Analysis of Work study in An Automobile Company

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ABSTRACT: This paper attempts to probe the contributors and management of stress among women in different levels of occupation. The seventeenth centaury has been called the age of enlightenment, eighteenth, the age of reason, the nineteenth the age of progress and the twentieth, the age of stress and anxiety. According to a survey conducted it was found that, four out of ten employees state that their jobs are "very" or "extremely" stressful. Those in high-stress jobs are three times more likely than others to suffer from stress-related medical conditions and are twice as likely to quit. The study states that women, in particular, report more stress related to the conflict between work and family.

I. INTRODUCTION

Occupational stress is stress involving work. Stress is defined in terms of its physical and physiological effects on a person, and can be a mental, physical or emotional strain. It can also be a tension or a situation or factor that can cause stress. Occupational stress can occur when there is a discrepancy between the demands of the environment/workplace and an individual’s ability to carry out and complete these demands. Often a stressor can lead the body to have a physiological reaction which can strain a person physically as well as mentally.

A variety of factors contribute to workplace stress such as negative workload, isolation, extensive hours worked, toxic work environments, lack of autonomy, difficult relationships among coworkers and management, management bullying, harassment and lack of opportunities or motivation to advancement in one’s skill level stress-related disorders encompass a broad array of conditions, including psychological disorders (e.g., depression, anxiety, post-traumatic stress disorder) and other types of emotional strain (e.g., dissatisfaction, fatigue, tension, etc.), maladaptive behaviors (e.g., aggression, substance abuse), and cognitive impairment (e.g., concentration and memory problems). In turn, these conditions may lead to poor work performance, higher absenteeism, less work productivity or even injury Job stress is also associated with various biological reactions that may lead ultimately to compromised health, such as cardiovascular disease, or in extreme cases death.

II. CATEGORIES OF WORKPLACE STRESS

There are a total of 5 categories associated with occupational stress.

- Factors unique to the job
- Role in the organization
- Career development
- Interpersonal work relationships
- Organizational Structure/climate

These individual categories demonstrate that stress can occur specifically when a conflict arises from the job demands of the employee and the employee itself. If not handled properly, the stress can become distress.
The first category concerns with the ability of the employee coping with the specific hours worked the level of productive rate expected, the physical environment, as well as the expectancy of the work desired by management. For instance, research shows that night shifts in particular have a high possibility of negative impact towards the health of the employee. In relation to this, approximately 20 percent of night shift workers have experienced psycho-physiological dysfunctions, including heart diseases. Extreme factors can affect the competence levels of employees.

The second category, role in the organization, is associated with the hierarchical ranking of that particular employee within the organization. Upper management is entitled to oversee the overall functioning of the organization. This cause’s potential distress as the employee must be able to perform simultaneous tasks.

The third category, career development, other factors come into play. Security of their occupation, promotion levels, etc. are all sources of stress, as this business market in terms of technology of economic dominance is ever-changing.

The fourth category of workplace stress pertains to the interpersonal relationships within the workplace. The workplace is a communication and interactive based industry. These relationships (either developed or developing) can be problematic or positive. Common stressors include harassment, discrimination, biased opinions, hearsay, and other derogatory remarks.

Finally, the last category of workplace stress is the organizational climate or structure. The overall communication, management style, and participation among groups of employees are variables to be considered. In essence, the resultant influence of the high participation rate, collaborative planning, and equally dispersed responsibilities provides a positive effect on stress reduction, improved work performance, job satisfaction, and decreased psychosomatic disorders.

Stress is a prevalent and costly problem in today’s workplace. About one-third of workers report high levels of stress. One-quarter of employees view their jobs as the number one stressor in their lives. Three-quarters of employees believe the worker has more on-the-job stress than a generation ago. Evidence also suggests that stress is the major cause of turnover in organizations. With continued stress at the workplace, workers will develop psychological and physiological dysfunctions and decreased motivation in excelling in their position.

The Kenexa Research Institute released a global survey of almost 30,000 workers which showed that females suffered more workplace stress than their male counterparts. According to the survey, women’s stress level were 10% higher for those in supervisory positions, 8% higher stress in service and production jobs than men, and 6% higher in middle and upper management than men in the same position.

