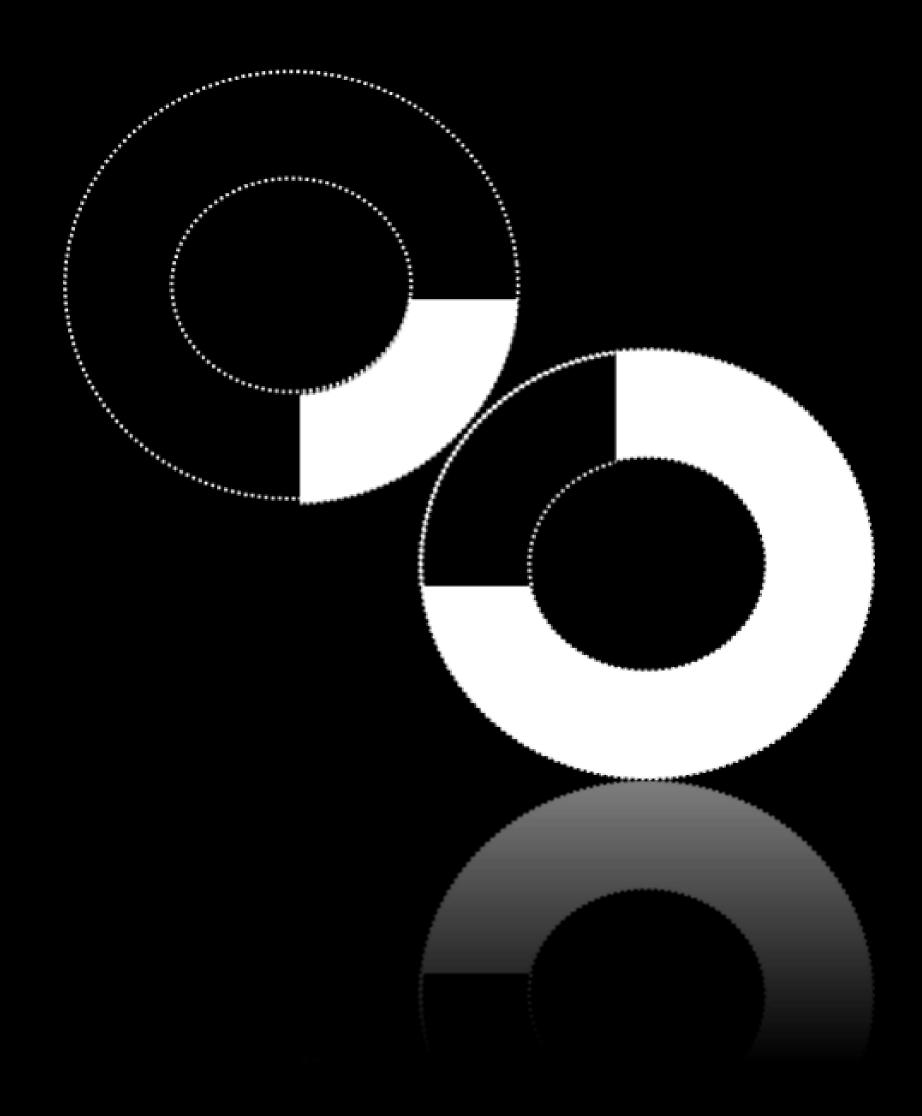
# THERESEARCH

The Miss. The Zero-One. The Moon



#Day time night time shift-impact on stress

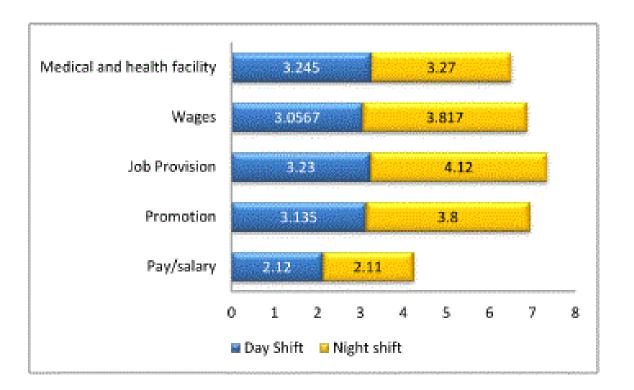
## **#Day time night time shift-impact on stress**

