



Prevalence of Nidra Vega Dharana and its Effects on Night Duty Workers

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ABSTRACT

To identify the prevalence of Nidra Vega Dhahran (Lakshanas) and its effects on Night duty workers to correlate physiological change associated with it. The present study was planned and conducted by enrolling a total of 105 night-duty healthcare workers of both sex and the 20-50 year age group. The methodology was based on self-reported information about the questionnaire (Clinical Survey) related to the prevalence of Nidra Vega Dharana. The study was conducted by extracting and preparing 10 questions from the reported symptoms or Lakshana of Nidra Vega Dharana reported in the Brihatrayi's followed by data collection and analysis. On the basis of self-reported information provided by the night-duty healthcare workers the overall impact showed that around 17.1% of night-duty healthcare workers showed a positive of 7-9 symptoms, 24.8% showed a positive of 4-6 symptoms and 58.1% showed a positive of 1-3 symptoms respectively. As per the data analysis, it was concluded that the Lakshana of Nidra Vega Dharana is the modern era and indicates every human being adopts a systematic lifestyle and habits.

Keywords: Nidra Vega Dharana, Irregular Sleeping Habit, Effects of Nidra Vega Dharana, Life, Style, Night Duty Workers.

Received 12.07.2022

Revised 29.09.2022

Accepted 10.11.2022

INTRODUCTION

Most people before the 1950s believed sleep was only passive activity related to the human body during which the body and brain were dormant but after long research, the belief now turns out that sleep is major a period during which the brain is not only engaged in a number of activities that are necessary to live, while is also closely linked to the *quality of life*," Researchers are spending many of their working hours and trying to discover about the science of sleep and the processes how it affects mental and physical health. Nowadays the term "sleep" is increasingly recognized as a major component of healthy development and overall health of every living being [7, 8, 31]. Healthy sleep comprises many dimensions, including appropriate timing, good quality and adequate duration [6, 12]; Gruber et al., [16]. The poor or absence of any dimension in sleep at night is generally associated with daytime fatigue, daytime sleepiness, depressed mood, and poor daytime functioning [22, 36, 28, 34, 24]. In the current era, morbidity and mortality rate is majorly associated with inadequate sleep and now has become a major concern in many countries, hence, considered it as a chronic insufficient sleep phenomenon which is associated with adverse health outcomes including depression [38], obesity [37], hypertension [35], types 2 diabetes[26], and all other cause mortality [27]. The major reason for morbidity and mortality is the disturbance between the internal (Biological) and external (Zeitgerbers) circadian clock [29, 5] which is responsible for optimal performance during the day time work and restorative sleep. Nowadays especially in the healthcare sector, the major goal of every country is to provide the continuity of patient care around the clock, hence, the arrangement is going to work in shifts. The most common shift schedule is based on the continuous rotating fashion, that is, morning, afternoon, and night shifts [20] with the negligence of the health of healthcare workers. There is mounting evidence that proved that night shift work has a major impact on the health and performance of medical personnel due to the basic alteration of natural circadian sleep and homeostatic processes [3, 4, 25] that can seriously compromise the public

safety of both medical staff and patients through increasing the workplace accidents and risk of errors [11, 20, 30]. Based on the evidence now the term “shift work disorder” is a major concern and experienced by around 20-30% of healthcare shift workers [13, 15, 21]. In *Ayurveda*, the term “sleep” is considered a basic and major instinct of life, which is directly associated with the lifestyle of all living beings [33]. Ancient Ayurveda already covered and described the term of sleep and its related disorders such as *Sushruta Samhita* (circa 100 B.C.–900 A.D) [34], *CharakaSamhita* (circa 300–500 A.D) [1], and *Vagbhatta* (circa 700 A.D.) [18]. Ayurveda has two aims i.e., protection and promotion of health and secondly cure the disease. To attain these aims, various Ayurveda Acharyas have described Dincharya (daily regimen), Ritucharya (seasonal regimen), Sadvritta (regimen of good conduct), etc. in detail. In sadvritta, Acharya has mentioned briefly some urges which should not be suppressed. In Ayurveda, these urges are known as “Vega”. Since, vega is a fundamental concept in Ayurveda, Vegas is created naturally to eliminate toxins that are produced in the body. The importance of sleep is well accepted by both Ayurveda and modern science because of its restorative, recuperative, and resting actions in living organisms [23]. So, it is important to respond to these urges and not suppress them otherwise may lead to imbalance between “Doshas”. In *Ayurveda* a unique feature called “*dosha*” which is generally determined and based on the psychosomatic attributes of every live being or individual’s personality [2]. The disturbance or imbalance between the *doshas* results in changes in various body functions especially brain, including sleep, and can lead to sleep disorders. Sleep is one of the most important phenomenon and natural urges of the human being and described in “Charka Samhita Sutrasthana adhyaya” 11 as “upastambha” which comes under the term “vihar”. As per Ayurveda vihar is consider as a one of the pillar of every healthy living being and backbone of healthy life. The importance of Nidra is described in “Samhita Sutrasthana” and the night shift workers are now considering as people who are suppressing some or most of the natural urges especially sleep, which is the main cause of sickness or health issues associated with them. Ayurveda described such condition as “Nidra veg Dharan” and majority of night shift works are associated with it.

