The International Journal of Indian Psychology
ISSN 2348-5396 (e) | ISSN: 2349-3429 (p)
Volume 3, Issue 4, No. 67, DIP: 18.01.182/20160304
ISBN: 978-1-365-39397-6
http://www.ijip.in | July-September, 2016

Chronic Insomnia & Its Impact amongst Adolescents

Himani Bhasin[1]*

Keywords: *Chronic Insomnia, Adolescent*

Insomnia, or sleeplessness, is an individual's reported sleeping difficulties. "Insomnia" is derived from the Latin word "Somnus", the name of the Roman god of sleep, with the incorporation of the prefix "in-" to add contradiction.

Thus, insomnia is most often thought of as both a sign and a symptom that can accompany several sleeps, medical, and psychiatric disorders characterized by a persistent difficulty falling asleep and/or staying asleep or sleep of poor quality. Insomnia is typically followed by functional impairment while awake.

A definition of insomnia is, "difficulties initiating and/or maintaining sleep, or non-restorative sleep, associated with impairments of daytime functioning or marked distress for more than 1 month." Insomnia can occur at any age, but it is particularly common in the elderly. Insomnia can be short term (up to three weeks) or long term (above 3-4 weeks), which can lead to memory problems, depression, irritability and an increased risk of heart disease and automobile related accidents.

Insomnia can be grouped into primary and secondary, or co morbid, insomnia. Primary insomnia is a sleep disorder not attributable to a medical, psychiatric, or environmental cause. It is described as a complaint of prolonged sleep onset latency, disturbance of sleep maintenance, or the experience of non-refreshing sleep. A complete diagnosis will differentiate between:

- insomnia as secondary to another condition,
- primary insomnia co-morbid with one or more conditions,
- Free-standing primary insomnia.

TYPES OF INSOMNIA

Insomnia can be classified as transient, acute, or chronic.

[1] HR Professional, PepsiCo Bottler, Varun Beverages Limited, Gurgaon, New Delhi, India
*Responding Author

1) Transient insomnia lasts for less than a week. It can be caused by another disorder, by changes in the sleep environment, by the timing of sleep, severe depression, or by stress. Its consequences – sleepiness and impaired psychomotor performance – are similar to those of sleep deprivation.

2) Acute insomnia is the inability to consistently sleep well for a period of less than a month. Insomnia is present when there is difficulty initiating or maintaining sleep or when the sleep that is obtained is non-refreshing or of poor quality. These problems occur despite adequate opportunity and circumstances for sleep and they must result in problems with daytime function. Acute insomnia is also known as short term insomnia or stress related insomnia.

3) Chronic insomnia lasts for longer than a month. It can be caused by another disorder, or it can be a primary disorder. People with high levels of stress hormones or shifts in the levels of cytokines are more likely to have chronic insomnia. Its effects can vary according to its causes. They might include muscular fatigue, hallucinations, and/or mental fatigue. Some people that live with this disorder see things as if they are happening in slow motion, wherein moving objects seem to blend together. Chronic insomnia can cause double vision.

A common misperception is that the amount of sleep required decreases as a person ages. The ability to sleep for long periods, rather than the need for sleep, appears to be lost as people get older. Some elderly insomniacs toss and turn in bed and occasionally fall off the bed at night, diminishing the amount of sleep they receive.

Causes, Incidences & Risk Factors

Sleep habits we learned as children may affect our sleep behaviors as adults. Poor sleep or lifestyle habits that may cause insomnia are as follows:

- Going to bed at different times each night
- Daytime napping
- Poor sleeping environment, such as too much noise or light
- Spending too much time in bed while awake
- Working evening or night shifts
- Not getting enough exercise
- Using the television, computer, or smart phone in bed

The use of some medications and drugs may also affect sleep:

- Alcohol or other drugs
- Heavy smoking
- Too much caffeine, especially late in the day
- Getting used to certain types of sleep medications
- Some cold medications and diet pills
- Other medicines, herbs, or supplements prescribed by a health care provider or bought on your own

Physical, social, and mental health issues can affect sleep patterns, including:

- Anxiety disorders
- Bipolar disorder
- Certain medical conditions, such as thyroid disease
- Feeling sad or depressed. Often, insomnia is the symptom that causes people with depression to seek medical help.
- Physical pain or discomfort
- Stress, whether it is short-term or long-term. For some people, the stress caused by the insomnia makes it even harder to fall asleep.

With age, sleep patterns tend to change. Many people find that aging causes them to have a harder time falling asleep, and that they wake up more often.

Typically, transient or short-term insomnia are caused by similar factors, but the degree of disturbance is usually greater to experience short-term insomnia. These include:

- Stress-related factors – significant personal events, such as losing a job, marital problems, stress and generally worrying.
- Uncomfortable sleeping environment (too much light or noise, uncomfortable temperature).
- Unusual sleeping environment
- Changes in the daily rhythm, such as a change in work shift or jet lag.
- Acute medical illness or their treatments.

