



A STUDY ON SYMPTOMS, TREATMENTS, EFFECTS AND WORKING THERAPIES OF INSOMNIA

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Abstract

Insomnia can be referred to as an epidemic in this modern era. Bad sleeping habits and various disabilities related to the sleep quality of people at every age. There are various factors and causes for each patient of insomnia. Age as well as gender differentiation also causes different symptoms for the disorder. This research completely focuses on symptoms, treatments, effects and working therapies of insomnia. As covering the disorder and its characterization in one paper is unfeasible and difficult as well. But mentioning the primarily spreaded characteristics of insomnia is important for the field of psychology. This research includes a sample size of 120 insomniacs to cover 4 different objectives. As the results have been found after the analysis, food habits & lifestyle is the primary cause of insomnia. Gastrointestinal Disorders (Heartburn) is found to be the major secondary cause for Insomnia where females suffer this issue more than males. Many other findings have also been covered in this research paper.

Introduction

The word "insomnia" originates from the Latin "in" (no) and "somnus" (sleep). It is a disorder characterised by inability to sleep or a total lack of sleep. Being the first psychosomatic disorder to be described by Johann Heinroth in 1818, insomnia clinically presents as a subjective perception of dissatisfaction with the amount and/or quality of the sleep. The presenting complaints are often that of difficulties falling asleep in spite of being in bed, waking up often during the night and having trouble going back to sleep, waking up too early in the morning or having an unrefreshing sleep.

Various studies have noted insomnia to be quite a common condition with symptoms present in about 33–50% of the adult population. The prevalence, however, ranges from 10 to 15% among the general population, with higher rates seen among divorced, separated, or widowed people, older ages, female gender, White population, and in the presence of co-morbid medical or psychiatric illness. About 30% of all adults complain of occasional insomnia and 10% of chronic insomnia, of whom 40% may have a psychiatric illness. Despite these high prevalence rates, evidence suggests that insomnia is mostly under-recognized, under-diagnosed, and under-treated, with the condition continuing to remain persistent in 50–85% of individuals over follow-up intervals of one to several years.

Chronic insomnia represents a more complex condition than acute transient insomnia. Patients with chronic insomnia usually have accompanying daytime impairment of cognition, mood, or performance that impacts not only the patient and his family, but also affects friends, co-workers, and caretakers. Insomnia patients are more likely to visit hospitals and physicians, have increased absenteeism, make errors or have accidents at work, and have more fatal road accidents. There is also an increased risk for depression, anxiety, substance use, suicide, and possible immune dysfunction. It is imperative that clinicians remain alert to these possible individual and societal risks during the evaluation.

Insomnia disorder is a condition characterised by both nocturnal and diurnal symptoms. It involves a predominant complaint of dissatisfaction with sleep quality or duration and is accompanied by difficulties in initiating sleep at bedtime, frequent or prolonged awakenings, or early-morning awakening with an inability to return to sleep. These difficulties occur despite adequate opportunity for sleep and are associated with clinically significant distress or impairment of daytime functioning including fatigue, decreased energy, mood disturbances and reduced cognitive functions, such as impaired attention, concentration and memory. Diagnosis of insomnia is made when sleep difficulties are present for ≥ 3 nights per week and last for > 3 months.

There is an important distinction between acute sleep disturbance, which is a ubiquitous and transient phenomenon characterised by insomnia symptoms that typically last a few days or weeks, and insomnia disorder, which tends to be persistent and often lasts months or years. Insomnia disorder and insomnia symptoms have different courses and trajectories, and the most reliable duration of symptoms for defining insomnia is 3 months.

The combination of the prevalence of insomnia with its effects on quality of life (QOL), occupational functioning and physical and psychological health means that the disorder inflicts a heavy burden on individuals and the broader community. However, owing to barriers relating to treatment and management, insomnia often remains unrecognised and untreated. This Primer summarises the current evidence on the epidemiology, aetiology and pathophysiology of insomnia, and addresses key issues relating to its assessment, diagnosis and treatment.

Epidemiology

The worldwide prevalence of insomnia symptoms is approximately 30–35%, and epidemiological studies from different countries yield similar prevalence estimates. By contrast, depending on the diagnostic criteria used, prevalence rates of insomnia disorder range from 3.9% to 22.1%, with an average of approximately 10% for multinational studies that used the *Diagnostic and Statistical Manual of Mental Disorders IV* (DSM IV) criteria. The 1-year incidence of insomnia varies between 7% and 15%. Although insomnia can be situational or recurrent, its course is often chronic with a median duration of 3 years and persistence rates ranging from 56% to 74% at 1 year^{17–19} and 46% at 3 years of follow-up assessment. One longitudinal study found a remission rate of only 56% across 10 years for individuals reporting severe insomnia symptoms.