In industrial cities, the prevalence of stress and anxiety disorders has risen dramatically, causing detrimental effects on the economy and quality of life, such as job interruptions and the possibility of suicide. This has led some researchers to call the "Age of Anxiety" the "XX century" There is evidence that temporal organization is one of the variables that raises levels of stress and anxiety by adversely affecting physical and mental wellbeing and human performance in the shift work schedules of companies/industries. This happens because temporary organization at non-usual times in work schedules pressures individuals due to successive physiological and behavioral adaptations.

- 1. The broken phase relationship between the organism and the working hours and the broken relationship between the phases of the various endogenous cycles.
- 2. Reduced, erratic or disrupted sleep and
- 3. Absence of family life due to the work schedule, loss of relationships and social activities.

## The Miss

about one in five European employees is working on shift work involving night work and about one in 20 extended hours of work. Shift schemes require intervals of 6-12 hours of work at a time with shift crews rotating over every 24-hour cycle on two, three, or four shifts. At 0600, 1400, and 2200 hours, the standard three shifts begin, but there are several variations on that. Some staff only work on two-day shifts, others only evenings, while others rotate with varying degrees of rotation speed and direction of rotation through all three shifts. Extended working hours are widely agreed to mean more than 48 hours a week of work. Owing to either a high number of hours working per day or a larger number of days worked per week, this may occur on a day job or shift work.



## The Zero one

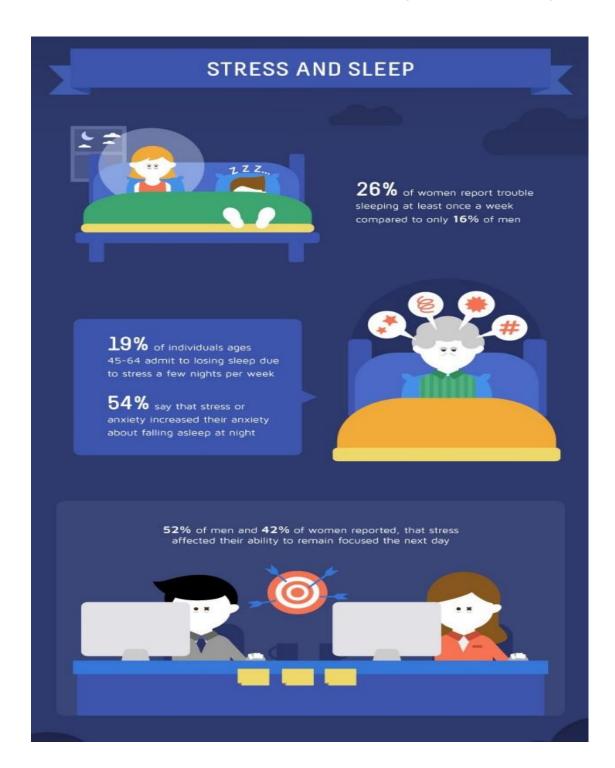
All of these changes and their consequences (gastrointestinal diseases, chronic fatigue, alterations in mood, cardiovascular disorders, hypertension, etc.) are partly the result of work schedules and requirements, which can be interpreted by people as threatening factors that generate conflict and thus cause responses to stress and anxiety.

Staff had elevated levels of cortisol on waking, apparently associated with chronic stress, under a scheme of alternating 8-hr daytime shifts beginning at 5hrs. Jobs under the same system, however, had regular cortisol levels beginning at 8hrs. The magnitude of cortisol reactions on waking is likely to be associated with sleep disturbance at very early hours, leading to poor quality of sleep and a break in the diurnal cortisol cycle.

