Impact of fatigue on the workplace



Introduction

Exposure to work-related fatigue is rising in today's 24-hour culture, which is progressively dominated by knowledge work. Fatigue from a medical point of view refers to a state of weakness of the body and the mind that affects everybody (Phillips, 2015). Fatigue is mostly related to exertive situations of work. Fatigue is an intricate problem that can be ascribed to numerous factors. Hence, it is problematic to define (Phillips, 2015). This essay seeks to explain the idea of fatigue and also discuss its effects in the working place. The paper then further discusses the types of workplaces, and work settings that the fatigue exists; the safety and health effects, both acute and chronic that may be associated with exposure to fatigue. It also discusses the federal and state agencies and standards used to regulate the hazard; traditional means of monitoring fatigue and measuring the effects it has the working place; Analysis of the possible causes of the fatigue. Finally, discuss various countermeasures to be used to manage fatigue in the workplace.

Causes of Fatigue in the Workplace

Fatigue is mainly a problem in safety sensitive areas, such as transport. The costs of fatigue are broadly studied in professional settings. There are numerous factors at both; in the place of work and out of the location of work which can impact levels of fatigue. The most significant factor that causes fatigue is the lack of enough sleep. In addition to the lack of sleep, fatigue can be induced by the type of work done and on the coworker. Occupational Safety Health (OSH) proposes that there are four 'categories of work' in this regard. Fatigue can be induced through any of these four categories. These

groups include self-generated stress, healthy work, poorly organized work, intrinsically stressful work.

Self-generated stress occurs when a worker creates his/her stressors because of individual choices. A person in this group might be trying to do many jobs, or agreeing to unrealistic demands on themselves (Rahman et al., 2017). Healthy work is work that is pleasing, motivating, satisfying and exciting. A valuation of this kind of job discloses this type of work does not induce fatigue to the worker directly rather it induces stress to resources. Poorly organized work is usually pleasing and fulfilling but structured in such a way that it becomes difficult for most people doing the work to cope with. Jobs in this category can be done safely but are often being worked too many hours in each week(Rahman et al., 2017). This can quickly induce fatigue to the person involved. The last group of work may be essentially more problematic to handle than others. Some cases of work that may be difficult to handle are work that is emotionally challenging, draining or even work that involves long periods of intense concentration; work that has high costs from error (medicine, policing air traffic control, social work) (Han et al., 2014).

The SafetyandHealth Effects of Fatigue

Fatigue is experienced by everyone irrespective of abilities, skills, and training. The most common effects of fatigue include poor judgment, information processing decrease of attentiveness and work motivation, longer reaction time, reduced concentration, and problems with memory. Studies show that fatigue in workplaces costs over 18 billion \$ a year in the

US (Caruso, 2014). Also, fatigued workers have deprived communication with their environment and get irritated easily. Therefore, a fatigued employee is possibly dangerous to themselves and their fellow employees, and most of the unfortunate incidents are found among fatigued workers. Serious accidents that have been reported in recent five decades have been credited to worker's fatigue. The Three Mild, The Challenger Explosion, The Exxon Valdez Oil Spill, American Airlines Flight 1420 Crash incidents are considered to be the most disastrous incident on U. S. soil; all these accidents are attributed to human error (Caruso, 2014).

Chronic effects of fatigue may follow chronic exposures to severe fatigue or portray a continuous failure of adequate rest. Continuous exposure to severe fatigue causes chronic circadian disruption of the immune response and intensify risks of emerging cardiac diseases (Boivin & Boudreau, 2014). The distraction of the daily regulation of human transcriptome is another mechanism behind fatigue. Also, postponing sleep by four hours for three successive days has led to decrease of the human blood transcriptome. Fatigue also alters hormonal and sleepiness cycles and the lipid and glucose metabolism, which may lead to the development of other diseases like obesity.

Studies have shown that severe fatigue cumulatively rises the rate at which performance declines across wakefulness (Caruso, 2014). Fatigue favors sleeping illnesses such as insomnia and hinders with behavior. Insomnia is defined as the incapacity to sleep and to remain asleep for a desired period. It is a very common sleep illness that is related to unbalanced work hours. Sleep hypopnea is sleep disorder which is very common among overweight https://assignbuster.com/impact-of-fatigue-on-the-workplace/

men who often snore. This condition is not caused by fatigue directly, but it is associated with fatigue in a way that it causes sleep deprivation which increases the fondness for food with high calories that may cause overweight and metabolic changes (Caruso, 2014). It may also affect the gastrointestinal and cardiovascular functions by altering hormonal and sleepiness cycles and increase peptic ulcer and symptoms associated with irritable bowel syndrome.

Standards Used to Regulate Work Fatigue

Reducing fatigue involves both state and company regulation and control as well as the efforts of the workers. OHS laws have been designed to guarantee that the health and security of everybody in the workplace is keenly observed. Every employer is urged to offer a possible working environment which is safe and does not risk the health of employees.

Workers also have an obligation to take care of their health and wellbeing and that of their coworkers and follow measures the management takes to conform with OHS laws. There are also various international standards that have been in place to help regulate fatigue in the workplace. For example, the International Safety Management Code states that if fatigue, lack of adequate rest, or excessive hours of work are or should be apparent, the employer should intervene to solve the problem immediately. All this laws and standards are put in place to help the employers and employees manage fatigue effectively.