Symptoms of Insomnia

- General tiredness
- Problems with concentration or memory
- Difficulty falling asleep at night
- Sleepiness during the day
- Waking up during the night
- Waking up too early
- Not feeling well-rested after a night's sleep
- Daytime tiredness or sleepiness
- Irritability, depression or anxiety
- Difficulty paying attention, focusing on tasks or remembering
- Increased errors or accidents
- Ongoing worries about sleep

Insomnia classification systems

Current diagnostic criteria reflect important changes that have been made in the latest versions of the *Diagnostic and Statistical Manual of Mental Disorders* (fifth edition) and the *International Classification of Sleep Disorders* (third edition). They include:

- Elimination of the distinction between ‘primary insomnia’ and ‘secondary insomnia’ (that is, insomnia related to another medical or psychiatric disorder). This reduces the need to make a causal attribution between insomnia and co-existing disorders, as there is limited understanding of mechanistic pathways in chronic insomnia and thus about the nature and directions of these associations. This change also acknowledges bidirectional or interactive effects between sleep disorders and co-existing medical or psychiatric disorders, and still requires specification of clinically relevant co-morbid conditions
- Deletion of ‘non-restorative sleep’ from the definition of insomnia, as this is not specific to insomnia and is often reported with several other sleep disorders
- Change in the definition of chronic insomnia to include a minimum frequency of 3 nights per week with insomnia and increased minimum duration threshold from 1 month to 3 months
- Addition of the construct of ‘sleep dissatisfaction’ to the definition of insomnia
- Specification of ‘early-morning awakening’ as a nocturnal insomnia symptoms.

Methods

Patients with insomnia and volunteers were enrolled from a neurology clinic. The participants underwent a series of examinations, including a clinical interview, laboratory blood tests, and neuropsychological assessment. Consent forms were signed by the participants before the study, and the study protocol was approved by the ethics committee. All participants underwent a complete physical and neurologic examination, standard laboratory tests, and an extensive battery of neuropsychological assessments, which included the Pittsburgh Sleep Quality Index, Insomnia Severity Index, Hamilton Anxiety Scale, Hamilton

Depression Rating Scale, Mini-Mental State Examination, Montreal Cognitive Assessment, and Clinical Dementia Rating. Patients with CID also underwent polysomnography.

Treatment

Drugs Used to Treat Insomnia

- **Antidepressants:** Some antidepressant drugs, such as Trazodone (Desyrel), are very good at treating sleeplessness and anxiety.
- **Benzodiazepines:** These older sleeping pills- Emazepam (Restoril), Triazolam (Halcion), and others may be useful when you want an insomnia medication that stays in the system longer.
- **Doxepin (Silenor):** This sleep drug is approved for use in people who have trouble staying asleep. Silenor may help with sleep maintenance by blocking histamine receptors. Do not take this drug unless you are able to get a full 7 or 8 hours of sleep.
- **Eszopiclone (Lunesta):** Lunesta also helps you fall asleep quickly, and studies show people sleep an average of 7 to 8 hours. Don't take Lunesta unless you are able to get a full night's sleep as it could cause grogginess. Because of the risk of impairment, the next day, the FDA recommends the starting dose of Lunesta be no more than 1 milligram.
- **Ramelteon (Rozerem):** This sleep medication works differently than the others. It works by targeting the sleep-wake cycle, not by depressing the central nervous system. It is prescribed for people who have trouble falling asleep. Rozerem can be prescribed for long-term use, and the drug has shown no evidence of abuse or dependence.
- **Suvorexant (Belsomra):** It works by blocking a hormone that promotes wakefulness and causes insomnia. It is approved by the FDA to treat people that have insomnia due to an inability to fall asleep or to stay asleep. The drug may cause you to feel sleepy the following day.
- **Zaleplon (Sonata):** Of all the newer sleeping pills, Sonata stays active in the body for the shortest amount of time. That means you can try to fall asleep on your own. Then, if you're still staring at the clock at 2 a.m., you can take it without feeling drowsy in the morning. But if you tend to wake during the night, this might not be the best choice for you.
- **Zolpidem (Ambien, Edluar):** These medicines work well at helping you get to sleep, but some people tend to wake up in the middle of the night. Zolpidem is now available in an extended release version, Ambien CR. This may help you go to sleep and stay asleep longer. The FDA warns that you should not drive or do anything that requires you to be alert the day after taking Ambien CR because it stays in the body a long time.
- **Over-the-counter sleep aids:** Most of these sleeping pills are anti-histamines. There is no proof that they work well for insomnia, and they can cause some drowsiness the next day. They're safe enough to be sold without a prescription. But if you're taking other drugs that also contain antihistamines like cold or allergy medications you could inadvertently take too much.

Psychological therapies

Psychological interventions for insomnia involve several distinct cognitive and behavioural therapies, hence the label cognitive-behavioural therapy. These interventions are aimed at changing sleep-scheduling behaviours and unhelpful beliefs and worries that are presumed to perpetuate insomnia. They can be used in isolation, but in clinical practice are commonly combined to address different contributing factors simultaneously.