MATERIAL AND METHOD

The study sample consisted of 105 night-duty healthcare workers of both sexes. The self-reported socio-demographic information was recorded from them on a suitable questionnaire. As per the previously reported chart by various Acharya for the determination of symptomatic events related to Nidra Veg Dharan took into basic consideration to generate questionnaires, implementation or perform and document the present study. Considering the symptoms as mentioned in table no 1, a questionnaire was prepared had the following questions: -

- 1) Do you do yawning repeatedly?
 - a) Yes
 - b) No
- 2) Do you feel malaise?
 - a) Yes
 - b) No
- 3) Do you feel heaviness in your head?
 - a) Yes
 - b) No
- 4) Do You Feel Heaviness in your eyes?
 - a) Yes
 - b) No
- 5) Do you feel exhausted?
 - a) Yes
 - b) No
- 6) Do you usually faint?
 - a) Yes
 - b) No
- 7) Do you feel apathetic?
 - a) Yes
 - b) No
- 8) Do you feel sleepy or drowsy?
 - a) Yes
 - b) No
- 9) Do you feel like there is a burden on your shoulder?
 - a) Yes
 - b) No
- 10) How many symptoms do you feel regularly?
 - a) 1-3 mild
 - b) 4-6 moderate
 - c) 7-9 severe

Table 1 Basic symptoms of Nidra Vega Dharana

| VEGA | SYMPTOMS | CHARAK | SHUSHRUT | ASHTANG HRIDAYA |
|-------|-----------------------------------|--------|----------|-----------------|
| Nidra | Jrmbha (Yawning) | + | + | + |
| | Angamarda (Malaise) | + | + | + |
| | Tandra (Exhaustion) | + | + | - |
| | Siro Gaurav (Heaviness of Head) | + | + | + |
| | Akashi Gaurav (Heaviness of Eyes) | + | + | + |
| | Moha (Fainting) | - | - | + |
| | Alaska (Apathetic) | - | - | + |

RESULT

A clinical survey (105 Night Duty Workers) was carried out by us and found a surprising result. Around 60% of the total sample showed a minimum of 1-3 Lakshana and around 25% showed 4-6 symptoms given by acharyas in Brihatrayi's in ayurvedic texts. The result of the systematic clinical survey and data analysis study is given in table no 2 and 3.

Table 2 Result of clinical survey related to Nidra Veg Dharana

| S.No | Symptoms | Total No of Healthcare Workers Enrolled | Symptoms Reported by Healthcare Workers Enrolled |
|------|--------------------------|---|--|
| 1 | Yawn | 105 | 55 |
| 2 | Malaise | 105 | 49 |
| 3 | Heaviness in Hans | 105 | 55 |
| 4 | Heaviness in eyes | 105 | 65 |
| 5 | Exhausted | 105 | 68 |
| 6 | Faint | 105 | 10 |
| 7 | Apathetic | 105 | 37 |
| 8 | Sleep or Drowsy | 105 | 70 |
| 9 | Burden on their shoulder | 105 | 43 |

Table 3 Total Impact of Yoga Nidra Dharana

| Total Number of Symptoms | Total No of Healthcare | Symptoms Reported by Healthcare Workers |
|--------------------------|------------------------|---|
| 1-3 | 105 | 19 |
| 4-6 | 105 | 26 |
| 7-9 | 105 | 61 |