III. CAUSES

Job stress results from the interaction of the worker and the conditions of work. Views differ on the importance of worker characteristics versus working conditions as the primary cause of job stress. Job stress is also caused due to being fired, having to leave the job because of ill health, work overload, time pressure, poor quality of supervision, insecure political climate, inadequate authority to match responsibility, role ambiguity, difference between company and employees value, lay off, too many decision, physical strain of work environment and long hours. The differing viewpoints suggest different ways to prevent stress at work. Differences in individual characteristics such as personality and coping skills can be very important in predicting whether certain job conditions will result in stress. In other words, what is stressful for one person may not be a problem for someone else? This viewpoint underlies prevention strategies that focus on workers and ways to help them cope with demanding job conditions.

Stress, by definition, is the interaction between an individual and the demands and burdens presented by the external environment. Stress occurs due to a demand that exceeds the individual's coping ability, disrupting their psychological equilibrium. Hence, in the workplace environment stress arises when the employee perceives a situation to be too strenuous to handle, and is threatening to their well being.

There are many external stressors that contribute to an employee’s ability to adapt to the demands of the environment. For instance, our technologically inclined society can provide a source of workplace stress seeing that some individuals may not have the capacity and the resources to advance their skills.

Although the importance of individual differences cannot be ignored, scientific evidence suggests that certain working conditions are stressful to most people. Such evidence argues for a greater emphasis on working
conditions as the key source of job stress, and for job redesign as a primary prevention strategy large surveys of working conditions, including conditions recognized as risk factors for job stress, were conducted in member states of the European Union in 1990, 1995, and 2000. Results showed a time trend suggesting an increase in work intensity. In 1990, the percentage of workers reporting that they worked at high speeds at least one-quarter of their working time was 48%, increasing to 54% in 1995 and to 56% in 2000. Similarly, 50% of workers reported they work against tight deadlines at least one-fourth of their working time in 1990, increasing to 56% in 1995 and 60% in 2000. However, no change was noted in the period 1995–2000 (data not collected in 1990) in the percentage of workers reporting sufficient time to complete tasks.

A substantial percentage of Americans work very long hours. By one estimate, more than 26% of men and more than 11% of women worked 50 hours per week or more in 2000. These figures represent a considerable increase over the previous three decades, especially for women. According to the Department of Labor, there has been an upward trend in hours worked among employed women, an increase in extended work weeks (>40 hours) by men, and a considerable increase in combined working hours among working couples, particularly couples with young children.

IV. EFFECTS OF STRESS

Physical symptoms that may occur because of occupational stress include fatigue, headache, upset stomach, muscular aches and pains, chronic mild illness, sleep disturbances, and eating disorders. Psychological and behavioral problems that may develop include anxiety, irritability, alcohol and drug use, feeling powerless and low morale.

The spectrum of effects caused by occupational stress includes absenteeism, poor decision making, and lack of creativity, accidents, organizational breakdown or even sabotage. If exposure to stressors in the workplace is prolonged, then chronic health problems can occur including stroke. An examination was of physical and psychological effects of workplace stress was conducted with a sample of 552 female blue collar employees of a microelectronics facility. It was found that job-related conflicts were associated with depressive symptoms, severe headaches, fatigue, rashes, and other multiple symptoms. Studies among the Japanese population specifically showed a more than 2-fold increase in the risk of total stroke among men with job strain (combination of high job demand and low job control). Along with the risk of stroke comes high blood pressure and immune system dysfunction. Prolonged occupational stress can lead to occupational burnout.

The effects of job stress on chronic diseases are more difficult to ascertain because chronic diseases develop over relatively long periods of time and are influenced by many factors other than stress. Nonetheless, there is some evidence that stress plays a role in the development of several types of chronic health problems—including cardiovascular disease, musculoskeletal disorders, and psychological disorders.

V. TYPES OF STRESSORS

A stressor is any event, experience, or environmental stimulus that causes stress in an individual. These events or experiences are perceived as threats or challenges to the individual and can be either physical or psychological. Researchers have found that stressors can make individuals more prone to both physical and psychological problems, including heart disease and anxiety.