Behavioural treatment methods include sleep restriction, stimulus control and relaxation therapies. Sleep restriction is designed to compress the sleep window as close as possible to the actual sleep time to strengthen the homeostatic sleep drive. This window is then gradually modified, usually on a weekly basis, contingent

upon sleep efficiency (the ratio of time spent asleep to time spent in bed), until an optimal sleep time is reached. This method is often combined with stimulus-control therapy, which involves a series of behavioural instructions designed to strengthen the association between the bedtime or bedroom environment and rapid sleep onset and also to establish a consistent sleep-wake schedule. These behavioural procedures are predicated on the observations that individuals with insomnia tend to spend too much time in bed, perhaps as a mechanism to cope with the disorder, and often come to associate their bedroom environment with performance anxiety and the frustration of being unable to sleep.

There are several relaxation-based interventions that can be used in isolation or in combination with sleep restriction and stimulus-control procedures. Some of these methods, such as progressive muscle relaxation, seek to reduce physical tension, whereas others focus on reducing intrusive thoughts and mental tension, such as imagery training. The selection of a particular relaxation method should be adapted to the specific needs of the individual, but daily practice over several weeks is often necessary to achieve benefits and, in most cases, professional guidance is initially needed to derive optimal therapeutic benefits.

Cognitive therapy seeks to alter misconceptions about sleep, unhelpful beliefs and negative thinking patterns such as worrying. This is usually accomplished through verbal interventions and behavioural experiments in which the patient is guided to test new hypotheses to challenge some unhelpful and ingrained beliefs and to reduce excessive worrying about sleep and the perceived impact of sleeplessness. This therapy is particularly helpful in alleviating the emotional distress and stopping the cycle of insomnia that often develops. CBT-I is a brief, sleep-focused and directive psychotherapeutic approach designed to guide patients to modify behavioural and thinking patterns that are presumed to perpetuate or exacerbate insomnia. CBT-I is typically carried out over four to six individual or group therapy sessions in which the therapist, who is a psychologist or other mental-health-trained clinician, provides guidance to change sleep habits, sleep schedules and thinking patterns. Keeping a daily sleep diary is also an essential element of CBT-I. Review of the literature

1. Evaluation of chronic insomnia. An American Academy of Sleep Medicine review.

Published By - Sateia MJ, Doghramji K, Hauri PJ, Morin CM - 2000

Insomnia is a condition which affects millions of individuals, giving rise to emotional distress, daytime fatigue, and loss of productivity. Despite its prevalence, it has received scant clinical attention. An adequate evaluation of persistent insomnia requires detailed historical information as well as medical, psychological and psychiatric assessment. Use of a classification system for sleep disorders and familiarity with major diagnostic groups will facilitate the clinician's evaluation and treatment. Thorough assessment also requires attention to the unique aspects of presentation and specific set of etiologies which are associated with particular age groups.

2. Symptom patterns in chronic sleep disorders.

Published By - Øyane N, van den Hoven AM, Fetveit A, Pallesen S, Bjorvatn B - 2009

Long sleep onset latency is most common in patients with insomnia, delayed sleep phase syndrome and restless legs while nightly awakenings are most common in patients with insomnia, restless legs and the sleep apnoea syndrome. Excessive daytime sleepiness is most pronounced in patients with hypersomnia, sleep apnoea syndrome and delayed sleep phase syndrome, whereas patients with insomnia rarely have this problem. Fatigue is a common feature of all sleep disorders, especially insomnia. The diagnosis of insomnia, circadian rhythm disturbances, restless legs and most parasomnias is mainly based on anamnestic data. Objective sleep recordings are necessary to diagnose sleep apnoea syndrome, hypersomnia and periodic leg movement during sleep.

3. Characteristics of insomnia in the United States: results of the 1991 National Sleep Foundation Survey - I.

Published By - Ancoli-Israel S, Roth T - 1999

The National Sleep Foundation in conjunction with the Gallup Organisation conducted telephone interviews with a sample of Americans (N = 1000) to examine the prevalence and nature of difficulty with sleep. Consistent with other national studies, about one-third of Americans reported some type of sleep problem. Approximately one in four reported occasional insomnia while 9% reported that their sleep difficulty occurred on a regular nightly basis. The problem most frequently reported by insomniacs was waking up in the morning feeling drowsy or tired, followed by waking up in the middle of the night, difficulty going back to sleep after waking up and difficulty falling asleep initially. Importantly, insomniacs rarely visited a physician to discuss their sleep problem and four out of ten insomniacs self-medicated with either over-the-counter medications or with alcohol. Two-thirds of the insomniacs reported that they did not have an understanding of available treatments for insomnia.

4. Prevalence of DSM-IV diagnostic criteria of insomnia: Distinguishing insomnia related to mental disorders from sleep disorders.