DISCUSSION

The major effects of shift work occur most probably on sleep, affecting both quality and quantity which depends on the nature of the night shift i.e. length, frequency, and rest periods in between them as well as the worker's personality and behaviours. Due to working on the night shift, workers have to sleep with the normal rising phase of the circadian rhythm, so, on average, night shift workers get two to four hours less sleep only. Moreover, night shift workers experience prematurely interrupted sleep with poorer stage two rapid eye movement sleep, which is perceived as being less restful and may prolong the period of feeling wakeful. Various epidemiological studies have been carried out over the past ten years, especially including night shift worker health parameters to demonstrate the effects of night shift work on health [3]. According to some of these studies, night shift workers majorly experience nervousness, irritability, and anxiety as the consequences of most stressful working conditions [4, 9]. Due to the persistent disturbance of the circadian rhythm as well as a growing sleep deficit, prolongs the period of feeling wakeful with stage two rapid eye movement sleep, and symptomatically experienced as yawn repeatedly, feeling malaise, heaviness in their heads and eyes with the burden on their shoulders, sometimes feels sleepy or drowsy, apathetic, exhausted even tend to faint. In the present study, it was found that around 52.40% of the people do yawning repeatedly in during the night shift as well as daytime activity. Yawning is characterized as an involuntary process of the body comprising deep breathing to fill the lungs with air through the mouth. The main reason behind the precise cause of yawning is still unclear but, it's often viewed as a natural response to being tired. In fact, it is natural to yawn late in the day as the body gets tired, or perhaps when feeling bored and usually triggered by sleepiness or fatigue while the excessive yawning may be caused by other health conditions and if excessive yawning occurs as a result of a poor or inadequate sleep, it may be treated with sleep-aid supplements, such as melatonin, or other medications, if necessary, and techniques for getting more restful sleep [12, 17]. Malaise is a

common symptom of a wide-ranging list of ailments especially triggered by inadequate sleep and indicates a person is ill or about to become ill. It can start slowly with continued night shift work or appear suddenly due to long-term inadequate sleep which is acute (short-lasting) or chronic (long-lasting). Malaise describes a general sense of discomfort or feeling unwell and can be an indication of symptoms of several conditions, both physical and emotional but in the most of the cases generally treated with changed in the lifestyle factors especially sleep quality and time with routine exercise [14, 32]. The present work also tried to cover term malaise and found that around 46.70% night shift healthcare workers accepted to feel malaise all the time. Night shift patterns of work have both negative implications on the individual, as well as those affected by that provision of service; for example negative implications on patient safety and care in the case of healthcare workers, in addition to significant economic and productivity costs. The current research also perform to specify the other major concern an found that 52.4% of night duty workers feel heaviness in their heads, 4- 61.9% feel heaviness in their eyes, 41% feels a burden on their shoulder, 35.2 % feel apathetic, 66.7% feel sleepy or drowsy, 64.8% feel exhausted and 9.5% of night duty workers tend to faint (Fig.1-9). The analysis overall impact showed that around 17.1% of night duty healthcare workers showed a positive of 7-9 symptoms, 24.8% showed a positive of 4-6 symptoms and 58.1% showed a positive of 1-3 symptoms respectively (Fig.10).

