

Effect of Meditation on Sleep- A Questionnaire Based Study among Dental Students.

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Abstract:

Aim: To evaluate the effect of meditation on the sleep of the students of Saveetha dental college.

Background: Sleep is a part of everyone's life. It is very essential and ensures the proper functioning of various organ systems. Due to the stressful lifestyle, hormonal imbalance or various other factors the sleep of an individual is disturbed to a great extent. Various drugs that have a harmful effect on the body are consumed due to the lack of sleep. Meditation which is a non invasive procedure has benefitted the human race in various aspects. From the previous studies, it shows to have an effect on the sleep, as well.

Key words: Sleep, Meditation, Sleep-wake cycle, Effects.

INTRODUCTION:

Sleep is an essential homeostatic process with well established effects on an individual's physiological, cognitive, and behavioural functionality and long term health [1,2,3,4,5]. Interplay of two major processes regulates the sleep-wake system, one of the processes, process S, promotes sleep and the other process, process C maintains wakefulness [6]. Sleep process S is regulated by neurons that shut down the arousal systems, allowing the brain to fall asleep, regulates the sleep process S. Many of these neurons are found in the preoptic area of the hypothalamus. The arousal systems are turned off during sleep by these neurons that inhibit neuronal communication by the molecules that they contain. Loss of these nerve cells causes profound insomnia [7,8]. The term stress describes external demands (physical or mental) on an individual's physical and psychological wellbeing. There are various factors that cause stress in dental students, arising from both the academic and socio-cultural environment, and attributable to social support issues[9]. Insomnia is common with people under stress. It is one of the causes which stress induces and affects the quality of the sleep. It also causes hyperarousal, which upsets the sleep-wake cycle[10]. Approximately 30% of the general population are affected by chronic insomnia, which is highly prevalent[11]. Meditation is a group of practices in which the practitioner trains an individual to consciously calm his/her mind in order to realize some benefit or achieve inner peace or harmony. Despite lack of a common consent in the scientific literature on a definition of meditation, most researchers agree that meditation implies a form of mental training that requires either stilling or emptying the mind, and its goal is to achieve a state of "detached observation" or "restful alertness"[12]. At a neurobiological level, there is a reduced level of cortisol and catecholamine (which includes epinephrine and norepinephrine) which is thought to trigger biologically based anxiety responses, due to meditation[13,14,15]. Meditation practices have been a part of the Indian lifestyle

for many centuries. A state of mental and physical well being is established by meditative practices as it integrates the brain functions and regulates various physiological mechanisms. This study aims to evaluate the effect of meditation on sleep among dental students.

MATERIALS AND METHOD:

Inclusion Criteria: The participants for the study included 100 healthy first year BDS students of Saveetha Dental College who were given 3 sittings of meditation classes previously. A questionnaire accessing the sleep pattern and students belief on the influence of meditation on sleep was distributed to the students who were willing to answer.

Exclusion criteria: Students who had previous sleep disorders, physical or physiological illness or those who were under medication were excluded from the study.

RESULTS AND DISCUSSION:

100 students participated in the study. The mean age group with S.D was 20 ± 1.58 .

40% of the students slept or 5-6 hours and only 3% of the students slept for 9 or more hours.

53.84% of the students fell asleep within a few minutes and it took a few hours for 25.6% of the students to fall asleep.