Published By - Maurice M. Ohayon - 1997

Epidemiological studies of insomnia in the general population have reported high prevalence rates. However, few have applied diagnostic criteria from existing classification systems. Consequently, it is not possible to determine whether subjects suffered from a sleep disorder or whether the insomnia constituted a symptom of a mental disorder. Insomnia and its relationship with other mental disorders was investigated in the general population using DSM-IV criteria. A representative sample of 5622 subjects from the French population were interviewed about their sleep habits over the telephone by lay interviewers. The course and content of interviews were customised by means of the Sleep-Eval knowledge-based system. A total of 18.6% of the sample reported insomnia complaints. The presence of insomnia complaints, lasting for at least one month with daytime repercussions was found for 12.7% of the sample. Subsequently, subjects were classified according to the Sleep Disorder decision-making process proposed by the DSM-IV classification, but without the recourse of polysomnographic recordings. Specific sleep disorder diagnoses were given for 5.6% of the sample, mostly as insomnia related to another mental disorder; primary insomnia was given for 1.3% of the sample. Primary mental disorder diagnoses were supplied for 8.4% of the sample, mostly as generalised anxiety disorder. The results of this investigation emphasise the need to use classifications to determine whether subjects with insomnia complaints suffer from a sleep disorder or whether insomnia constitutes a symptom of some other mental disorder. These distinctions are of utmost importance as they have a bearing on the choice of treatment. Conversely, diagnoses were obtained by lay interviews, which may have caused a lack of recognition and/or discrimination for light or borderline symptomatology.

5. Clinical Correlates of Insomnia in Patients with Chronic Illness. Published By - David A. Katz, MD, MSc; Colleen A. McHorney, PhD - 1998

Results: Sixteen percent of study patients had severe and 34% had mild insomnia at baseline. At 2-year follow-up, 59% (95% confidence interval, 55%- 63%) of patients with mild insomnia and 83% (95% confidence interval, 78%- 88%) of patients with severe insomnia at baseline still had sleep problems. Odds ratios corresponding to mild and severe insomnia for key risk factors were as follows: current depressive disorder, 2.6 and 8.2; subthreshold depression, 2.2 and 3.4; congestive heart failure, 1.6 and 2.5; obstructive airway disease, 1.6 and 1.5; back problems, 1.4 and 1.5; hip impairment, 2.2 and 2.7; and prostate problems, 1.6 and 1.4. The majority of insomnia-comorbidity associations observed at baseline persisted at 2-year follow-up.

Conclusions: Patients with insomnia require follow-up, as the majority continue to be bothered by difficulty

initiating and maintaining sleep. In addition to detecting affective disorders in patients with insomnia, clinicians should focus on medical conditions that disturb sleep, especially cardiopulmonary disease, painful musculoskeletal conditions, and prostate problems.

**6. A psychiatric perspective on insomnia. *The Journal of Clinical Psychiatry*.
Published By - McCall, W. Vaughn - 2001**

Notes that insomnia is a cardinal symptom for many psychiatric disorders, especially depressive disorders. This article suggests an evaluation and management strategy for insomnia in psychiatric practice, including transient insomnia, persistent insomnia in the untreated patient, and persistent insomnia in the otherwise successfully treated psychiatric patient.

**7. Daytime consequences and correlates of insomnia in the United States: Results of the 1991 National Sleep Foundation Survey - II.
Published By - Roth, Thomas Ancoli-Israel, Sonia - 1999**

The daytime consequences and correlates of insomnia were examined in the National Sleep Foundation and the Gallup Organisation survey of 1,000 randomly selected Americans (aged 18 yrs and older). Respondents were grouped as having occasional insomnia, chronic insomnia or no insomnia. There were dramatic differences in reported waking behaviors and psychosocial measures by insomniacs compared to those who do not report sleep difficulty. These problems include impaired concentration, impaired memory, decreased ability to accomplish daily tasks and decreased enjoyment of interpersonal relationships. Importantly, most of these variables showed an increasing degree of impairment with greater frequency of sleep disturbance. These findings suggest that insomnia negatively impacts aspects of waking function related to quality of life.

8. Diagnosis and Treatment of Chronic Insomnia: A Review Published By - Ruth M. Benca, M.D., Ph.D. - 2005

RESULTS: Evidence from epidemiologic studies, physician surveys, and clinical studies suggests that numerous patient and physician factors contribute to the fact that the needs of patients with insomnia remain unmet, including low reporting of insomnia by patients, limited physician training, and office-based time constraints, as well as misconceptions about the seriousness of insomnia, the advantages of treatment, and the risks associated with hypnotic use. Nonpharmacologic therapies produce long-lasting and reliable changes among people with chronic insomnia and have minimal side effects. Pharmacologic therapies have proven effective with improving wake time after sleep onset and sleep maintenance and reducing the number of night-time awakenings. However, pharmacologic therapy has a greater chance of producing side effects. No conclusive evidence exists to favor either pharmacologic therapy or behavioural therapy.

