

Sleep Duration and Insomnia in Youth: A Prevalence Survey

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Abstract

Introduction: Insomnia is a sleep disorder which is characterised by struggle in falling and/or staying asleep. People having insomnia have one or more of the following symptoms: Problem in falling asleep, Trouble to going back to sleep often during night and waking up.

Objective: To describe the prevalence of insomnia in youth aged 19 - 29.

Design: The survey was done to evaluate insomnia prevalence across study sample of youth of Delhi-NCT (India). Participants: 406 individuals.

Results: The highest percentage of respondents between 19 - 21 years which constitute to about 67.4% of total population. 4.4% of individual sleep for less than 6 hours. More than 50% have agreed that sleep does have a negative impact on their mood, energy and equation with people. Additionally, 65.5% have accepted that sleep impacts their productivity, concentration and the ability to stay awake during the day.

Keywords: Sleep Duration; Insomnia; Youth; Delhi-NCT (India)

Introduction

Insomnia is the most prevalent of all health problems among the youth at present. If not dealt with, it will exacerbate the well-being of a potentially healthy population due to the lack of awareness and dearth of treatment options available [1]. Insomnia can be considered as a commonly witnessed sleep disorder in medical practise [2]. It can be considered as a potential risk factor for the development of depression, anxiety and suicide. Depression is quoted as the leading cause of disability in both men and women worldwide and it is one of the 10 leading disorders for global disease burden [3]. Sleep disorders and related problems are becoming increasingly common among the youth primarily due to the overuse of technology and the kind of lifestyle that the youth is leading. It has been observed that most studies have reported that insomnia is associated with a number of problems such as hyper secretion ACTH and cortisol and it is also linked to hypercortisolemia [4]. Insomnia with short sleep duration is also associated with high risk of hypertension [2].

Our study is a questionnaire survey of a representative sample of the young population in Delhi that included 406 individuals between the age 19 to 29. The online survey included questions that were designed with the aim to determine the prevalence of sleeping problem in the individuals. The study focus on evaluating the severity of the problem and to suggest possible ways to combat it.

Method

The survey was performed through online mode Google where questions were designed on an online form (Google Forms) and distributed among the individuals via email and different social media platforms. They were made aware of the purpose of the survey and

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were asked to sign the acknowledgment relating to the authenticity of the information provided by them. The acknowledgment ensured that the responses were veritable and genuine. A sample size of 406 was considered. The survey was conducted for a period of about 60 days. A total of 456 responses were collected. However, screening was done to segregate responses that belonged to the required age criteria and a sample size of 406 was considered. The subjects were verified as being representative of the young population of NCT of Delhi age. According to the census size of India (2011), the total urban population was 36,52,153 out of which 19,54,240 are male and 16,97,913 are female. Mathematically derived Yamane formula was used to calculate the sample size. Below represents the Yamane formula [5]:

$$n = \frac{N}{1 + Ne^2}$$

Where:

n = Required responses

e² = Error limit

N = Sample size

Questionnaire

The questionnaire comprised of total 15 questions which had a range of questions varying from the duration of sleep the person takes, medications that might affect his tendency to sleep, whether or not he faces any difficulty in falling in sleep, etc. The questions were designed in simple language taking into consideration the ability of respondents to understand them and give their inputs accordingly. Furthermore, personal details such as name, contact number and date of birth were also asked and recorded (screenshot attached).

Results

According to the survey, the highest percentage of respondents were between 19 and 21 years of age constituting to about 67.4%. As per the responses mentioned in a minimal 4.4% individuals sleep for less than 6 hours which is considered unhealthy. Whereas, 41.4% individuals sleep for an average 7 hours which is considered essential for a healthy lifestyle. Since a majority of respondents were college students, therefore, a larger part of this age group used to sleep between 12 and 1 am. Furthermore, a staggering 46.8% have accepted that they have occasionally experienced trouble in falling in sleep and about 11.3% are having difficulty to fall in sleep. These results direct the attention towards the fact that such a problem can lead to development of serious diseases in the long run. However, a majority of youth considered did not take any medication for sleep but still a small fraction (3.4%) did sometimes (Figure 1).