Stressors are more likely to affect an individual's health when they are "chronic, highly disruptive, or perceived as uncontrollable" In psychology, researchers generally classify the different types of stressors into three categories: crises/catastrophes, major life events, and daily hassles/micro stressors.

Crises/Catastrophes

This type of stressor is unforeseen and unpredictable and, as such, is completely out of the control of the individual. Examples of crises and catastrophes include: devastating natural disasters, such as major floods or earthquakes, wars, etc.
Though rare in occurrence, this type of stressor typically causes a great deal of stress in a person's life. A study conducted by Stanford University found that after natural disasters, those affected experienced a significant increase in stress level.

**Major Life Events**  
Common examples of major life events include: marriage, going to college, death of a loved one, birth of a child, etc. These events can be either positive or negative. Research has found major life events are somewhat rare to be major causes of stress, due to its rare occurrences.  
The length of time since occurrence and whether or not it is a positive or negative event are factors in whether or not it causes stress and how much stress it causes. Researchers have found that events that have occurred within the past month generally are not linked to stress or illness, while chronic events that occurred more than several months ago are linked to stress and illness. Additionally, positive life events are typically not linked to stress—and if so, generally only trivial stress—while negative life events can be linked to stress and the health problems that accompany it.

**Daily Hassles/Micro stressors**  
This category is the most commonly occurring type of stressor in an individual's everyday life. This includes daily annoyances and minor hassles. Examples include: making decisions, meeting deadlines at work or school, traffic jams, encounters with irritating personalities, etc. Often, this type of stressor includes conflicts with other people. Daily stressors, however, are different for each individual, as not everyone perceives a certain event as stressful. For example, most people find public speaking to be stressful, nevertheless, a seasoned politician most likely will not.

There are three major psychological types of conflicts that can cause stress. First, the approach-approach conflict occurs when a person is choosing between two equally attractive options, i.e. whether to go see a movie or to go see a concert. The second type is the avoidance-avoidance conflict, where a person has to choose between two equally unattractive options, for example, to take out a second loan with unappealing terms to pay off the mortgage or to face foreclosure on one's house. The third type is an approach-avoidance conflict. This occurs when a person is forced to choose whether or not to partake in something that has both attractive and unattractive traits—such as whether or not to attend an expensive college (meaning taking out loans now, but also meaning a quality education and employment after graduation).

**Evidence of occupational stress due to an individual's status in the workplace**  
A person's status in the workplace can also affect levels of stress. While workplace stress has the potential to affect employees of all categories; those who have very little influence to those who make major decisions for the company. However, less powerful employees (that is, those who have less control over their jobs) are more likely to suffer stress than powerful workers. Managers as well as other kinds of workers are vulnerable to work overload (Primm, 2005).

Economic factors that employees are facing in the 21st century have been linked to increased stress levels. Researchers and social commentators have pointed out that the computer and communications revolutions have made companies more efficient and productive than ever before. This boon in productivity however, has caused higher expectations and greater competition, putting more stress on the employee (Primm, 2005).

The following economic factors may lead to workplace stress:
- Pressure from investors, who can quickly withdraw their money from company stocks.
- The lack of trade and professional unions in the workplace.
- Inter-company rivalries caused by the efforts of companies to compete globally.
- The willingness of companies to swiftly lay off workers to cope with changing business environments.

Bullying in the workplace can also contribute to stress. This can be broken down into five different categories:
- Threat to profession status
- Threat to personal status
- Isolation
- Excess work
Destabilization i.e. lack of credit for work, meaningless tasks etc.] This in effect can create a hostile work environment for the employees that, which in turn, can affect their work ethic and contribution to the organization.

Sexual harassment as a cause of workplace stress

Sexual harassment in the workplace is an important cause to workplace stress. In the workplace, women are more likely to experience sexual harassment compared to men especially for women who are working in traditionally masculine occupations are particularly likely to experience this stressed. A study investigated sexual harassment experiences collected the outcomes of 747 women employed in the private sector and at universities and the research indicated that sexual harassment had negative effects on the psychological well-being to workers. In The Sexual Experiences Questionnaire, it was found that sexual harassment had adverse effects on the psychological wellbeing. The result indicated that women who had experienced low, moderate and high levels of harassment and those who had not experienced any harassment could perform differently on the work related tasks. The different levels of harassment could lead to different kinds of outcomes at workplace. High levels of harassment were related to the worst outcomes, and no harassment was related to least negative outcomes. In other words, women had experienced a higher level of harassment are more likely to perform poorly at workplaces.