CONCLUSIONS: Insomnia is particularly challenging for clinicians because of the lack of guidelines and the small number of studies conducted in patient populations with behavioural and pharmacologic therapies. Current treatment options do not address the needs of difficult-to-treat patients with chronic insomnia, such as the elderly, and those with comorbid medical and psychiatric conditions. More research is necessary to determine the long-term effects of insomnia treatments.

9. Practice Parameters for the Nonpharmacologic Treatment of Chronic Insomnia. *An American Academy of Sleep Medicine report. Standards of Practice Committee of the American Academy of Sleep Medicine.*

Published By - Chesson AL, Jr, Anderson WM, Littner M, Davila D, Hartse K, Johnson S, et al. - 1999

Insomnia is the most common sleep complaint reported to physicians. Treatment has traditionally involved medication. Behavioural approaches have been available for decades, but lack of physician awareness and training, difficulty in obtaining reimbursements, and questions about efficacy have limited their use. These practice parameters review the current evidence with regards to a variety of nonpharmacologic treatments for insomnia. Using a companion paper which provides a background review, the available literature was analysed. The evidence was graded by previously reported criteria of the American Academy of Sleep Medicine with references to American Psychological Association criteria. Treatments considered include: stimulus control, progressive muscle relaxation, paradoxical intention, biofeedback, sleep restriction, multicomponent cognitive behavioural therapy, sleep hygiene education, imagery training, and cognitive therapy.

10. An evaluation of behavioural treatments for insomnia in the older adult.

- Case Studies

Published By - Mindy Engle-Friedman, Richard R. Bootzin, Lisa Hazlewood, Carol Tsao - 1992

Behavioural treatments were evaluated for their effect on the subjective and objective sleep of older adult insomniacs ($N = 53$) aged 47 to 76 years. Conditions were support and sleep hygiene, support and sleep hygiene plus progressive relaxation, support and sleep hygiene plus stimulus control, or a measurement control group. The results indicated that all groups, including the measurement control group, were effective in improving the sleep diary, assessing awakenings, naptime, and feeling refreshed upon awakening. Subjects at 3 weeks felt less depressed and felt that they had more control over their sleep. Stimulus control was most effective in improving sleep at the post therapy period. A 2-year follow-up showed that the stimulus control subjects most frequently used the treatment instructions and had shorter sleep latencies and highest sleep quality. Behavioural treatments were found to be effective in improving the perception of sleep among older adult insomniacs.

11. An efficacy, safety, and dose–response study of Ramelteon in patients with chronic primary insomnia.

Published By - Erman M, Seiden D, Zammit G, Sainati S, Zhang J - 2006

Results: All tested doses of ramelteon resulted in statistically significant reductions in latency to persistent sleep (LPS) and increases in total sleep time (TST). No next-day residual effects were apparent at any dose, as compared with placebo. There were no differences in the number or type of adverse events between any active treatment and placebo group. The most commonly reported adverse events were headache, somnolence, and sore throat.

Conclusions: Ramelteon demonstrated a statistically significant reduction in LPS and a statistically significant increase in TST, with no apparent next-day residual effects, in patients with chronic primary insomnia.

12. Valerian for Sleep: A Systematic Review and Meta-Analysis.

Published By - Bent S, Padula A, Moore D, Patterson M, Mehling W - 2006

Insomnia affects approximately one-third of the adult population and contributes to increased rates of absenteeism, health care use, and social disability. Extracts of the roots of valerian (*Valeriana officinalis*) are widely used for inducing sleep and improving sleep quality. A systematic review of randomized, placebo-controlled trials of valerian for improving sleep quality is presented. An extensive literature search identified 16 eligible studies examining a total of 1093 patients. Most studies had significant methodologic problems, and the valerian doses, preparations, and length of treatment varied considerably. A dichotomous outcome of sleep quality (improved or not) was reported by 6 studies and showed a statistically significant benefit (relative risk of improved sleep = 1.8, 95% confidence interval, 1.2-2.9), but there was evidence of publication bias in this summary measure. The available evidence suggests that valerian might improve sleep quality without producing side effects. Future studies should assess a range of doses of standardized preparations of valerian and include standard measures of sleep quality and safety.