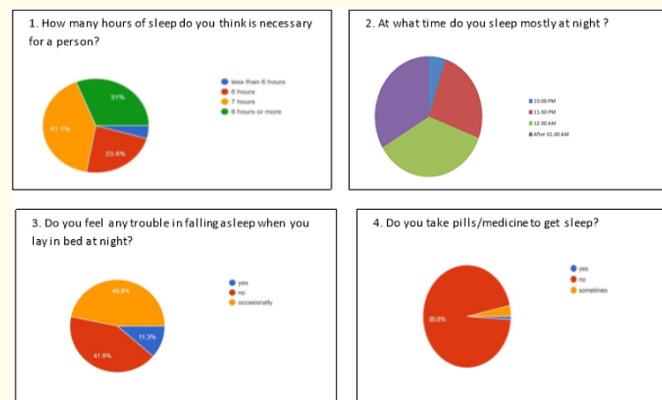


Figure 1: Data obtained for questions 1, 2, 3 and 4 of the questionnaire respectively.

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It can also be inferred that due to sleeping quite late at night a vast majority experienced either occasional or persistent feeling of tiredness while waking up in the morning. A main component responsible for keeping people away from sleeping at time is the social media as more than 50% responded that they scroll through social media when they cannot sleep. Exercise, meditation and yoga contribute to less than 10% of favourable activity when individuals cannot sleep. Due to the disparity in sleep duration, 25.1% have admitted to have anxiety and stress on daily basis while an astonishing 33.3% have occasionally experienced them. In addition to this, several hormonal and gastrointestinal related problems are also faced by individuals among them, 31.5% of them admitted to have such problems and a substantial 23.6% occasionally faced similar issues (Figure 2).

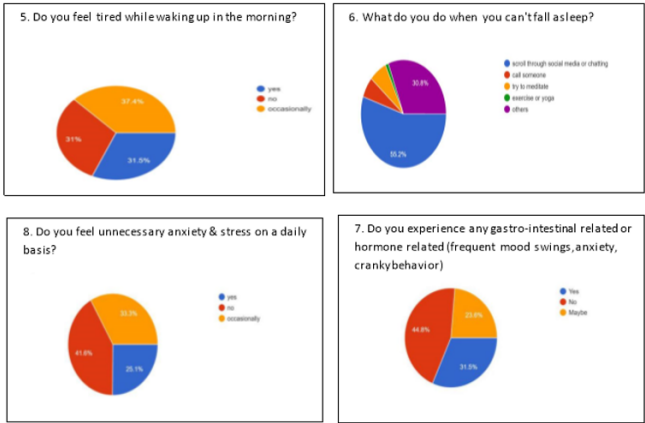


Figure 2: Data obtained for questions 5, 6, 7 and 8 of the questionnaire respectively.

It is also important to note that even though 51% of respondents did not experience of night mares or bad dreams, 13.5% have admitted to having such experience while 35.5% maintains that they only occasionally faced such a scenario. 43.3% of respondents take longer than 15 minutes to fall asleep while 17% take about 30 to 45 minutes for the same. It is also important to note that about 12.8% respondents have reported that for more than 3 nights in a week they encounter problem with their sleep. As per the data, 36.2% consider the quality of their sleep as average while a substantial 41.9% and 14.5% rate their sleep quality as good and very good respectively (Figure 3).

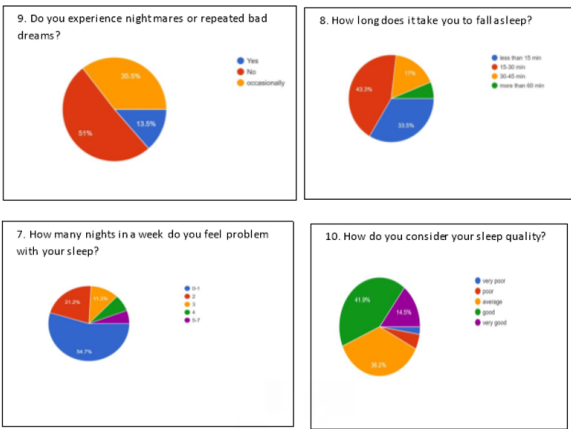


Figure 3: Data obtained for questions 9, 10, 11 and 12 of the questionnaire respectively.