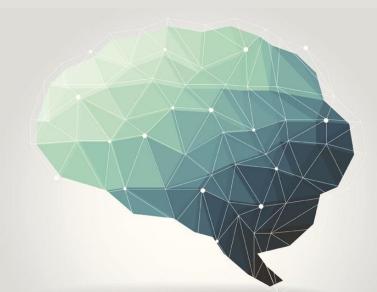
Shift work can have a negative effect on workers' health and well-being, in particular night work, as it can cause: (a) interruption of the usual circadian patterns of psychophysiological functions, starting with the sleep/wake cycle; (b) conflict with work output and productivity over the 24-hour period, with consequent mistakes and accidents;(c) difficulties in sustaining the normal relationships, both at the family and social level, resulting in detrimental effects on marital relationships, childcare and social contacts; (d) degradation of health, which may be expressed in disruptions in sleeping and eating patterns and, in the long run, in more serious gastrointestinal disorders(colitis, gastroduodenoscopy and peptic ulcer). Neuro-psychic (chronic fatigue, anxiety, depression) and,

potentially, cardiovascular (hypertension, ischemic heart disease) functions In addition, shift and night work, both in terms of their specific hormonal and reproductive function and their family roles, can have more specific adverse effects on women's health. It has been estimated that, due to extreme disruptions, about 20% of all employees have to leave shift work in a very short time; those remaining in shift work display varying levels of (mal)adaptation and (in)tolerance, which may become more or less noticeable at different times and with different intensities. In fact, the effects of such stress conditions will vary greatly between shift workers in relation to several 'intervention variables' in terms of both individual factors (e.g. age, characteristics of personality, physiological characteristics) as well as working environments (e.g. workloads, shift schedules) and social conditions (e.g. number and age of children, housing, commuting).

Sleep deprivation due to shift work is connected to sleep/wake cycle disruption, similar to the changed activity/rest pattern. The circadian patterns of biological functions, regulated by the body clock located in the suprachiasmatic nuclei of the hypothalamus, may be significantly disturbed by this. According to their duty periods, shift and night staff have to adjust sleep times and strategies; therefore, depending on the variable start and finish times on various shifts, both sleep duration and quality may be greatly affected. Approximately 10% of night and rotating shift employees, between the ages of 18 and 65, are reported to have a diagnosable "shift-work sleep disorder". This can lead to recurrent and serious sleep disruptions, chronic exhaustion and psychoneurotic syndromes in the long term, in addition to being a risk or aggravating factor for injuries, gastrointestinal, cardiovascular and reproductive conditions, and, possibly, cancer. Preventive and corrective actions deal with the organization of shift schedules according to ergonomic criteria, careful health surveillance, appropriate education and training on effective countermeasures, in particular, sleep hygiene and napping.



Those who work shifts do not work and sleep in accordance with their circadian endogenous rhythm, so there is a misalignment of biological and social time. This is generally what happens after a short trip through many time zones and is thus often referred to as "social jetlag". The endogenous circadian rhythm determines the need for wakefulness and sleep, body temperature, heart rate, blood pressure, and levels of hormones, particularly cortisol and melatonin levels. Exogenous stimuli known as zeitgebers, such as light, synchronize the endogenous circadian rhythm with the celestial solar day in the light-dark period of a 24-hour day.



Even though the endogenous chronobiological rhythm is disturbed by any change in the phases of waking and sleeping induced by shift work, external zeitgebers are dominant. Therefore, chronobiological adaptation of the sleep-wake cycle is typically ineffective in those who work night shifts. Nocturnal light exposure decreases overall melatonin output over the 24-hour day; this also plays a role in the incidence of breast cancer. Impaired control of cortisol is believed to play an important role in arteriosclerotic diseases such as coronary heart disease. A decrease in the mean duration of sleep by one hour or more as an additional consequence of the disturbed circadian rhythm. To a lesser degree, however, the activation of the sympathetic nervous system and systemic inflammatory precursors can also increase in those who work early shifts. Shift work is frequently correlated with psychosocial stress or less healthy behavior, irrespective of its biological impact.