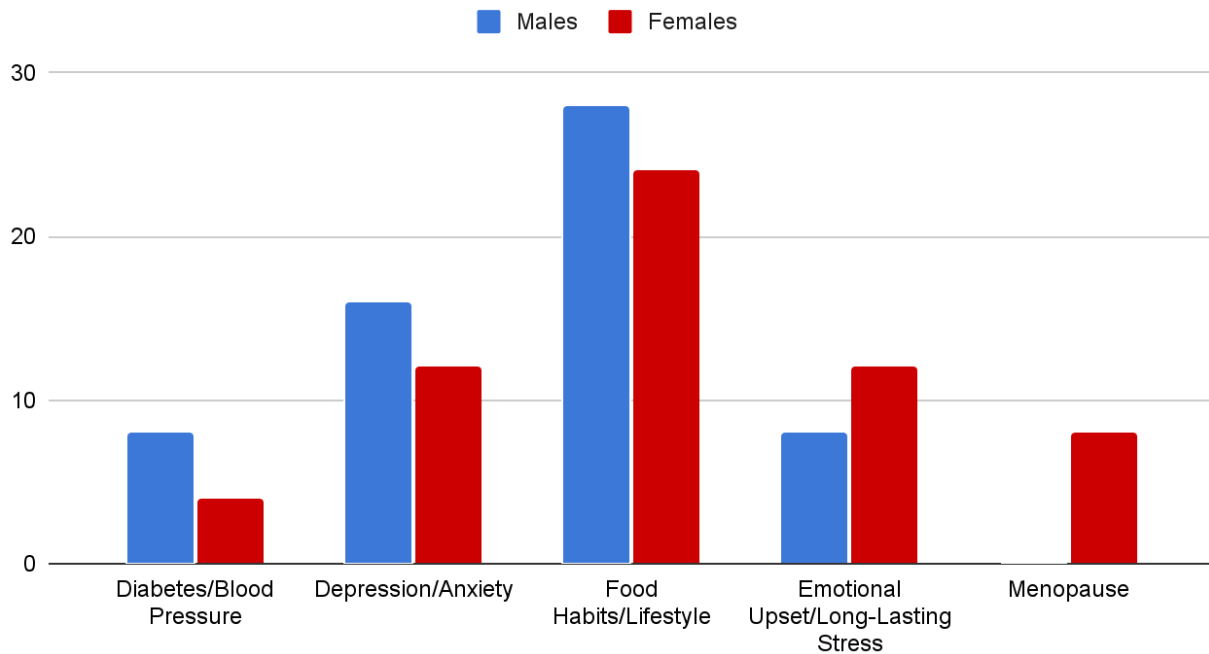
Research Methodology

- ❖ **Research method :** The *Descriptive Research Method* will be used for this research specially to describe the Insomnia and other facts of the disorder. As well as the vitalness of the disorder among people.
- ❖ **Data collection method :** Structured close-ended questionnaire (Google form).
- ❖ **Sample size :** This research study is to be conducted on the sample size of 120 people who have symptoms of insomnia. Where the ratio of male and female has been tried to be maintained.
- ❖ **Sampling method :** For this research study, Convenience Sampling Process is being used.
- ❖ **Objectives :**
 - To study the primary and the secondary causes of Insomnia.
 - To analyse and observe the symptoms of Insomnia.
 - To understand the key factors which affect the social, personal and physical life of an Insomniac.
 - To find out the most effective treatment and therapy for the disorder.
- ❖ **Data analysis :** Statistical distribution and percentage.

Result and Discussion

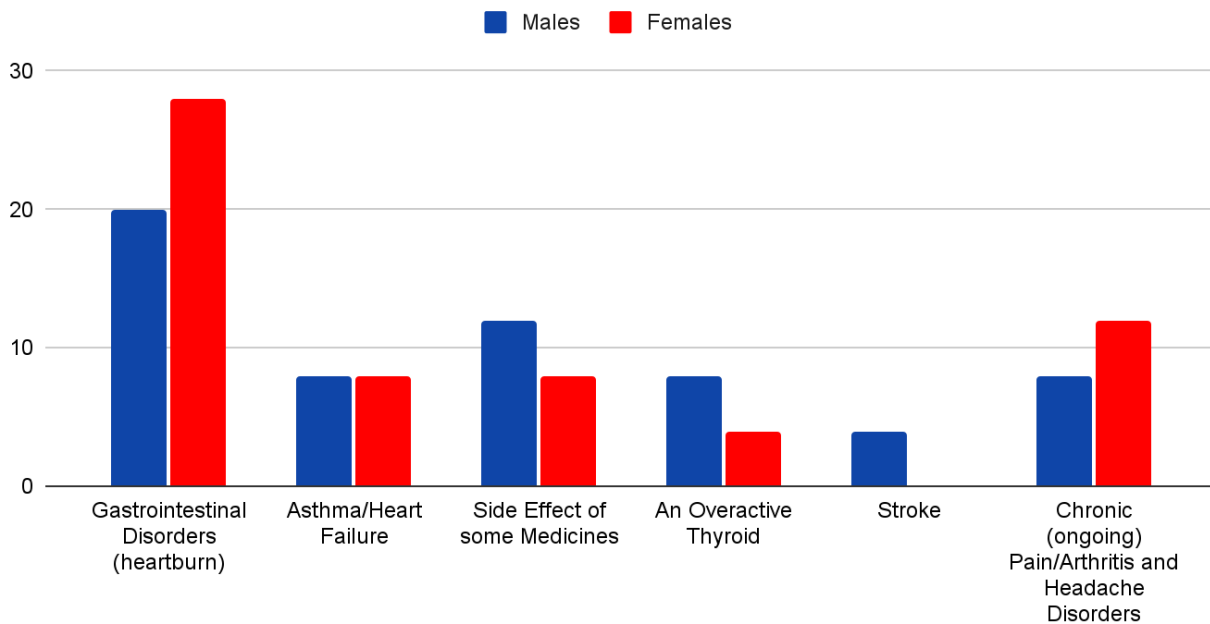
Objective - 1: To study the primary and the secondary causes of Insomnia.