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More than 50% have agreed that sleep does have negative impact on their mood, energy and equation with people while only 23.4% beg to differ. In addition to this, 65.5% have accepted that the sleep impacts their productivity, concentration and the ability to stay awake during the day. Lastly, while 59.4% still maintain that they do not have any problem with sleep, about 15.3% propose that they have had problem for more than a year. Furthermore, small but considerable 5.9% and 3.4% signify that respondents are facing this difficulty with sleep for about 3, 6 and more than 6 months respectively. This analysis brings attention to the increasing problem of developing insomnia in youth to the forefront (Figure 4).

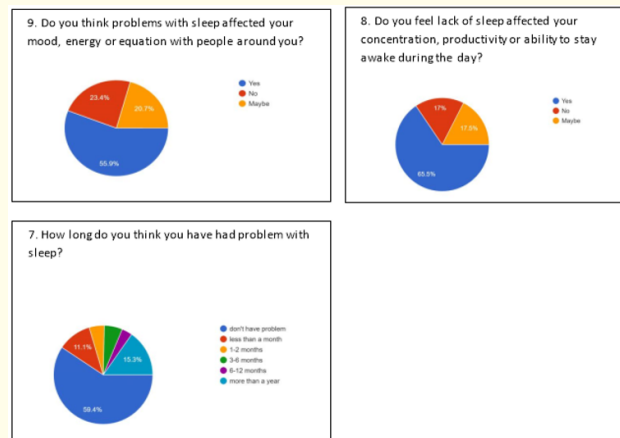


Figure 4: Data obtained for questions 13, 14 and 15 of the questionnaire respectively.

Discussion

A necessity for improved insomnia care is the accessibility and regular use of reliable and valid insomnia assessment. Only then can a clinical problem be recognized as different from the normal variation, and a tenacious problem be distinguished from a momentary one. We have done here a survey of people aged between 19 - 29 for the prevalence of insomnia and various sleep related patterns. Results indicate that 4.4% population of total sample population sleep for less than 6 hours and this may lead to various health ailments i.e. heart disease, neurologic diseases, breathing problems, urinary problems, chronic pain, and gastrointestinal problems [6]. Results indicate that more than 70% of the individuals sleep for 7 or more hours and more than 50% of the individual, have good quality of sleep and these results concerns about the poor quality of sleep in large number of population and it need to be addressed in clinical practices. Sleep duration is also associated with the mortality, people who sleep for 7 hours shows best mortality rate and people who sleep for 6 hours or less and 8 hours or more show mortality hazard [7]. Several studies also demonstrated that there is no relation of age with insomnia. Lifestyle behavioral pattern are claimed to have a substantive effect upon insomnia. The highest likelihoods ratio linked with insomnia was for life stress. Stress may be associated to essential psychological difficulties that hinder with sleep, and/or be a product of physical health concerns [8]. Comparison with earlier studies show that average time-to-fall-asleep was 22 minutes for most of the people and in our studies it is 15 minutes for majority of the people, average duration-of-actual-sleep was 7h and in our studies it is more than 6 h for majority of the population. Majority (93.8%) reported good-quality sleep in existing studies [9] and in our studies near about 50% of the population reported good quality of sleep. For the management of insomnia, most cases can be managed by primary care physician using different behavioral techniques and occasional hypnotics. Short-acting hypnotics are encouraged for transient insomnia, which lasts less than 3 weeks. For the patients of chronic insomnia, they are used as an adjunctive treatment where non-pharmacological treatment is not sufficient to improve insomnia. Behavioral interventions are another way to produce reliable and durable enhancements in sleep patterns. Efficacious treatment of chronic insomnia requires lifestyle changes. Another therapy is combination therapy and it is favoured

by majority of the sleep specialists. This therapy includes the use of both pharmacological and behavioral interventions. The combination therapy eases patients' capability to cope with the factors that worsened sleep disturbances. One of the major concerns of combination therapy is that the patient may have problem withdrawing the hypnotics. Zolpidem is well suited for combination therapy as it has minimal rebound insomnia [10].

