

TO SEE EFFECT OF SLEEP, STRESS AND PTSD: DEPRIVATION AND FIREFIGHTERS

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ABSTRACT

In this study we are presenting the To See Effect of Sleep, Stress and PTSD: Deprivation and Firefighters. In this study, one of the ways in which social workers in the fire service as a means of addressing more stigmatized mental health issues may be physical health topics, like sleep. As public safety workers, the well-being of firefighters is a concern for the entire community. One of the primary work-related health issues facing firefighters is sleep deprivation, which can contribute to an array of health problems including mental health, metabolic diseases, and heart disease. The interest in sleep can be traced back to the earliest civilizations, and only love and human struggle have attracted much attention from poets and other writers. Over the past 50 years, sleep medicine has become a new medical specialty due to better understanding of sleep, and nearly 100 different sleep disorders have been described.

Keyword: - PTSD, Sleep, Stress, Health, Issues, Medicine etc.

1. INTRODUCTION

The average adult requires 6 to 10 hours of sleep each day. Not all sleep and waking hours are the same, due to humans' circadian rhythms and preference for nighttime sleep. When estimating the effects of a given daily schedule, both sleep in the number of hours and the time it takes should be considered. Normal sleep is complex and consists of two distinct states: non-rapid eye movement (NREM) sleep and rapid eye movement (REM) sleep. Non-rapid eye movement sleep as soon as sleep begins. This, in turn, is made up of four stages, indicating progressively deeper sleep. Stage 1 is seen as shallow sleep, during which a person can be easily woken up. With the onset of Stage 2 NREM sleep, the stimulation threshold increases. Stages 3 and 4 of NREM sleep are defined by specific EEG patterns and are collectively known as deep sleep, delta sleep, or slow-wave sleep. In general, studies linking sleep and work patterns with performance and health outcomes are cross-sectional, where a snapshot of findings at a time is used to compare people with one type of work and sleep habits in which others are traditional or 'healthy'. Pattern. However, other variables may also influence the findings. For example, individuals who work more hours may do so due to financial pressures that motivate them to work more hours. Similarly, individuals can choose the night shift due to the demand of the day. In addition, shifts may differ only in ways other than work duration, supervision and backup systems such as duration and time of days. These factors can also make the comparison misleading.

Sleep affects the body, mind, emotions, and experiences of every human being, and even today many people sacrifice sleep to meet the demands of today's rapidly emerging society. One group that may experience sleep deprivation is full-time, professional firefighters. As shift workers, professional firefighters have odd hours and uncertain sleep schedules. Unlike other shift workers, however, professional firefighters work all day.

Reaction to emergencies in time, both day and night. These long and uncertain shifts, coupled with off-duty scheduling demands, make it nearly impossible for firefighters to accommodate a coherent sleep capsule. Lack of sufficiently consistent, quality sleep can have a very negative effect on the health of firefighters and predict them for an array of biopsychosocial disease, including: obesity, depression, and addiction (Walker, 2017).

2. SLEEP FUNCTION OF THE BODY

It assists the learning process, enhances creativity and promotes positivity. Sleep also supports immune health. Thus, sleep deprivation may contribute to a number of health issues, including heart disease, cancer, diabetes, obesity, addiction, cognitive illness, and mental illness (2012, Aran et al., 2016; Chung, Wolf, and Shapiro). 2009; Kamfuss et al., 2016; Cowan, 2008; Stubbs et al., 2016; Tobaldini et al., 2017; Walker, 2017). While each person has a unique biological makeup that affects how they process and adjust to an irregular sleep schedule (Suh et al., 2016), it is clear that sleep deprivation is profound and profound on everyone. Can have a lasting effect. Sleep is an essential function of the body. Sleep allows for rest, repair and cellular to systemic levels of the body (Walker, 2017). There is no aspect of health that is unaffected by sleep. Sleep plays a role in the maintenance of the body's homeostasis. It is rehabilitative and energizing. As sleep debts cannot be satisfied by future compensation (Walker, 2017), the eight-hour sleep opportunity should be viewed as a necessary daily (night) function and not compromised. However, since emergencies occur both day and night, and firefighters must always be prepared to respond to alarms, there may be a need to find other ways to meet the sleep needs of these emergency crews.

3. SLEEP AND COGNITION

Firefighters often need to be able to make decisions, often facing risks to their own and others' lives. In this regard, the findings of the 2016 rodent study, unfortunately, do not bode well for sleep-deprived firefighters or the communities they serve. In their study of sleep deprivation on the conductive behavior of mice, researchers found that sleep-deprived mice exhibit deficiencies in the functioning of their pre-frontal cortex (Kamphisen et al., 2016). Mice in Kamfusse et al. The study was trained in a lever-suppressing / reward task and reached mastery levels before being limited to four hours of sleep a night for seven days. Their performance was then measured on the mastery task, yielding results indicating a significant decline in performance after sleep deprivation. Specifically, these mice exhibited high impulsivity, withdrawal and lack of awareness while performing tasks; All characteristic of the lack of essential executive function, for which the prefrontal cortex is responsible. As these findings have come from a rodent study, their generality to humans is certainly limited. Nevertheless, similar findings have come from sleep studies of human subjects.