Fatigue Measurement and Monitoring

Studies show that fatigue is a complex problem that cannot be simply monitored and measured in working place(Wright et al., 2013). Most workers are unwilling to express signs of fatigue. Also, no instrument has been designed to measure fatigue, because of definitional difficulties of fatigue, the huge effects fatigue has on human skills, and multiple causes of fatigue. However, to be able to manage fatigue in the workplace effectively, fatigue must first be identified, measured and then analyze their causes. There exist very many tools available to be used for this purpose including articles, books, rules, and questionnaires. Some instruments are inaccurate and inconclusive. It is, therefore, important to identify the most appropriate for the workplace and acquire sufficient knowledge about the various benefits and shortcomings of each instrument in the workplace. Availability of this instruments allows the management and employees to identify, measure and manage fatigue in their place of work, determine the useful methods for evading fatigue or the probability of it occurring. They are also able to study some managing strategies to be used to control fatigue and perform through accident surveys after the occurrence of problems induced by fatigue. The measurement carried out in the workplace can determine one dimension of fatigue or multiple dimensions.

The one-dimensional scale is the most important dimension that is used for measuring fatigue. Its variety is mainly used for research and clinical purposes. Multi-dimensional assessment of fatigue (MAF) is another type of subjective quantification of fatigue. It indicates the degree of fatigue experienced by a worker one week ago. However, the Piper Fatigue Scale is the most accurate scale for quantification of fatigue. It contains various

additional features to measure how fatigue interferes with daily living activities and the timing of fatigue.

The second method of identifying fatigue is by investigating the various correlates of fatigue which include sleep and depression. These correlates are used to predict if a worker suffers from effects of fatigue. Its typical application is a valuation of fatigue for academic researchers. There exist various methods of measuring how tired a person is. Epworth Sleepiness Scale is one of the common standard methods used. It illustrations how a worker is likely to sleep during the daytime or working periods (Dawson et al., 2014). Another instrument used in fatigue measurement is the Horne-Ostberg Questionnaire (HOQ). The questionnaire contains nineteen questions that aim to determine when respondents would desire to awake or sleep. (Dawson et al., 2014). There are more other instruments used for measuring and identifying fatigue. This research mainly focuses on the three most important that have been discussed above. The other common methods include: Sleep guestionnaires, sleep diaries, actigraphy, and polysomnography, symptom distress scale (SDS) 13-items questionnaire (Dawson et al., 2014). Fatigue can also be measured physiologically through various methods. These methods include eye blink rates, the temperature of the skin, and response and reaction time.

Conclusion

As discussed above fatigue can be caused by very many factors in the workplace. It is there necessary to come up with multiple tactics to address various types and causes of this hazard. These strategies can be classified

into two categories: Operational strategies which are used during the job; preventive strategies which are mostly implemented before working hours and during rest time (Darwent et al., 2015). Different methods can be applied in the preventive strategy. Most of them help to relieve fatigue symptoms temporarily. These strategies include: minimize sleep loss, teaching healthy sleeping behaviors to the workers, and stimulators (Darwent et al., 2015). It is important to note that laws and compliance cannot resolve all the issues connected to fatigue. The workers' behavior is also significant. The workers are advised to rest and avoid caffeine and alcohol before sleeping. It is highly recommended to spend most of the free time in daylight and to participate various activities to promote activeness during the day.

Recommendation

Work fatigue is among the top ten issue in the modern industry, mainly due to long duty periods, circadian rhythms distraction and continuous sleep debt. The full understanding and further evaluation of the potentials of various preventive strategies, and individual fatigue mitigation management systems is recommended. Additional research should be done on the different methods of measuring and quantifying dynamics of transient, circadian biologic clock and cumulative sleep, and recovery to help in efficient management of fatigue in the workplace. Furthermore, a software tool to be used for fatigue prediction should be developed.

References

Dawson, D., Searle, A. K., & Paterson, J. L. (2014). Look before you (s) sleep: evaluating the use of fatigue detection technologies within a fatigue risk management system for the road transport industry. *Sleep medicine reviews*, 18 (2), 141-152.

Han, K., Trinkoff, A. M., & Geiger-Brown, J. (2014). Factors associated with work-related fatigue and recovery in hospital nurses working 12-hour shifts. *Workplace health & safety*, *62* (10), 409-414.

Rahman, H. A., Abdul-Mumin, K., & Naing, L. (2017). Psychosocial Work Stressors, Work Fatigue, and Musculoskeletal Disorders: Comparison between Emergency and Critical Care Nurses in Brunei Public Hospitals. *Asian Nursing Research*.

Wright, K. P., Bogan, R. K., & Wyatt, J. K. (2013). Shift work and the assessment and management of shift work disorder (SWD). *Sleep medicine reviews*, *17*(1), 41-54.

Boivin, D. B., & Boudreau, P. (2014). Impacts of shift work on sleep and circadian rhythms. *Pathologie Biologie*, *62* (5), 292-301.

Dawson, D., Searle, A. K., & Paterson, J. L. (2014). Look before you (s) sleep: evaluating the use of fatigue detection technologies within a fatigue risk management system for the road transport industry. *Sleep medicine reviews*, 18 (2), 141-152.

Darwent, D., Dawson, D., Paterson, J. L., Roach, G. D., & Ferguson, S. A. (2015). Managing fatigue: It is about sleep. *Accident Analysis & Prevention*, 82, 20-26.

Caruso, C. C. (2014). Negative impacts of shift work and long work hours. *Rehabilitation Nursing*, 39 (1), 16-25.

Phillips, R. O. (2015). A review of definitions of fatigue-And a step towards a whole definition. *Transportation research part F: Traffic Psychology and Behavior*, 29, 48-56.