There are some recommendations for healthy sleep habits that are described as sleep hygiene are as follows:

Do's:

- A regular bedtime routine should be established.
- The environment for sleeping should be safe, dark and comfortable.
- Exercises for relaxation, prayer, meditation and sometimes light conversation with the bed partner may be helpful to establish an enjoyable and pleasant feeling at bed time.
- Create a fixed bed and awake time seven days a week.
- Decide the total hours of sleep needed to be restored. Confine the time in bed to those hours.
- Exercise daily. Depth of sleep is increased by exercise.
- One should avoid bright light if during night sleep is disrupted.
- Plan a "worry" time former to getting ready to sleep. This helps in control vying thoughts which are troublesome to sleep.

Don'ts

- Do not exercise in the evening prior to sleep, that may be disruptive.
- Drinking large amounts of liquid prior to bed time should be avoided.
- Naps should be avoided if you have insomnia.
- If you are awake for more than 20 minutes do not stay in bed, Leave the bedroom and return to bed when you are sleepy.
- Do not use stimulants in the evening like coffee, or nicotine.
- Sleep quality may be disrupted by alcohol prior to sleeping.
- Hypnotics on a regular basis should be avoided Instead, an occasional sleeping pill may be used.
- Do not do anything entertaining or interesting if you wake up and unable to sleep. Such activities will increase alertness. Reading material that is uninteresting away from the sleeping area is fine.
- Do not watch television, read or listen to the radio in bed if you have sleep onset insomnia
- If you wake up at night, do not pay attention to what time it is. Avoid watching at the clock during the night
- Do not get irritated if you cannot sleep, it will cause surge arousal. Soothe yourself that you will sleep eventually.

Above mentioned are do's and don'ts of sleep hygiene [11].

Conclusion

Millions of people suffer from insomnia and it may have a prominent impact on their lives. The cost to insomniac society is estimated in billions of rupees. Treatment of insomnia is available for almost all people suffering from this problem. Treatment can be done by medication therapy, behavioural therapy and/or combination therapy depending upon the condition of the individual. The challenge is how to provide the available treatment in the most effective manner to the society. This will require greater education and awareness of the physicians and the general public. This will not be proficient without a substantial escalation in the resources currently available.

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Bibliography

1. Singleton N., *et al.* "Psychiatric morbidity among adults living in private households, 2000". London: The Office for National Statistics, HMSO (2001).
2. Vgontzas AN., *et al.* "Insomnia with objective short sleep duration is associated with a high risk for hypertension". *Sleep* 32.4 (2009): 491-497.
3. Lopez AD., *et al.* "The burden of disease and mortality by condition: data, methods, and results for 2001". Global Burden of Disease and Risk Factors. World bank and Oxford University Press, New York (2006): 85-86.
4. Vgontzas AN., *et al.* "Chronic insomnia and activity of the stress system: a preliminary study". *Journal of Psychosomatic Research* 45.1 (1998): 21-31.
5. Yamane, Taro. "Statistics: An introductory analysis". (1973)
6. Daniel J Taylor., *et al.* "Comorbidity of Chronic Insomnia With Medical Problems". *Sleep* 30.2 (2007): 213-218.
7. Daniel F Kripke., *et al.* "Mortality associated with sleep duration and insomnia". *Archives of General Psychiatry* 59.2 (2002): 131-136.
8. Deborah A Sutton., *et al.* "Insomnia and Health Problems in Canadians". *Sleep* 24.6 (2001): 665-670.
9. Panda S., *et al.* "Sleep-related disorders among a healthy population in South India". *Neurology India* 60.1 (2012): 68-74.
10. Tipathi, KD. "Essentials of Medical Pharmacology". 7th Edition, Jaypee Publisher (2013).
11. Dement WC and Pelayo R. "Public health impact and treatment of insomnia". *European Psychiatry* 12.1 (1997) 31s-39s.

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