Chronic insomnia may be caused by one of the following:

- Chronic medical illnesses - Certain medical illness can interfere with sleep, especially disorders of the heart (congestive heart failure) and lungs (chronic obstructive pulmonary disease). Other important physical causes include heartburn, prostates, menopause, diabetes, arthritis, hyperthyroidism and hypoglycemia.
- Sleep disordered breathing - Disorders of sleep that cause one to stop breathing while asleep may fragment sleep and cause frequent awakenings during the night. This can be seen rarely with obstructive sleep apnea, but is much more common with central sleep apnea.
- Restless leg syndrome (RLS) – RLS is an unpleasant tickling, burning, pricking or aching sensations in the legs that are generally only relieved with movement and tend to occur while relaxing in the evening hours. A similar and often overlapping disorder is periodic limb movement of sleep, which are the recurrent movements of the legs during sleep that may cause arousals from sleep.
- Psycho physiologic ("learned") insomnia - Many people go to bed worrying about insomnia because of previous episodes. This creates an anxiety about going to sleep, which usually leads to greater difficulty sleeping.
- Biological factors - As we age, sleep becomes lighter and more fragmented. Older people often struggle with frequent nighttime awakenings and the inability to sleep past the very

early morning. Also, during our life spans, the internal biological "clock" that regulates sleeps creeps slightly forward, compelling older people to go to sleep earlier and to wake earlier.

- Lifestyle factors - Excessive caffeine consumption, alcohol and drug abuse, smoking, and poor sleeping habits are often overlooked as cause of chronically disturbed sleep.

Diagnosis of Insomnia

Surprisingly, a sleep study is not routinely recommended for those complaining of insomnia. The reason is that when a sleep study is performed in someone suffering from insomnia, it does not generally give any new information; it simply confirms that the patient is having trouble sleeping. The best way to find the cause for insomnia is by careful history taking.

Assessment of recent onset insomnia should focus on acute personal and medical problems. In those reporting long-term sleep disturbances, evaluation should address the history as well as physical and mental status. Referral to a sleep laboratory might be appropriate if a sleep-related breathing disorder is suspected, insomnia has been present for more than six months and medical, psychiatric, and neurological causes have been excluded, or if insomnia has not responded to medical or behavioral treatment. Additionally, a sleep diary should be maintained. This diary would include bedtimes, estimates of the time needed to fall asleep, number of night awakenings, and total amount of time asleep. This helps in correct diagnosis as well as monitoring the treatment.

Treatment of Insomnia

When people think of treatment for insomnia they tend to think of sleeping pills, but there are actually non-medical therapy that have not only been shown to be effective in improving insomnia, but are possibly even better in the long term than “sleeping pills”. Insomnia therapy can be divided into two areas: treatment with and without medication.

Treatment with Medication

- Alcohol:-Commonly self-prescribed as a sleep aid, alcohol is of limited benefit. A very small amount of alcohol can be relaxing and produce sleepiness early in the evening, but later in the evening there may be a “rebound effect” of difficulty sleeping. In addition, chronic alcohol use can produce tolerance and dependence and cause many other medical problems.
- Antihistamines: - Usually sold as remedies for colds, over-the-counter antihistamines (e.g., diphenhydramine) can produce sedation and are often used as sleeping pills. These agents can be effective for short-term use, but they have not been shown to be consistently effective. Since they are long acting medications, grogginess can persist into the daytime.
- Benzodiazepines: - These drugs, relatives of diazepam (Valium), improve sleep by decreasing the amount of time needed to fall asleep and the number of awakenings during

sleep. Their use has declined considerably with the introduction of non-benzodiazepine drugs. The side effects of using these drugs are poor coordination, reduced reaction time, and impaired memory. These "hangover effects" occur when the blood level is at its peak and will vary depending on how long the drug remains in the body. These drugs may also worsen sleep apnea.

- Non-benzodiazepines:- These drugs have been introduced over the past 10-12 years and have become the primary treatment for short-term insomnia. They work in the same area of the brain as the BZDs, but tend to be more specific for inducing sleep. They also do not cause significant hangover effects and do not seem to worsen sleep apnea. Examples of this class of drugs are Ambien, Sonata, and Lunesta.
- Ramelteon (Rozerem):- A newly approved medication that acts at the melatonin receptor to help induce sleep.
- Melatonin: - This herbal agent seems to be effective in helping transient and short-term insomnia. However, as an herbal supplement which is not regulated by the Food and Drug Administration, there is a great discrepancy in the quality of the products and no firm recommendations and can be given for its use.
- Antidepressants: - These agents are often prescribed as sleep aids in those with co-existing psychiatric problems. The most commonly used sedating antidepressant is trazodone.
- Herbal medications such as valerian, chamomile, and kava-kava, are often used to help sleep.

Treatment without Medication

The non-medication treatment methods used to help insomnia are often focused at helping the patient “relearn” how to sleep. Some of these techniques are common-sense habits that go a long way in helping people feel sleepy at night. These include:

- Develop a regular sleeping schedule. Avoid daytime naps and stimulating activities just before bedtime.
- Avoid stimulating drugs, such as caffeine and nicotine, particularly before going to bed.
- Exercise during the day.
- Avoid alcohol- it is a leading cause of poor sleep.
- Minimize light and noise when trying to sleep.
- Maintain a comfortable bedroom temperature.
- Avoid heavy meals before bedtime.
- Take medications that may be stimulating, or those that may cause you to wake up to urinate long before bedtime.
- Increase exposure to sunlight in the morning, and avoid it later in the afternoon (5-6 PM).