58.9% of the students believe that exercise/ physical work promotes their sleep,

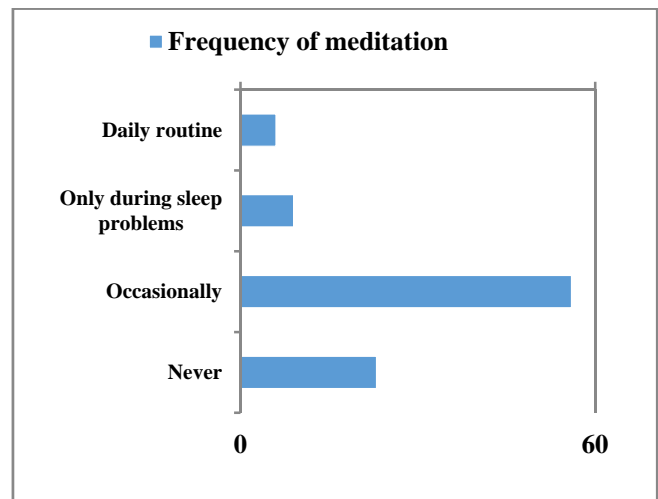
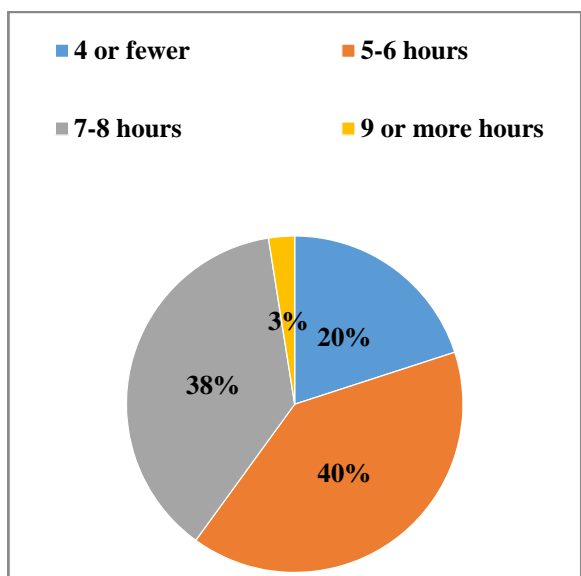
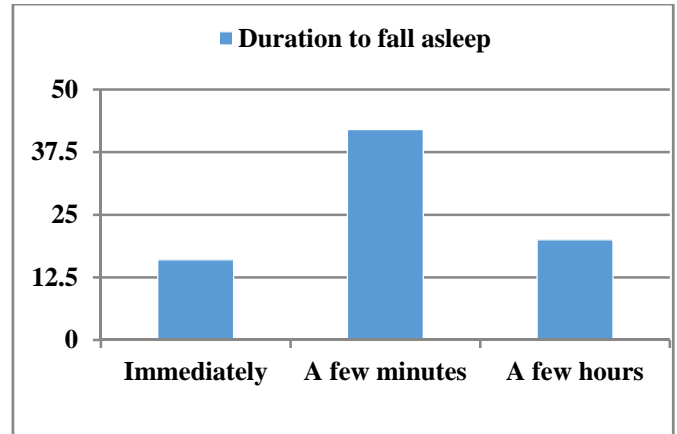
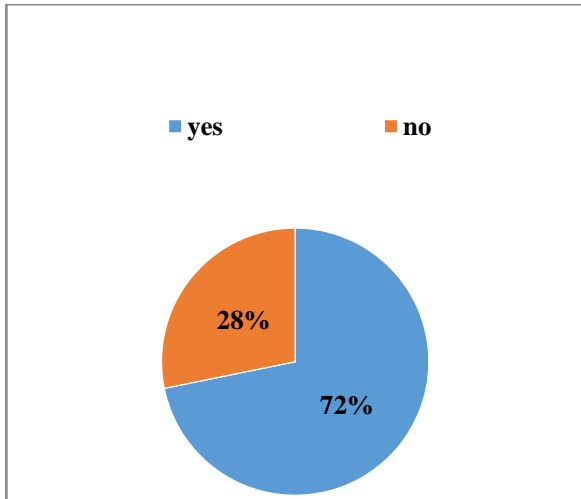
35.89% believe that music promotes their sleep, while 5.12% of the students believe that meditation enhances their sleep. 72.2% of the students have seen a drastic change in their sleep pattern after joining college.

44.74% of students think that meditation gives them a peaceful mind, 34.21% think that it increases their concentration,

13.16% think they can sleep better after meditating and 7.89% believe that meditation improves their memory.

76.92% students opted to recommend meditation to their friends and family members who have sleep disorders.

58.97% occasionally meditate with only 5.13% of the students following meditation as a daily routine.



71.79% of the students believe that meditating before sleep enhances their sleep. But 57.89 % of the students have not experienced the benefit of mediation with respect to sleep, many factors such as ignorance, less awareness and lethargy may be the reason to this. 82.05% of the students believe that mediation is necessary for dental students.

The study suggests that meditation should be a part of the dental student routine as it has various positive effects on the student and also the student must not be ignorant towards meditation and must make himself aware of the benefits of meditation so that there is an improvement in the overall performance of the student while maintaining the health.

Previous studies have shown that meditation appears to preserve the sleep-wake cycle, which suggests that meditation could prevent the age associated changes in the slow wave generating mechanisms. It shows a positive modulatory role in sleep through autonomic functions. Meditation practices enhance melatonin levels and hence the quality of sleep is also enhanced[16]. It has also been shown to reduce stress and increase the feeling peace and calm [17]

CONCLUSION:

This study finds that meditation does have an effect on the sleep, thus adding to the preexisting evidence. Sleep is inevitable and ensures the proper functioning of almost all the bodily functions. Dental students have an erratic sleep pattern, and so there is a need for implementation of meditation as a part of the curriculum as it will reduce their stress and will make them relax and improve their overall health.

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