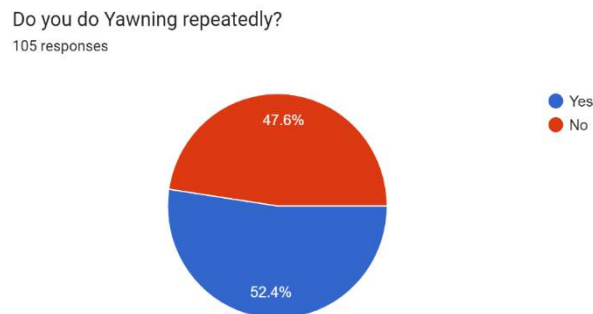


Figure 1. Impact on night duty workers as Yawn repeatedly

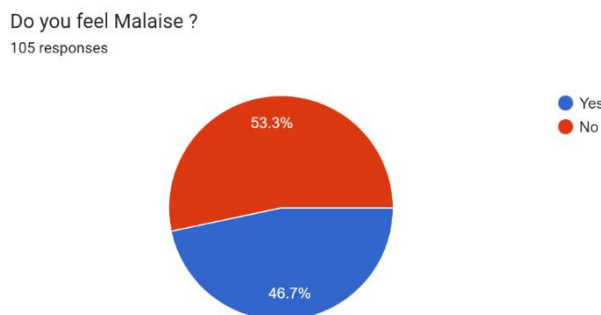


Figure 2. Impact on night duty workers as feel malaise

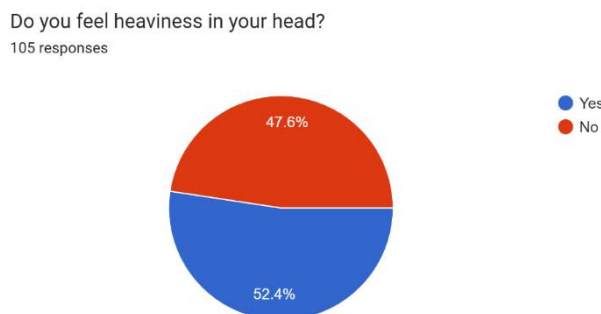


Figure 3 Impact on night duty workers as heaviness on their hands

Do you feel heaviness in your eyes?
105 responses

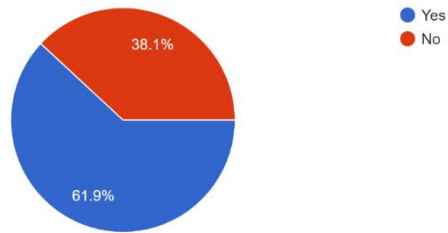


Figure 4 Impact on night duty workers as heaviness in their eyes

Do you feel Exhausted?
105 responses

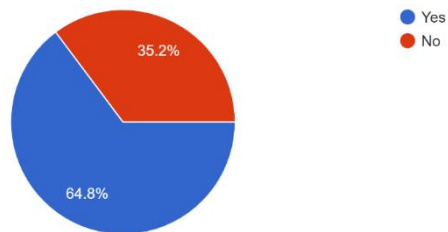


Figure 5 Impact on night duty workers as feel exhausted

Do you usually Faint?
105 responses

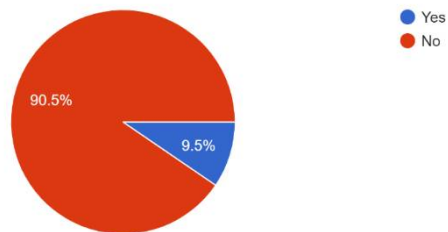


Figure 6 Impact on night duty workers as tend to faint

Do you feel Apathetic?
105 responses

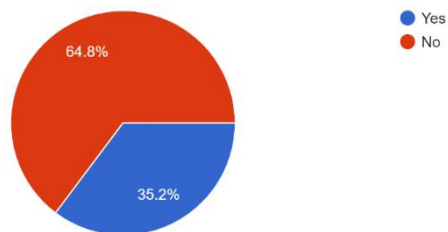


Figure 7 Impact on night duty workers as feel apathetic

Do you feel Sleepy/Drowsy?
105 responses

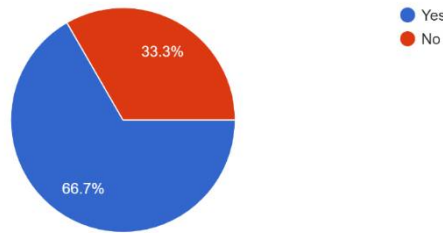


Figure 8 Impact on night duty workers as feel sleepy or drowsy

Do you feel like their is Burden in your Shoulders?
105 responses

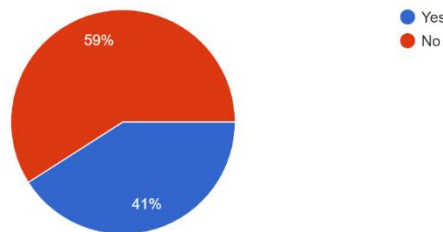


Figure 9 Impact on night duty workers as burden in their shoulders

How many Symptoms do you feel regularly?
105 responses

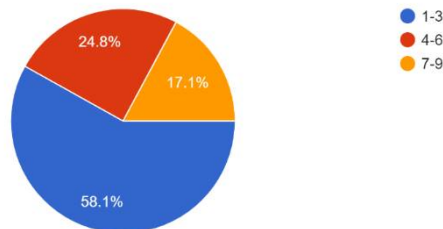


Figure 10 Overall Impact.

CONCLUSION

In this paper, we focus on documenting based on the self-reported questions assessing the prevalence of Nidra Vega Dharana, especially among healthcare workers intended to measure harmful effects associated with sleep domains. We conducted a methodological survey to document the variation or suppression of the urge “Nidra or sleep” in event of symptoms generated with it. The goals of this work were to identify the prevailing approaches to self-reported symptoms generated by alteration of sleep duration and/or timing; to document the variation in symptomatic event definition(s). This work should support major future efforts in order to standardize questions pertaining to sleep quality i.e. duration and timing and thus enable studies to improve understanding of sleep's role in health and safety. Night shift working pattern disrupts the body’s circadian rhythms, or internal “clock” that controls sleep-wake cycles. It increases the risk of developing various neurological conditions, diabetes, heart disease, and obesity. The researchers are continually evaluating the health effects associated with night shift working. In this research we have tried to establish correleationship between the Nidra Veg Dhahran and some specific parameters that hampers normal routine work even may lead to dangerous diseased conditions.

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CITATION OF THIS ARTICLE

P Gupta, K Deshpande and KS Shamrao. Prevalence of Nidra Vega Dharana and its Effects on Night Duty Workers. *Bull. Env. Pharmacol. Life Sci.*, Vol 12[1] December 2022: 194-201.