Additionally, there are some behavioral techniques, usually conducted under the guidance of a psychologist that can be very helpful in treating insomnia. The effectiveness of these procedures tends to be more durable in helping patients with insomnia than treatment with medication alone. These include relaxation therapy, sleep restriction, stimulus control, and cognitive therapy.

Relaxation therapy consists of techniques that help reduce or eliminate anxiety and body tension.

Sleep restriction is a technique that starts with a person only being allowed to get a few hours sleep a night; over time the hours of sleep are increased until a more normal night's sleep is achieved. This technique is designed to limit the hours that one spends in bed unable to sleep and helps re-associate the bedroom with sleeping, instead of the frustration of insomnia.

Stimulus control therapy attempts teach the patient to use the bedroom is only for activities related to sleep. For most people this means not using their beds for any activities other than sleep and sex.

The goal of **cognitive therapy** is provide reassurance to patients that sleeping less than 8 hours a night is not necessarily unhealthy and does not always lead to major consequences on the following day.

Aims & Objectives

- To study the effect of chronic insomnia on adolescents & to invent preventive measures to combat the negative consequences amongst adolescents.

LITERATURE REVIEW

Melatonin in Children and Adolescents with Insomnia: A Retrospective Study

Riva Tauman, David Gozal

University of Louisville School of Medicine, Louisville, USA [1993]

Effectiveness and tolerability of melatonin was assessed in 32 children (mean age 9.6± 4.5 years) with chronic sleep initiation and sleep maintenance problems treated naturalistically in a pediatric sleep medicine center. Children received melatonin for an average of 2.1 ± 2.0 months at a final average dose of 2.0 ± 1.2 mg administered 1 hour before bedtime. Twenty-nine (90.6%) children exhibited partial improvement to complete resolution of their sleep problems as measured by sleep latency time and number of awakenings reported by parents. Thus, melatonin may be effective, safe, and well tolerated in the treatment of chronic insomnia in children.

Epidemiology of DSM-IV Insomnia in Adolescence: Lifetime Prevalence, Chronicity, and an Emergent Gender Difference

Johnson, Thomas Roth, Lonnie Schultz Naomi

Department of Epidemiology, Michigan State University, East Lansing, Michigan [1996]

According to the objective of the study the confluence of sleep/wake cycle and circadian rhythm changes that accompany pubertal development and the social and emotional developmental tasks of adolescence may create a period of substantial risk for development of insomnia. Although poor sleep affects cognitive performance and is associated with poor emotional and physical health, epidemiologic studies among adolescents have been limited. In this first epidemiologic study of insomnia defined by Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria in a US sample of adolescents, we estimated lifetime prevalence of

insomnia, examined chronicity and onset, and explored the role of pubertal development. Data come from a random sample of 1014 adolescents who were 13 to 16 years of age, selected from households in a 400000-member health maintenance organization encompassing metropolitan Detroit. Response rate was 71.2%. The main outcome measured was DSM-IV–defined insomnia.

Results showed that Lifetime prevalence of insomnia was 10.7%. A total of 88% of adolescents with a history of insomnia reported current insomnia. The median age of onset of insomnia was 11. Of those with insomnia, 52.8% had a co morbid psychiatric disorder. In exploratory analyses of insomnia and pubertal development, onset of menses was associated with a 2.75-fold increased risk for insomnia. There was no difference in risk for insomnia among girls before menses onset relative to boys, but a difference emerged after menses onset. In contrast, maturational development was not associated with insomnia in boys.

Insomnia seems to be common and chronic among adolescents. The often found gender difference in risk for insomnia seems to emerge in association with onset of menses.

Persistence and Change in Symptoms of Insomnia among Adolescents
Robert E. Roberts, Catherine Ramsay Roberts, Wenyaw Chan
University of Pennsylvania [1999]
The objective of the study was to estimate the incidence, chronicity, and remission of symptoms of insomnia and to examine factors associated with the incidence and chronicity of insomnia among adolescents. Data were collected using diagnostic interviews and questionnaires from 4175 youths aged 11 to 17 years at baseline, and 3134 of these youths followed-up a year later. Subjects were sampled from large managed care populations in a metropolitan area of over 4.7 million. Insomnia was assessed by youth-reported DSM-IV symptom criteria. Results showed that one year incidence was 13.9% for 1 or more symptoms, 5.5% for 1 or more symptoms plus daytime fatigue or sleepiness, and 5.3% for insomnia caseness. Rates of chronicity were 45.8% for 1 or more symptoms, 34.7% with daytime fatigue or sleepiness, and 22.8% for insomnia caseness. There were no effects of age, sex, or family income in predicting incidence or chronicity of insomnia. There was a weak association of both somatic and psychological dysfunction with risk of future sleep outcomes, with stronger prediction for psychological dysfunction.

These results document further the public health burden of insomnia among adolescents. Prevalence of insomnia is comparable to that of other major psychiatric disorders such as mood, anxiety, disruptive, and substance use disorders. Incidence over one year also is high. Insomnia represents a chronic condition, further enhancing burden.

