sleeping patterns
3. Difficulties concentrating
4. Depressed mood
5. Chest pains, headaches, palpitations,
6. Hyperventilation
7. Poor memory
8. Anxiety
9. Irritability
10. Loss of confidence

B) Fatigue Organizational symptoms:

1. High absenteeism
2. Low morale
3. High staff turnover
4. Poor industrial relations and process improvement
5. Poor quality and productivity
6. Increased accident and illness
7. Increased stress claims,
8. Increased retirement rates and use of grievance procedures
9. Loss of employee contribution to planning.

Does fatigue always result from stress? Fatigue is one of the most common symptoms of occupational stress. The definition above would suggest that fatigue mainly stems from a task that lasts too long, or work.

Fatigue played an important role in the relationship between stress and perceived health. It fully mediated this relationship, which could mean that stress may lead to poor health outcomes when it is significant enough to drain stress resiliency resources and manifest as fatigue. When stress is not related to fatigue there is no impact of stress on perceived health. Fatigue has been previously conceptualized as a warning sign, indicating harmful accumulation of stress. Therefore, stress, when severe enough to deplete the recovery resources and cause fatigue, may lead to poor perceived health. Fatigue can signal unresolved stress and serve as a window of opportunity to intervene and avert the deterioration of health perceptions.

Stress and Fatigue: Their Impact on Health and Safety in the Workplace

The impact of stress on health can vary according to individual response; however, high stress levels can contribute to developing health-related impairments, including mental and behavioral disorders such as exhaustion, burnout, anxiety and depression, as well as other physical impairments such as cardio-vascular disease and musculoskeletal disorders. Growing attention is also being paid to the impact of emerging coping behaviors such as alcohol and drug abuse, smoking, unhealthy diet, poor sleep, as well as to their relation with an increasing rate of workplace accidents and non-communicable diseases.

Stress can have an impact on overall health. Our bodies are designed, pre-programmed if you wish, with a set of automatic responses to deal with stress. This system is very effective for the short term "fight or flight" responses we need when faced with an immediate danger. The problem is that our bodies deal with all types of stress in the same way. Experiencing stress for long periods of time (such as lower level but constant stressors at work) will activate this system, but it doesn't get the chance to "turn off". The body's "pre-programmed" response to stress has been called the "Generalized Stress Response" and includes:

- increased blood pressure
- increased metabolism (e.g., faster heartbeat, faster respiration)
- decrease in protein synthesis, intestinal movement (digestion), immune and allergic response systems
- increased cholesterol and fatty acids in blood for energy production systems
- localized inflammation (redness, swelling, heat and pain)
- faster blood clotting
- increased production of blood sugar for energy

- increased stomach acids
- Stress can contribute to accidents/injuries by causing people to:
- sleep badly
 - over-medicate themselves and/or drink excessively
 - feel depressed
 - feel anxious, and nervous
 - feel angry and reckless (often due to a sense of unfairness or injustice)
- When people engage in these behaviors or are in these emotional states, they are more likely to:
- become momentarily (but dangerously) distracted
 - make errors in judgment
 - put their bodies under physical stress, increasing the potential for strains and sprains
 - fail in normal activities that require hand-eye or foot-eye coordination.

Stress also has been linked to suppression of the immune system, increasing your chances of becoming ill or altering the course of an illness if you already have one. In particular, it has been implicated as playing a role in cancer and gastrointestinal, skin, neurologic and emotional disorders, and even the common cold. Some studies have shown that relaxing while listening to soothing music can improve immune system functioning and, we can assume, help with our long-term health.

Elevated blood pressure is another response to stress. Too much stress with little or no coping skills keeps the body “revved up.” Learning to relax can help lower your blood pressure. Elevated blood pressure always should be discussed with your family physician, which can help you sort out whether your elevated blood pressure is due to a medical or genetic condition or a reaction to uncontrolled stressors.

Stress can also lead to accidents or injuries directly by not giving the person the control necessary to stop the threat to their physical well-being. Stress appears to be a silent killer which does not weigh people down in a day, therefore people seems to be careless about it or manage it away it should (Bada & Falana,2012)

Safety –Health magazine reported some of this can be related to stress coping mechanisms, such as alcohol or medication, which even when none consumed during work hours, can impact worker health or reaction time. However, stress can also contribute to distraction. A stressed worker is more likely to be thinking about his or her stress source and be less focused on the task at hand. Poor attention can lead to accidents and injury (Total Safety, 2016). Other job stressors that can lead to fatigue and inattention, and correspondingly accidents and injury, include excessive workload, fear of being laid off, unreasonable performance demands and infrequent breaks.

Responsibilities under the Health and Safety in Employment Act Employers are required to take all practicable steps to prevent harm occurring to employees. The Act requires employers to adopt a systematic approach to identifying, assessing and controlling hazards at work. Because impairment can arise from stress or fatigue, that may occur at home or at work, employers should aim to identify this impairment when it threatens workplace health

and safety. Employees also have obligations. In this context employees should use opportunities for recuperation responsibly. They should ensure that the personal life choices they make (e.g. use of alcohol or recreational drugs or working second jobs which prevent adequate rest don't pose a risk of harm to themselves or other people at work.

NIOSH encourages employers to reduce workplace stress by creating recognition systems to reward employees for good work performance. Opportunities for career development and advancement and managerial actions that are consistent with organizational values also help to lower workplace stress. Stress management and other wellness programs can also be introduced to help workers cope with stress sources. NIOSH also advised employers to be flexible in work hours and tasks when workers have responsibilities or other factors in their personal lives that are creating stress.

No matter what stress management techniques are installed, the key to success is to have a continuing commitment to improving the health and well-being of all employees. Important components to ensure a business strategy that successfully addresses stress include:

- Long-range strategies customized to the employee population and company culture
- Multiple approaches and an ongoing communications campaign
- Emphasis on both organizational and individual change
- Achievable goals with built-in time tables
- Rewards and incentives for even the small changes

Addressing the management of stress can be a vital wellness strategy that makes for a healthier, happier workforce and a stronger, more productive company.

CONCLUSIONS

Although, work activity has a strong and long formative potential upon human, it can also be an important source of stress with major consequences for both individual and the organization. Stress seems to be a par shoot of human survival. People talk about it; discuss it with little or no attention being paid to it. Stress appears to be a silent killer which does not weigh people down in a day, therefore people seems to be careless about it or manage it the way it should. Therefore, academic stress is a wide spread phenomenon and stress, when significant enough to cause fatigue, may lead to poor health.

However, fatigue was common in this metropolitan primary care environment and completely mediated the relationship between stress and poor perceived health. Stress can come from the environment, or as a response to it. Through these interactions, organizations can suffer, intervention programs are essential in order to eliminate stress at the workplace. There should the relaxation centers on the university system to reduce the stress faced by the university lecturers.

In conclusion there are a variety of business needs to be done to cope with stress in life. Whatever happens, wanted or otherwise, the person is forced to face the pressure which exists to live a more meaningful business performance. Pressure and stress is also a problem of motivation (Kasim,2017). Indeed, only with determination, grit and a strong faith can help us cope with all the stress or pressure in stride.

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