## The Moon

Managers can do their utmost to move workers from the day shift to the night shift slowly. At the very least, this gives the body time to adapt to the new timetable. If you're a busy boss facing several day and night shifts with team members coordinating.

When you intend to be successful working the night shift, the cooperation of your family is important. To balance such important tasks, you will all need to work together as:

- Time for Family
- Maintaining timetables
- Paying for Bills
- Going shopping
- Housework Job

In setting quiet hours, you will also need their support so you can get the sleep you need to work at night.

Caffeine is a stimulant used to give you a fast energy boost to keep you awake. The caffeine problem lies in the fact that after you notice the effects, it remains in your system for hours, and it can keep you from sleeping well after work. To prevent problems caused by caffeine, drink water whenever possible.

Alcohol can help you fall asleep quicker, but quick-eye-movement (REM) sleep is also reduced. REM sleep is the restorative period of the sleep cycle, so you essentially interfere with the ability of your body to heal itself if you interfere with it by drinking alcohol.

Try to spend at least 30 minutes in the sun while you are not working. Go for a stroll, work outside in the garden, workout, or even just sit down and read a book. Doing so will provide the vitamin D needed by your body to keep you safe.

Sleeping can have a big influence on how well and how long you sleep in the right setting. Here are five ways to ensure that your quality of sleep doesn't mess with where you sleep:

Try to spend at least 30 minutes in the sun while you are not working. Go for a stroll, work outside in the garden, workout, or even just sit down and read a book. Doing so will provide the vitamin D needed by your body to keep you safe.

Sleeping can have a big influence on how well and how long you sleep in the right setting. Here are five ways to ensure that your quality of sleep doesn't mess with where you sleep:

These easy steps make it possible, even if you sleep during the day, to get the best night's sleep at all times.

A natural stimulant is the nicotine present in cigarettes, vapour pens, pipes, and all types of tobacco. In order to relax, you might feel like you need a cigarette before bed, but it's all in your head. Your heart rate increases as you introduce nicotine into your bloodstream, your breathing becomes quicker and shallower, and your blood pressure goes up.

These are the reverse circumstances that your body wants to collapse asleep. In essence, then, you are sabotaging your sleep by smoking before bed. At least three hours before your bedtime, smoke your last cigarette. This will give your body time out of your system to absorb the nicotine.

Electronic devices such as computers, laptops, and TVs emit light at shorter wavelengths (toward the blue end of the visible spectrum). This blue light causes less melatonin to be produced by your body, a hormone that controls circadian rhythms. Your body would be less likely to

Electronic devices such as computers, laptops, and TVs emit light at shorter wavelengths (toward the blue end of the visible spectrum). This blue light causes less melatonin to be produced by your body, a hormone that controls circadian rhythms. Your body would be less likely to slow down and fall asleep due to this lack of melatonin. Switch your electronics off at least an hour before you go to sleep to prepare your body for sleep, especially after working the night shift. Stop fluorescent light if possible (incandescent lamps are fine) and stay in a dimly-lit space for a while.

During the day shift, you do not have to, but taking a nap during the night shift can be key to helping you function safely. A brief nap of 20 minutes will restore energy levels and keep you vigilant and alert during the night. Try not to overcome 45-minute naps or run the risk of straying into the loop of deep sleep. You will not feel as refreshed if you force yourself to wake up during this time, and it will take you longer to feel alert again.

#### References

- 1. Comparing the effects of Day and Night shift on employee's job satisfaction A case study at Cement Industry-Research gate
- 2. The impact of different shift work schedules on the levels of anxiety and stress in workers in a petrochemicals company Scielo
- 3. Night Work and the Risk of Depression NCBI
- 4.Is night-time the right time? Psychological well-being in day versus night shift nurses Sail.USC
- 5. The impact of shift and night work on health-Pubmed
- 6.10 effects of night-time shifts and how to combat them Getsling

## **Research Curation Analyst**

Rishi Somani

THE RESEARCH
The Miss. The Zero-One. The Moon