Non pharmacologic treatment of chronic insomnia-An American Academy of Sleep Medicine review

Morin CM, Hauri PJ, Espie CA

University of Laval, Canada. [1999]

This paper reviews the evidence regarding the efficacy of nonpharmacological treatments for primarychronic insomnia. It is based on a review of 48 clinical trials and two meta-analyses conducted by a task force appointed by the American Academy of Sleep Medicine to develop practice parameters on non-drug therapies for the clinical management of insomnia. The findings indicate that nonpharmacological therapies produce reliable and durable changes in several sleep parameters ofchronic insomnia sufferers. The data indicate that between 70% and 80% of patients treated with nonpharmacological interventions benefit from treatment. For the typical patient with persistent primary insomnia, treatment is likely to reduce the main target symptoms of sleep onset latency and/or wake time after sleep onset below or near the 30-min criterion initially used to define insomnia severity. Sleep duration is also increased by a modest 30 minutes and sleep quality and patient's satisfaction with sleep patterns are significantly enhanced. Sleep improvements achieved with these behavioral interventions are sustained for at least 6 months after treatment completion. However, there is no clear evidence that improved sleep leads to meaningful changes in daytime well-being or performance.

Three treatments meet the American Psychological Association (APA) criteria for empirically-supported psychological treatments for insomnia: Stimulus control, progressive muscle relaxation, and paradoxical intention; and three additional treatments meet APA criteria for probably efficacious treatments: Sleep restriction, biofeedback, and multifaceted cognitive-behavior therapy.

Additional outcome research is needed to examine the effectiveness of treatment when it is implemented in clinical settings (primary care, family practice), by non-sleep specialists, and with insomnia patients presenting medical or psychiatric comorbidity.

Sleepless Nights Common Among adolescents

Joseph Pattinson

University of Philadelphia, U.S.A [2004]

Insomnia is a widespread and perhaps under recognized problem among U.S. adolescents, according to research presented recently at a meeting of sleep experts. In a study involving interviews with 1,014 adolescents aged 13 to 16; one-third reported having sleep problems at some point during their lives. Among these adolescents, 94% reported experiencing difficulty sleeping at least twice per week for a month or longer during the previous year. Nearly a third of this group also had another psychiatric illness of some sort. Nearly 17% of the adolescents qualified for the clinical definition of insomnia -- trouble falling or staying asleep or achieving restful sleep at least twice a week for a month or more, causing noticeable distress and

impairment in their daily lives. Their insomnia appeared to be chronic or frequently recurrent beginning at an average age of 11. Interestingly, 14% of the 13- to 16-year-old interviewees had an episode of insomnia within the past 30 days. "The prevalence was a bit surprising," lead researcher Eric Johnson, PhD, a research scientist at the Henry Ford Hospital in Detroit, tells WebMD. The most common problem was difficulty falling asleep. Sleep efficiency, or time spent in bed actually sleeping, was also a significant problem.

Chronic Insomnia and Its Negative Consequences for Health and Functioning of Adolescents: A 12-Month Prospective Study

Robert E. Roberts, Catherine R. Roberts [2007]

This study was conducted to estimate prevalence and chronicity of insomnia and the impact of chronic insomnia on health and functioning of adolescents. Data were collected from 4175 youths 11–17 at baseline and 3134 a year later sampled from managed care groups in a large metropolitan area. Insomnia was assessed by youth-reported DSM-IV symptom criteria. Outcomes are three measures of somatic health, three measures of mental health, two measures of substance use, three measures of interpersonal problems, and three of daily activities. Results showed that over one-fourth reported one or more symptoms of insomnia at baseline and about 5% met diagnostic criteria for insomnia. Almost 46% of those who reported one or more symptoms of insomnia in Wave 1 continued to be cases at Wave 2 and 24% met DSM-IV symptom criteria for chronic insomnia (cases in Wave 1 were also cases in Wave 2). Multivariate analyses found chronic insomnia increased subsequent risk for somatic health problems, interpersonal problems, psychological problems, and daily activities. Significant odds ($p < .05$) ranged from 1.6 to 5.6 for poor outcomes. These results are the first reported on chronic insomnia among youths, and corroborate, using prospective data, previous findings on correlates of disturbed sleep based on cross-sectional studies. Insomnia is both common and chronic among adolescents. The data indicate that the burden of insomnia is comparable to that of other psychiatric disorders such as mood, anxiety, disruptive, and substance use disorders. Chronic insomnia severely impacts future health and functioning of youths. Those with chronic insomnia are more likely to seek medical care. These data suggest primary care settings might provide a venue for screening and early intervention for adolescent insomnia.

Insomnia is 40% more common in women than in men

William Dutchbug

Middlesex University, London [2007]

A survey of 1.1 million residents in the United States conducted by the American Cancer Society found that those that reported sleeping about 7 hours per night had the lowest rates of mortality, whereas those that slept for fewer than 6 hours or more than 8 hours had higher mortality rates. Getting 8.5 or more hours of sleep per night increased the mortality rate by 15%. Severe insomnia – sleeping less than 3.5 hours in women and 4.5 hours in men – also led to a 15% increase in mortality. However, most of the increase in mortality from severe insomnia was

discounted after controlling for co-morbid disorders. After controlling for sleep duration and insomnia, use of sleeping pills was also found to be associated with an increased mortality rate. The lowest mortality was seen in individuals who slept between six and a half and seven and a half hours per night. Even sleeping only 4.5 hours per night is associated with very little increase in mortality. Thus, mild to moderate insomnia for most people is associated with increased longevity and severe insomnia is associated only with a very small effect on mortality. As long as a patient refrains from using sleeping pills, there is little to no increase in mortality associated with insomnia, but there does appear to be an increase in longevity. This is reassuring for patients with insomnia in that, despite the sometimes-unpleasantness of insomnia, insomnia itself appears to be associated with increased longevity. It is unclear why sleeping longer than 7.5 hours is associated with excess mortality.