4. THE FIRE SERVICE

They are also kept busy during the day, performing both emergency and non-emergency duties, such as fire prevention and education, company training, and community engagement. Because of this, firefighters may not be able to compensate for a night of interrupted sleep during the day. Even if firefighters are able to nap or sleep in the days following a busy night, research suggests that attempting to make up for lost sleep may be ineffective, as the lasting effect of sleep deprivation Happens (Walker, 2017). These findings are problematic for emergency workers working shift work. The encounters of firefighters during their shifts are very varied and unpredictable. They should always be ready to respond, and as is the nature of emergencies, their work is stressful. Firefighters respond to a wide range of incidents, including but not limited to: fires, explosions, terrorist incidents, mass casualty incidents, high angle / confined space / technical rescue, hazardous material emergencies, Medical vehicles, motor vehicle accidents / extracts, snow / water residues, and natural disasters (St. Paul Fire Department, 2017; Minneapolis Fire Department, 2016). They work under very intense, stressful and dangerous conditions, whether they are resting well or not. Similar to the ways that emergency work can negatively affect the number of sleeping firefighters, while on duty, the stressful nature of firefighters can also negatively affect their sleep. In their study of 303 Brazilian firefighters, researchers found that 51% of firefighters experienced sleep disturbances and that psychological distress and psychosomatic disturbances were significantly predictive of sleep disturbances among this population (Barros et al., 2012) .

5. SLEEP, STRESS, AND PTSD

The stress and pressure firefighters experience in the line of duty can be extreme in nature and life-threatening. Their extraordinary, life-threatening experiences may contribute to the development of PTSD, which is common in the fire service (Hersonerson et al., 2016; Kehl, Knuth, Hulse, & Schmidt, 2014; Wagner, McFee, & Martin, 2010). is. . People with PTSD often suffer from sleep disturbances, a common symptom of nightmares disorder. In a comparative study of veterans with PTSD, primary insomnia and veterans with healthy controls, researchers found that veterans with PTSD had significantly worse sleep efficiency than both veterans with primary insomnia and healthy controls (Straus et al 2015). Veterans with PTSD also had less predictable sleep patterns. Based on their findings, Strauss et al. (2015) highlighted the importance of consideration for sleep therapy when working with individuals with PTSD, as the disorder often affects one sleep. Interrupted sleep patterns are a recognized source of occupational stress, and fire fighters are not immune to those adverse consequences. A survey of more than 700 fire

fighters assessed job stressors and found that approximately one-third of fire fighters (Murphy et al, 1994) were stressed by disturbing sleep disturbances (disruptions, poor quality of sleep, not enough). Ranked as important cause.). Participating professionals from the Pacific Northwest were firefighters who responded to an anonymous mailed survey that used a standardized device to control occupational stress. Most were men, and on average, they had been firefighters for 12 years. Other studies have noted the work structure of fire fighters as a source of stress (Murphy et al., 2002; Murry et al., 1999; Ogenskabulik, 2005).

6. INDIVIDUAL DIFFERENCES IN THE EFFECTS OF SLEEP LOSS

One area of current research, which has not yet reached practical applications, is the recognition of individual variability in the effects of sleep deprivation (Lemmers-van der Holst et al., 2006; Van Dongen et al., 2004). Van Dongen and coworkers (2004) have identified differences in symptoms such as fatigue and sensitivity to performance impairment due to sleep deprivation, with a six-fold difference in the same amount of sleep loss individuals have when controlling for other factors. The researchers concluded that "sleep deprivation constitutes a differential vulnerability trait to neurobehavioral deficits." Perhaps fire fighters and EMS respondents are a select group who can infer that they are capable of coping with long-term work stresses. However, investigations by other unique workers, such as active duty F-117 pilots, showed that they were not all equally capable of enduring sleep deprivation and their loss from sleep (van Dongen et al, 2006) Demonstrated significant variability in sensitivity. . Future work may identify individuals more suited to shift work and allow stratification coping strategies based on the worker's innate propensity towards problems from sleep deprivation and circadian disruption.

7. SLEEP HABITS AND LIFESTYLES

Workers' ability to endure long hours is affected by their general health and how they spend their non-work hours. Shift work may be a risk factor for many health-impairment effects. To counter those effects, it is particularly important to maintain a healthy lifestyle and to achieve healthy people 2010 objectives. Those health behaviors are known to result in increased life expectancy and improved quality of life (DHHS, 2005). For shift workers, their sleep habits are among those lifestyle issues first. In general, adverse effects of irregular shift schedules and long working hours are minimized when people establish some regularity in their bedtime and waking schedules, even on weekends.

8. SLEEP AND HEALTH

With sudden cardiac arrest being the leading cause of firefighter line-of-duty deaths, it is no surprise that organizations such as NFPA and IAFF are recognizing the need to address heart disease in the fire service. It is of interest, then, to investigate ways that firefighters can improve their heart health by improving their sleep. As the literature has shown, sleep deprivation can contribute to a myriad of health problems, including: heart disease such as hypertension and atherosclerosis, and metabolic diseases such as diabetes and obesity. In support of the findings in the literature, the current study identified a significant relationship between sleep debt (measured by the ESS score group) and both heart disease and obesity. In addition, obesity and heart disease were found to be related to each other. A 2005 study of heart disease and obesity among firefighters identified obesity as a significant risk factor for the development of heart disease among firefighters (Soteriades et al., 2005). Soteriades et al. (2005) found that not only were obese firefighters more likely to suffer from heart disease than firefighters with a healthy weight, but they were also more likely to develop heart disease, as in one year and five years. Follow-up was clarified by assessment.

Several firefighters who participated in this study identified a need to improve their sleep. In fact, firefighters indicated that sleep required the most attention and improvement than any other aspect of their health and well-being. It is surprising, then, that when participants were asked to describe which of the many health and wellness resources they were most interested in, they did not express the most interest in sleep hygiene and education resources. Instead, he showed the most interest in physical fitness resources, such as gym memberships and medical practitioners, above all. Firefighters might not believe they would benefit from professional sleep assessments and training. Or, it may be that firefighters share, with the rest of Western society, a general devaluation for sleep.

9. REFERENCES

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