V. PSYCHOLOGICAL STRESS AND DISEASE

Negative affective states, such as feelings of anxiety and depression, could influence the pathogenesis of physical disease, which in turn, have direct effects on biological process that could result in increased risk of disease in the end. For example, when humans are under chronic stress, permanent changes in their physiological responses are most likely to occur. Such changes could lead to disease. Chronic stress results from stressful events that persist over a relatively long period of time, such as caring for a spouse with dementia, or results from brief focal events that continue to be experienced as overwhelming long after they are over, such as experiencing a sexual assault. Experiments show that when healthy human individuals are exposed to acute laboratory stressors, they show an adaptive enhancement of some markers of natural immunity but a general suppression of functions of specific immunity. By comparison, when healthy human individual are exposed to real-life chronic stress, this stress is associated with a biphasic immune response where partial suppression of cellular and humeral function coincides with low-grade, nonspecific inflammation. Even though psychological stress is often connected with illness or disease, most of healthy individuals can still remain disease-free after confronting chronic stressful events. This suggests that there are individual differences in vulnerability to the potential pathogenic effects of stress; individual differences in vulnerability arise due to both genetic and psychological factors

VI. STRESS AND HEALTH

As seen in the previous section, the physiological response to stress demands much of the body's energy and resources. This often has a great impact on disease and risk for disease. When the body's energy is used to respond to minor (or major) stressors, the immune system's ability to function properly is compromised. This makes the individual more susceptible to physical illnesses like the cold or flu. Stressful events, such as job changes, often result in insomnia, impaired sleeping, and health complaints Recent studies have shown that there is a link between stress and cancer in animals. The initiation of cancer typically starts off with an unstoppable cell growth and division, leading to a tumor. This cell eventually goes through metastasis, where they leave the tumor and migrate to other parts of the body. They found that stress plays as an activator for certain processes that can lead to diseases such as antiviral defense. However, many tests regarding stress is not capable and thus this relationship between cancer and stress within humans can't be determined
Chronic stress and a lack of coping resources available or used by an individual can often lead to the development of psychological issues such as depression and anxiety (see below for further information). This is particularly true regarding daily stressors. These types of stressors tend to have a more negative impact on health because they occur daily and thus require the body's physiological response to occur daily. This depletes the body's energy more quickly and usually occurs over long periods of time, especially when these micro stressors cannot be avoided (i.e., traffic on the way to work). Studies have also proven that perceived chronic stress and the hostility associated with Type A personalities are often associated with much higher risks of cardiovascular disease. This occurs because of the compromised immune system as well as the high levels of arousal in the sympathetic nervous system that occur as part of the body's physiological response to stressful events.

However, it is possible for individuals to exhibit hardness—a term referring to the ability to be both chronically stressed and healthy. Many psychologists are currently interested in studying the factors that allow hardy individuals to cope with stress and evade most health and illness problems associated with high levels of stress. Stress can be associated with psychological disorders such as general anxiety disorder, depression, and post-traumatic stress disorder. However, it is important to note that everyone experiences some level of stress, and diagnosis of stress disorders can only be performed by a licensed practitioner.

**VII. STRESS MANAGEMENT**

Stress management refers to a wide spectrum of techniques and psychotherapies aimed at controlling a person's levels of stress, especially chronic stress, usually for the purpose of improving everyday function. In general, stress is related to both external and internal factors. External factors include your physical environment, your job, relationships with others, your home, and all the situations, challenges, difficulties, and expectations you're confronted with on a daily basis. Internal factors determine your body's ability to respond to, and deal with, the external stress-inducing factors. Internal factors which influence your ability to handle stress include your nutritional status, overall health and fitness levels, emotional well-being, your ability to control stress through relaxation techniques or other strategies, and the amount of sleep and rest you get.