DISCUSSIONS

Research shows that adolescents need 8½ to more than 9 hours of sleep a night. Studies have found that many adolescents have trouble falling asleep, it's because their brains naturally work on later schedules and aren't ready for bed.

During adolescence, the body's circadian rhythm (sort of like an internal biological clock) is reset, telling a teen to fall asleep later at night and wake up later in the morning. This change in the circadian rhythm seems to be due to the fact that the brain hormone melatonin is produced later at night in teens than it is for kids and adults, making it harder for teens to fall asleep. Sometimes this delay in the sleep-wake cycle is so severe that it affects a person's daily functioning. In those cases it's called **delayed sleep phase syndrome**.

Changes in the body clock aren't the only reason adolescents lose sleep, though. Lots of people have **insomnia** — trouble falling or staying asleep. The most common cause of insomnia is stress. But all sorts of things can lead to insomnia, including physical discomfort (the stuffy nose of a cold or the pain of a headache, for example), emotional troubles (like family problems or relationship difficulties), and even an uncomfortable sleeping environment (a room that's too hot, cold, or noisy).

It's common for everyone to have insomnia from time to time. But if insomnia lasts for a month or longer with no relief, then doctors consider it **chronic**. Chronic insomnia can be caused by a number of different problems, including medical conditions, mental-health problems, medication side effects, or substance abuse. People with chronic insomnia can often get help for their condition from a doctor, therapist, or other counselor.

For some people, insomnia can be made worse by worrying about the insomnia itself. A brief period of insomnia can build into something longer lasting when a person becomes anxious

about not sleeping or worried about feeling tired the next day. Doctors call this **psycho physiologic insomnia**.

Furthermore, in a study involving interviews with 1,014 adolescents aged 13 to 16; one-third reported having sleep problems at some point during their lives. Among these adolescents, 94% reported experiencing difficulty sleeping at least twice per week for a month or longer during the previous year. Nearly a third of this group also had another psychiatric illness of some sort.

Nearly 17% of the teens qualified for the clinical definition of insomnia -- trouble falling or staying asleep or achieving restful sleep at least twice a week for a month or more, causing noticeable distress and impairment in their daily lives.

Their insomnia appeared to be chronic or frequently recurrent beginning at an average age of 11. Interestingly, 14% of the 13- to 16-year-old interviewees had an episode of insomnia within the past 30 days.

"The prevalence was a bit surprising," lead researcher Eric Johnson, PhD, a research scientist at the Henry Ford Hospital in Detroit. The most common problem was difficulty falling asleep. Sleep efficiency, or time spent in bed actually sleeping, was also a significant problem.

Puberty Affects Girls' Insomnia

The adolescents' sex and socioeconomic levels were the only two significant demographic risk factors that surfaced in this study. Lower socioeconomic level correlated with increased insomnia risk, Johnson says. In addition, girls had a 50% higher risk than boys for insomnia symptoms. Johnson and his colleagues also found that the risk of developing insomnia among the female adolescents correlated with puberty. There was a "significant jump in insomnia" after their first menstruation, Johnson says, with girls being 2.5 times more likely to experience insomnia after their first period than before. Among the boys experiencing insomnia, no association was found with their pubertal development.

In both groups, no significant difference in insomnia prevalence could be traced to race/ethnicity or parents' marital status. The most common cause of chronic insomnia amongst adolescents is -- trouble falling and staying asleep -- is stress. Insomnia is a sleep disorder that can affect adolescents that find themselves stressed about school/college, friends, family and other situations common in adolescence. It is also possible to develop psycho physiologic insomnia, in which anxiety over feeling tired the following day or worry about falling asleep can result in insomnia.

When an adolescent is active, even during sleep, it can cause him or her not to get a good night sleep. This chronic insomnia is punctuated by involuntary twitches in the arms or legs during

sleep. The adolescent may not consciously wake up when afflicted with chronic insomnia, but he or she still feels the effects the next day: feeling irritable and tired. Sometimes treating an iron deficiency can help and sometimes other medications can help adolescents with chronic insomnia.

Obstructive sleep apnea: - Adolescents with this sleep disorder actually stop breathing briefly during sleep. This causes them to wake up for a few seconds. While adolescents with obstructive sleep apnea do not consciously wake up when they stop breathing, they are prevented from getting a deep sleep. Excessively snoring and heavy sweating are signs of sleep apnea, and chronic insomnia can be caused by obesity and by enlarged adenoids or tonsils.

Reflux:-If someone has gastro esophageal reflux disease (GERD), stomach acid moves backward up into the esophagus, producing the uncomfortable, burning sensation known as heartburn. GERD symptoms can be worse when someone is lying down. Even if someone doesn't notice the feelings of heartburn during sleep, the discomfort it causes can still interfere with the sleep cycle.

Nightmares:-Most teens have nightmares on occasion. But frequent nightmares can disrupt sleep patterns by waking someone during the night. Some things can trigger more frequent nightmares, including certain medications, drugs, or alcohol. Ironically, sleep deprivation can also be a cause. The most common triggers for more frequent nightmares are emotional, such as stress or anxiety.