Primary Causes According to Sample Cases



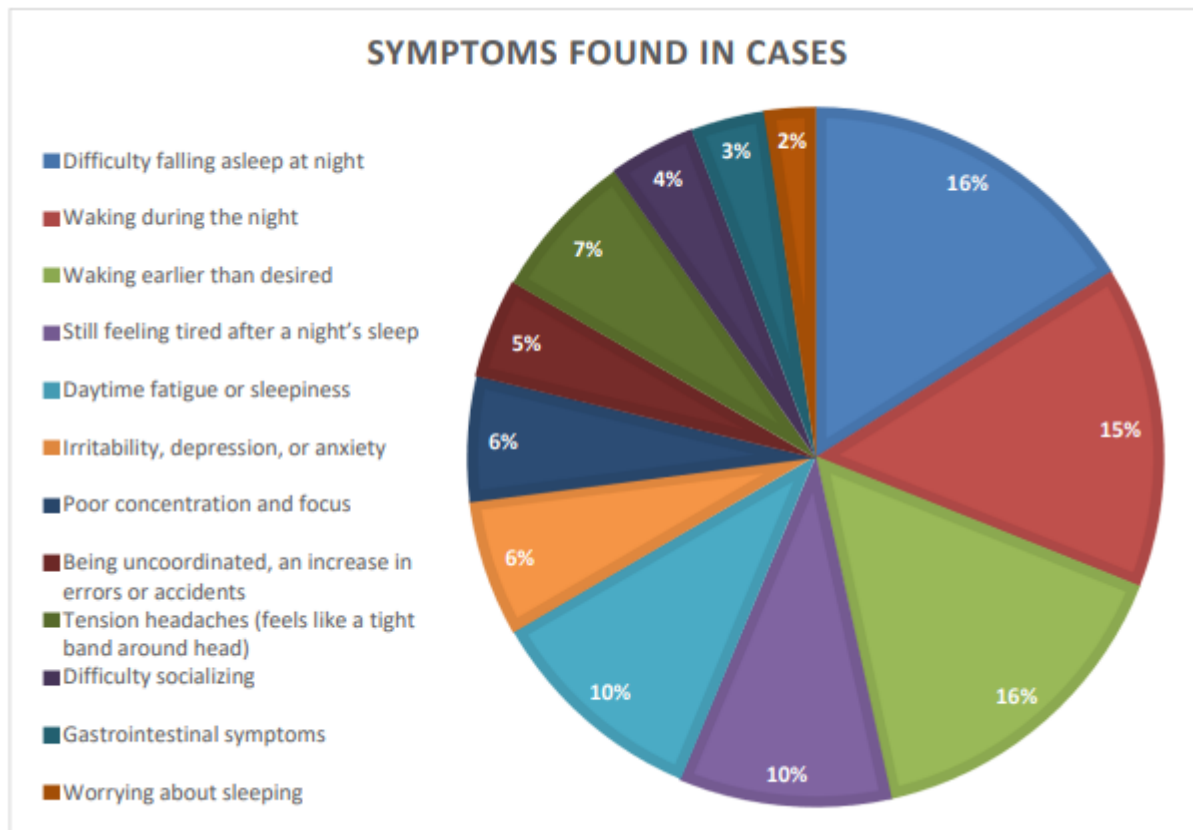
Interpretation: Food habits & lifestyles are the most basic reasons causing Insomnia as **28 males & 24 females** have the disorder due to this primary factor. Secondly, psychological comorbidity - Depression & Anxiety are another primary reason for Insomnia as **16 males & 12 females** found this a primary causing factor. Emotional Upset & Long - Lasting Stress is a 3rd most opted primary cause of Insomnia as **8 males & 12 females** opted for this. The least affecting cause is medical comorbidity such as diabetes & blood pressure as **8 males & 4 females** have this as a primary cause. Menopause is another effective primary cause for Insomnia in females as **8 females** have Insomnia due to this reason.

Secondary Causes According to Sample Cases



Interpretation: Gastrointestinal Disorders (Heartburn) is found to be the major secondary cause for Insomnia where females suffer this issue more than males. Where **28 females & 20 males** have this as a secondary cause. Side effects of some medicines such as theophylline (for asthma), and some allergy and cold medicines can cause insomnia. Beta blockers also can cause the condition. Where **8 females & 12 males** have this secondary cause. Chronic pain (such as back-pain) is also responsible for Insomnia as **12 females & 8 males** have this secondary cause. Asthma & Heart Failure are also causing Insomnia as a secondary factor as **8 females & 8 males** have this secondary cause. An Overactive Thyroid is also responsible for Insomnia as **4 females & 8 males** have this secondary cause. Stroke is the least effective secondary cause as only **4 males** have this factor as secondary cause for Insomnia.