Managing stress, therefore, can involve learning tips to change the external factors which confront you or the internal factors which strengthen your ability to deal with what comes your way.

**Techniques to cope up Stress**

**Exercise**

Exercise can be a key, central method to compensate for stressors. Physical exercise not only promotes overall fitness, but it helps you to manage emotional stress and tension as well. Exercise can also aid in relaxation and improve sleep. For one thing, exercise can emotionally remove one temporarily from a stressful environment or situation. Being fit and healthy also increases your ability to deal with stress as it arises.

**Relaxation techniques and meditation**

There are many ways to use structured relaxation techniques to help control stress and improve your physical and mental well-being. While some types of meditation and relaxation therapies are best learned in a class, it's also possible to learn meditation techniques on your own. There are literally hundreds of different types of relaxation methods ranging from audio CDs to group martial arts and fitness classes. The following are only examples of the types of structured programs available that can increase our capacity for relaxation:
Autogenic training: Developed in the early 20th century, this technique is based upon passive concentration and awareness of body sensations. Through repetition of so-called autogenic "formulas" one focuses upon different sensations, such as warmth or heaviness, in different regions of the body. Autogenic training has been used by physicians as a part of therapy for many conditions. Popular in Europe (where it is even covered by some insurance plans), this method is currently gaining acceptance in the United States. No particular physical skills or exercises are involved; however, people desiring to learn this technique must be prepared to invest time and patience. Since this technique is slightly more complex than some relaxation methods, a course is generally the best way to learn the method.

Biofeedback: Biofeedback is one method of learning to achieve relaxation, control stress responses, or modify the body's reactions through the use of monitoring equipment that provides information from the body which would normally not be available. This method is based upon the principle first advanced in the early 1960s that the autonomic nervous system (the part we don't consciously use) is trainable. For example, instruments can be used to measure heart rate, blood pressure, brain activity, stomach acidity, muscle tension, or other parameters while people experiment with postural changes, breathing techniques, or thinking patterns. By receiving this feedback, one can learn to identify the processes that achieve the desired result, such as reduction in heart rate and blood pressure. Biofeedback is used by many practitioners for a variety of psychological and physical conditions. Because the technique involves the use of measuring devices, it can only be performed by a professional.

Imagery: Imagery, sometimes referred to as guided imagery, is the use of pleasant or relaxing images to calm the mind and body. By controlling breathing and visualizing a soothing image, a state of deep relaxation can occur. This method can be learned by anyone and is relatively easy to try out.

Meditation techniques: Ranging from practices associated with specific religions or beliefs to methods focusing purely on physical relaxation, meditation is one of the most popular techniques to achieve physical and mental relaxation. There are thousands of different types of meditation, and many can be learned on your own. The meditative state is one in which there is a deep centering and focusing upon the core of one's being; there is a quieting of the mind, emotions, and body. The meditative state can be achieved through structured (as in a daily practice of a routine) or unstructured (for example, while being alone outdoors) activities. While teachers of meditative arts are readily available, some techniques can be learned through books or online tutorials. A form of meditation popularized for several decades is transcendental meditation (TM). TM has the goal of achieving transcendental consciousness (the simplest form of awareness). It is practiced for 15-20 minutes in the mornings and evenings and is relatively easy to learn. Numerous classes and teaching materials are available for beginners.

Another variant of a meditation technique has gained popularity in the U.S. since its description in the 1970s by Harvard physician Herbert Benson. This technique involves generation of the so-called relaxation response through the repetition of a word of phrase while quietly seated, 10-20 minutes per day. Designed to evoke the opposite bodily reaction to the stress response (or "fight or flight" reaction), this method carries no religious or spiritual overtones. Its value has been documented in the reduction of blood pressure and other bodily stress responses. Like other forms of meditation, it can be learned on one's own, but time and practice are required to elicit the desired relaxation state.