Narcolepsy:-People with narcolepsy are often very sleepy during the day and have sleep "attacks" that may make them suddenly fall asleep, lose muscle control, or see vivid dreamlike images while dozing off or waking up. Someone's nighttime sleep may be disrupted, with frequent awakenings throughout the night. Narcolepsy can be disturbing because people fall asleep without warning, making it hazardous to do things like drive. A person's schooling, work, or social life can be affected by the unusual sleep patterns.

Narcolepsy is not that commonly diagnosed in teens, although many cases go unrecognized. People usually first begin to have symptoms between the ages of 10 and 25, but may not be properly diagnosed until 10-15 years later. Doctors usually treat narcolepsy with medications and lifestyle changes.

Sleepwalking: - It tends to happen most often when a person is sick, has a fever, is not getting enough sleep, or is feeling stress. Because most sleepwalkers don't sleepwalk often, it's not usually a serious problem. Sleepwalkers tend to go back to bed on their own and don't usually remember sleepwalking. (Sleepwalking often happens during the deeper sleep that takes place during stages 3 and 4 of the sleep cycle.)

Affects of Chronic insomnia on adolescents

Adolescents with sleeping disorders are affected by more than just feeling drowsy. The feelings of fatigue that come with adolescent sleep disorders can affect various aspects of life. Sleeping during class can affect academic performance. Additionally, feeling tired can make it difficult to

participate in extracurricular activities, especially sports. Falling asleep at a part-time job can also result from teenage sleep disorders. Irritability is one of the side effects from sleeping disorders, and this can put stress on relationships with family and friends.

Finally, chronic insomnia can result in a dependence on stimulants. Many adolescents turn to stimulant drugs, both prescription and over the counter, to help them stay awake. Soda, coffee and energy drinks may become addictive as adolescents begin to rely on them to overcome their drowsiness.

Different sleep problems are treated differently. Some can be treated with medications, whereas others can be helped by special techniques like light therapy (where someone sits in front of a light box for a certain amount of time each day) or other practices that can help reset a person's body clock.

Doctors also encourage teens to make lifestyle changes that promote good sleeping habits. You probably know that caffeine can keep you awake, but many teens don't realize that playing video games or watching TV before sleeping can do the same thing.

Although any chronic sleep problem in a teenager should be evaluated by a health care professional, here are a few tips to help adolescents sleep better:

- Help adolescent to set a regular bedtime and waking time, and stick to it, even on weekends. This will help his or her body get used to a regular sleep time.
- Exercise during the day, but avoid strenuous exercise within a couple of hours of bedtime.
- Keep adolescents' bedroom dark, cool, and quiet.
- Remove distractions from the bedroom, such as the telephone or radio.

CONCLUSIONS

Chronic insomnia in adolescents is on rise these days. The amount of extra activities such as surfing Internet, watching television, heavy home works and sending text messages can create serious health consequences causing sleep disturbances. It is the responsibility of every parent to keep a check on their child's health. It is not only providing them with proper food and clothing that is important, but also taking them to a doctor when lacking an adequate sleep is equally important. Sleep deprivation effects on adolescents given below show why adolescents should not stay awake late nights.

- Insomnia increases risk of depression

Research studies revealed that adolescents that stay awake late nights sitting in front of computers are at a greater risk of developing mental disorders. There is a possibility of sleep deprivation in teenagers which is one of the reasons for mental illnesses. Sleep deprivation is associated with distress that leads to serious mental disorders like depression.

- Adolescents are more likely to gain excess weight and become obese

Adolescents deprived of sleep are at a high risk of weight gain. Research studies revealed that inadequate sleep can lead to obesity in teenagers and adults as well. The main reason behind gaining weight is that the hormonal levels in the body that regulate appetite fluctuate due to lack of sleep.

- Academic performance is badly affected

Academic performance is greatly affected due to lack of sleep. The learning skills, cognitive behavior and many more skills hidden in teens are affected.

- Adolescents develop irritable and aggressive behavior

When adolescents do not get proper sleep, they get irritated for every silly reason. This irritability leads to aggressive behavior in them. For instance, they start screaming at an opponent while playing which is purely inappropriate. This behavior in adolescents can develop a domino effect where in the act superior in every situation. It has got many negative effects. For instance, the aggressive nature can break a friendship with a friend and losing a friend makes the person depressed and so on.

- Insomnia can affect driving

Adolescents are careless while driving and are at a high risk meeting with an accident. And when you add lack of sleep into the mix, there is a higher risk of accidents. Sleep deprivation in adolescents makes them to take inappropriate judgments and moreover, they have quick reflexes that can lead to accidents.

- Insomnia also affects future

Adolescents not only get affected with the above effects, but also their future is badly ruined. For instance, if an adolescents' academic performance is poor, he/she gets low grades which are not enough to get an admission into good colleges. It can also raise the risk of obesity and the adolescent is more likely to get diabetes or any other health problems in the future. Sleep deprivation is a spark which causes a fire of huge problems.

To avoid all these insomnia effects in adolescents, they require an appropriate sleep of 9.25 hours a day. Some may require more sleep than this and some may require very less sleep. If an adolescent is getting habituated to sleep deprivation, it is good to make some lifestyle changes. These efforts can be helpful in saving his/her future.