Progressive muscle relaxation: Progressive muscle relaxation is a method developed in the 1930s in which muscle groups are tightened and then relaxed in succession. This method is based upon the idea that mental relaxation will be a natural outcome of physical relaxation. Although muscle activity is involved, this technique requires no special skills or conditioning, and it can be learned by almost anyone. Progressive muscle relaxation is generally practiced for 10-20 minutes a day. As with the relaxation response, practice and patience are required for maximum benefits.
Qigong: The martial art qigong is an ancient Chinese health-care system that combines physical training (such as isometrics, isotonic, and aerobic conditioning) with Eastern philosophy and relaxation techniques. There are many different kinds of qigong, including medical qigong. Some forms are practiced while standing, sitting, or lying down; others involve structured movements or massage. Over 70 million Chinese practice some form of qigong daily. Qigong has been used for centuries in China for the treatment of a variety of medical conditions. Learning qigong involves time, commitment, patience, and determination, and learning from a master or group is advisable. Since this technique involves physical exertion, check with your doctor before beginning, particularly if you have a chronic medical condition or are over 40 years old.

Tai chi: Like qigong, tai chi is a Chinese martial art. It has been termed a kind of "meditation in motion" and is characterized by soft, flowing movements that stress precision and force. Also known as tai chi chuan, this method is thousands of years old. As with qigong, training from a master is necessary to learn the art of tai chi. Again, since motion and force are required, check with your doctor before beginning training.

Yoga: There are many forms of yoga, an ancient Indian form of exercise based upon the premise that the body and breathing are connected with the mind. The practice of yoga is thought to be over 5,000 years old. One goal of yoga is to restore balance and harmony to the body and emotions through numerous postural and breathing exercises. Yoga, which means "joining" or "union" in Sanskrit, has been called the "search for the soul" and the "union between the individual and the divine." Among the benefits of yoga are increased flexibility and capability for relaxation. No special level of conditioning is required; yoga can be learned by nearly anyone. Classes, books, and videos are widely available. Those with special or chronic physical conditions will want to get clearance from their doctor before beginning.

Although many techniques have traditionally been developed to deal with the consequences of stress considerable research has also been conducted on the prevention of stress, a subject closely related to psychological resilience-building. A number of self-help approaches to stress-prevention and resilience-building have been developed, drawing mainly on the theory and practice of cognitive-behavioral therapy.

VIII. PREVENTION
A combination of organizational change and stress management is often the most useful approach for preventing stress at work

How to Change the Organization to Prevent Job Stress

- Ensure that the workload is in line with workers' capabilities and resources.
- Design jobs to provide meaning, stimulation, and opportunities for workers to use their skills.
- Clearly define workers' roles and responsibilities.
- To reduce workplace stress, managers may monitor the workload given out to the employees. Also while they are being trained they should let employees understand and be notified of stress awareness.
- Give workers opportunities to participate in decisions and actions affecting their jobs.
- Improve communications-reduce uncertainty about career development and future employment prospects.
- Provide opportunities for social interaction among workers.
- Establish work schedules that are compatible with demands and responsibilities outside the job.
- Combat workplace discrimination (based on race, gender, national origin, religion or language).
- Bringing in an objective outsider such as a consultant to suggest a fresh approach to persistent problems.
- Introducing a participative leadership style to involve as many subordinates as possible to resolve stress-producing problems.

St. Paul Fire and Marine Insurance Company conducted several studies on the effects of stress prevention programs in hospital settings. Program activities included (1) employee and management education on job stress, (2) changes in hospital policies and procedures to reduce organizational sources of stress, and (3) the establishment of employee assistance programs.
programs. In one study, the frequency of medication errors declined by 50% after prevention activities were implemented in a 700-bed hospital. In a second study, there was a 70% reduction in malpractice claims in 22 hospitals that implemented stress prevention activities. In contrast, there was no reduction in claims in a matched group of 22 hospitals that did not implement stress prevention activities.

Telecommuting is another way organizations can help reduce stress for their workers. Employees defined telecommuting as "an alternative work arrangement in which employees perform tasks elsewhere that are normally done in a primary or central workplace, for at least some portion of their work schedule, using electronic media to interact with others inside and outside the organization." One reason that telecommuting gets such high marks is that it allows employees more control over how they do their work. Telecommuters reported more job satisfaction and less desire to find a new job. Employees that worked from home also had less stress, improved work/life balance and higher performance rating by their managers.

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