Simple changes like cutting down extracurricular activities, removing television or computer from the bedroom, turning off the lights, etc would help in getting a good and sound sleep.

No More "Early to Bed, Early to Rise"

Sleep and adolescents– the relation between the two is for the latter to postpone the former until late into the night and then embrace sleep until late in the morning. Benjamin Franklin's famous anecdote about sleep does not certainly apply to today's adolescents and this is suggested by many surveys and studies. According to the National Sleep Foundation's polls, 15 percent

children are known to fall asleep at school while 60 percent of fewer than eighteens are tired during the daytime.

Sleep & Adolescents

As mentioned earlier, teenagers go to sleep late and thus, wake up late. So, how can it be possible for them to make it school afresh at 7 am in the morning? This is the very reason that in the year 1999, a congressional resolution was introduced not to start schools before 8:30 am. Many studies found that teens were not getting enough sleep and this was the reason for the congressional resolution to not begin schools at 7 in the morning.

The effect of Late Start Times

A doctor from the University of Minnesota conducted a study to see if changing the start time from 7 to 8:30a.mhad any impact on the student's performance. The study found that the sleep time of teenagers increased by at least 5 hours in a week thus benefiting them considerably in terms of their attendance, daytime alertness and enrollment rates. Also, depression among teens was also reduced to gaining some more hours of sleep.

Advantages of Proper Sleep in teenagers

According to Doctor Dr. Mary Carskadon, an expert on adolescent sleep, proper sleep in teenagers has the following benefits-

- less periods of depression
- reduced tardiness
- improved attendance
- improvement of grades
- less absenteeism
- less likely to fall asleep during daytime
- decreased risk of abnormal metabolism and nutritional deficiencies

KEY LEANINGS

While conducting this research, I learnt that Insomnia is trouble falling asleep or staying asleep through the night. Episodes may come and go which is commonly known as episodic insomnia. Moreover, insomnia may also last up to 3 weeks, known as acute insomnia or it can be long-lasting which is known as chronic insomnia.

Furthermore tossing and turning, worrying about whether an individual will get enough sleep and how will he get through the next day, almost everyone has a night like that sometimes. But if it is happening three or more nights a week and this goes on for longer than a month, then the individual might be struggling with chronic insomnia.

Interestingly I researched & found out that throughout history there have been many famous people who are known to have suffered from insomnia. These have included famous writers, poets, scientists, political leaders and many others who have achieved eminence in their lifetime.

In most instances they came to terms with their inability to enjoy the benefits of a full night sleep.

Napoleon is one striking example who managed to get by on as little as three hours sleep. Another famous personality who appeared to need very little sleep was Winston Churchill. It would appear that Churchill's habit of sleeping only three hours each night was unrelated to his depressive tendencies. However, it must be noted that depression is a very common cause of Chronic Insomnia and an inability to fall asleep immediately.

Sir Isaac Newton, Thomas Edison, Robert Burnsalong with John Stuart Mill**, t**he famous English economist and philosopher suffered from bouts of depression and as a result found great difficulty in falling asleep.
Moreover**,** Benjamin Franklin an able president in American history suffered from severe bouts of insomnia. Abraham Lincoln and Theodore Roosevelt also suffered from Chronic Insomnia. I was shocked to found that well known writers like Shakespeare, Dickens, Marcel Proust, and Scott Fitzgerald also suffered from insomnia. Actor Cary Grant and actress Marilyn Monroe also suffered from Chronic Insomnia.

I found that all these famous people achieved distinction in their various fields in spite of the discomfort, frustration, stress and tension they must have suffered from their bouts of insomnia. It is clear that insomnia is not a life threatening disorder. However there is little doubt that if they been able to enjoy the relaxing comfort of a full night undisturbed sleep every night, their lives would have been immeasurably more comfortable.

The collective research studies have shown that sleeping less than 3.5 hours in women and 4.5 hours in men has led to a 15% increase in mortality rates as insomnia is found to be 40% more common in women than in men.
Moreover I think that the relative causes for higher rates of Chronic Insomnia in women are seen to be hypertension, work stress, high work load & balancing family responsibilities along with their married life & children. Chronic insomnia severely impacts future health and functioning of the adolescents.

In fact sleeping because of worry and poor sleep habits also contributes to Chronic Insomnia. While gathering the research studies I also found that around 20% of the population or one in five people are struggling with insomnia. Out of this 6% of the population is suffering through Chronic Insomnia.

Chronic insomnia is more common in women and in older people, but it can happen at any age - including in small children.

I strongly think that if the sleeplessness is being caused by any health problem, then that problem may need to be managed first so that adolescents can sleep better again. Many adolescents who have chronic insomnia use sleep medications, and often use them for years. These kinds of medication are only meant to be used as a temporary help and not for months or years.

Looking at the current perspective, I think that adolescents who have a lot of trouble sleeping must discuss this problem with the doctor. Even if adolescents want to avoid taking medication or "sleeping pills", there are still many ways a doctor could help - for instance by ruling out any medical conditions that could need treatment and letting to know what types of sleep therapy are available in the problem area.

I researched and found that there are many things that can be worked upon to help adolescents sleep better, like exercise and bright light therapy.

Complementary medicines (like valerian or melatonin), techniques like yoga, autogenic training and acupuncture, and traditional remedies like a glass of warm milk before bed are also helpful. One of the main things to do is avoid the things that might be interfering with your sleep, especially drinking too much alcohol or taking drugs or smoking.

Although alcohol can help an individual fall asleep more quickly, but, it lowers the quality of an individual's sleep and makes it harder for the person to sleep through the night.

Furthermore, out of the non-drug options for getting better sleep, certain techniques and kinds of training to change sleep habits have been shown to help some people whose insomnia is not caused by a medical condition.

Sleep hygiene

The following set of habits called "sleep hygiene", can make a positive difference:

- Do not use alcohol, coffee, tea or other stimulants for four to six hours before going to bed
- Avoid smoking before bedtime or during the night
- Avoid large or very spicy meals just before going to bed
- Get exercise, but not very strenuous exercise
- Make sure that the bedroom is quiet, dark and has a comfortable temperature

Stimulus control

This is meant to help establish a clearer "sleep-wake" pattern & following:

- Getting out of bed if you are unable to sleep
- Getting up at the same time every morning
- Not having naps during the day

Cognitive therapy and cognitive-behavioral therapy

Cognitive therapy aims to help change an individual's thinking patterns about sleep. This is not just simple "positive thinking". It is about changing exaggerated, unrealistic beliefs about sleep. For example, an individual might be convinced that he will always wake up at 3 o'clock in the morning and will not be able to get back to sleep. In cognitive therapy, Psychologist would work on this way of thinking, so that it does not become a self-fulfilling prophecy.

I have researched that one of the common negative thoughts that people have when they cannot sleep is: "If I cannot get back to sleep, it will be a catastrophe, because I will never get through the day tomorrow." A more realistic thought could be: "This happens from time to time. It is still possible that I could get some sleep. And if I don't, then it won't be the end of the world."

Relaxation techniques aim to help reduce physical tension and stop an individual's thinking about things that will make it difficult for him to sleep. The goal is to achieve mental and physical peace and tranquility. The most common of these is progressive muscle relaxation, which is also often called the **Jacobson method**. In this an individual is taught to gradually tense and relax the muscles in each part of the body, either in a class or using an audio recording.

Autogenic training (AT) is commonly used. The aim of this technique is "self-hypnosis". It involves focusing awareness on different parts of the body and relaxing them. As people become more advanced, they will be able to influence involuntary body functions such as their heart beat and breathing. It is believed that reaching deep physical relaxation in this way will relieve stress and negative feelings.

Biofeedback: - A technique which involves body's reaction to tension and how to relax areas of tension in the body. This is done using electrodes attached to the body.

Another common type of relaxation training is **imagery**, where an individual visualizesvery peaceful scenes or imagines breathing quietly, gently falling asleep and having a good night's sleep.

Henceforth by following these, an adolescent can be easily able to overcome his sleeplessness or in other words "Chronic Insomnia". Being optimistic, following health hygiene& avoiding stress, leading a healthy lifestyle & managing things in a proper way would definitely help to avoid sleeplessness, or "Chronic Insomnia".

Moreover, as it is said "PREVENTION IS BETTER THAN CURE", hence one should focus on preventing Chronic Insomnia & lead a happy, stable & healthy life.

It is not a problem which cannot be cured but yes, if certain precautions are followed then, it can be easily cured or treated.

Acknowledgments

The author appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interests

The author declared no conflict of interests.

REFERENCES

Agency for Healthcare Research and Quality (AHRQ). Manifestation and management of chronic insomnia in adults. *(*2005).

Benca KM, Obermeyer WH, Thisted RA, Gillin JC. Sleep and psychiatric disorders. A meta-analysis. Arch Gen Psychiatry. (1992)

Borbely AA, Wirz-Justice A. Sleep, sleep deprivation and depression. A hypothesis derived from a model of sleep regulation. Hum Neurobiol. (1982)

Ford DE, Kamerow DB. Epidemiologic study of sleep disturbances and psychiatric disorders. (1989)

Gillin JC. Are sleep disturbances risk factors for anxiety, depressive and addictive disorders? (1998)

Janowsky DS, el-Yousef MK, Davis JM, Sekerke HJ. A cholinergic-adrenergic hypothesis of mania and depression. Lancet.(1972)

Morin CM, Bootzin RR, Buysse DJ, Edinger JD et al. Psychological and behavioral treatment of insomnia (2006)

Neckelmann D, Ursin R. Sleep stages and EEG power spectrum in relation to acoustical stimulus arousal threshold in the rat. Sleep. (1993)

Ohayon MM, Roth T. Place of chronic insomnia in the course of depressive and anxiety disorders. (2003)

Vollrath M, Wicki W, Angst J. The Zurich study. VIII. Insomnia: association with depression, anxiety, somatic syndromes, and course of insomnia. (1989)

Weitzman ED, Kripke DF, Goldmacher D, McGregor P, Nogeire C. Acute reversal of the sleep-waking cycle in man. Effect on sleep stage patterns. Arch Neurol. (1970

Wu JC, Bunney WE. The biological basis of an antidepressant response to sleep deprivation and relapse: review and hypothesis. (1990).

How to cite this article: H Bhasin (2016), Chronic Insomnia & Its Impact amongst Adolescents, International Journal of Indian Psychology, Volume 3, Issue 4, No. 67, ISSN:2348-5396 (e), ISSN:2349-3429 (p), DIP:18.01.182/20160304, ISBN:978-1-365-39397-6