Objective - 2: To analyse and observe the symptoms of Insomnia.



Interpretation: We cannot collect the data in categories of male & female as all the cases have multiple symptoms. So here we've analysed which symptoms are the most common in all the cases. *Difficulty falling asleep at night & Waking earlier than desired* are the most commonly found symptoms as respectively 112 & 108 patients reported these symptoms. Where *Gastrointestinal symptoms & Worrying about sleeping* have least weightage in the diagram as respectively 24 & 16 patients reported them.

Objective - 3: To understand the key factors which affect the social, personal and physical life of an Insomniac.

Insomnia is difficult on its own, but it may also cause other issues, both psychological and physical. Many people with insomnia feel more refreshed when they get proper treatment and finally begin to sleep well again. Chronic insomnia (difficulty sleeping for three months or longer) may also lead to changes in mood, lack of motivation and energy, irritability, and more. Difficulty in socialising is also found in this study. When you're drowsy, it may make you feel tense and preoccupied, and the worry over your inability to sleep can add to this. For those who take care of small children or have a lot of family and work responsibilities to balance, insomnia can make these tasks feel even more overwhelming when you are tired.

- **Increased risk for medical conditions**

These include:

- stroke
- asthma attacks
- seizures
- weak immune system
- sensitivity to pain
- Inflammation
- obesity
- diabetes mellitus
- high blood pressure
- heart disease

- **Increased risk for mental health disorders**

These include:

- depression
- anxiety
- confusion and frustration

- **Increased risk for accidents**

Insomnia can affect your:

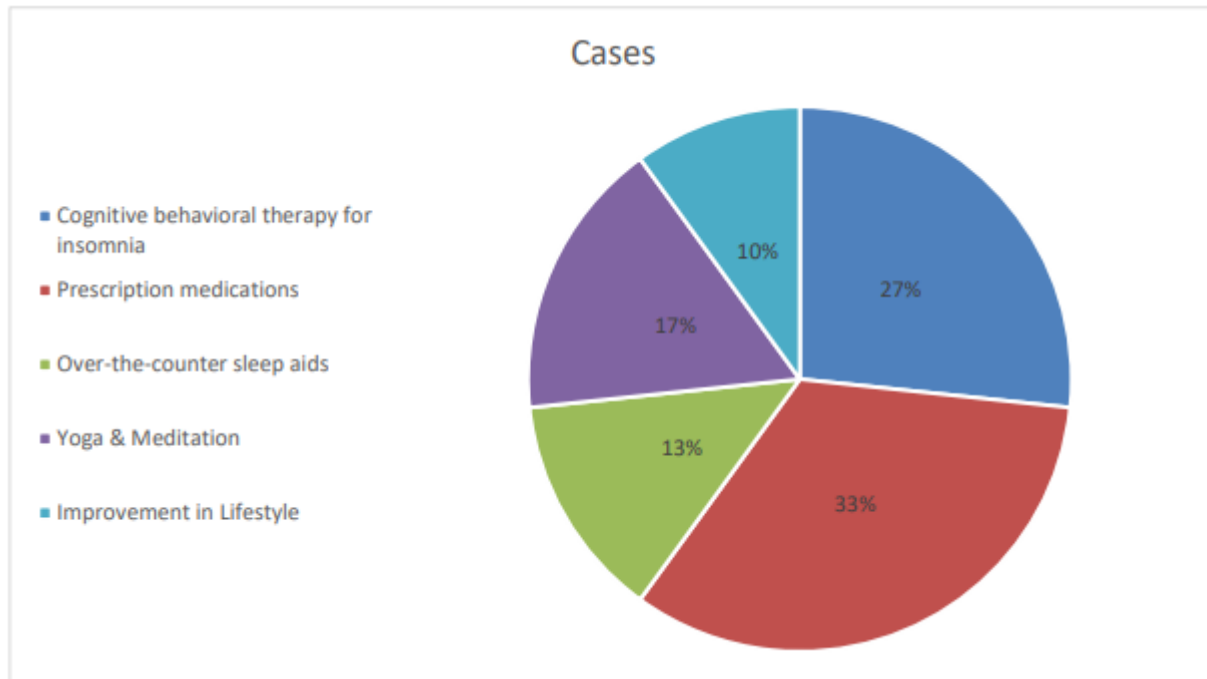
- performance at work or school
- sex drive
- memory
- judgement

The immediate concern is daytime sleepiness. A lack of energy can cause feelings of anxiety, depression, or irritation. Not only can it affect your performance at work or school, but too little sleep may also increase your risk for car accidents.

- **Shortened life expectancy**

Having insomnia can shorten your life expectancy. An analysis of 16 studies that covered over 1 million participants and 112,566 deaths looked at the correlation between sleep duration and mortality. They found that sleeping less increased risk for death by 12 percent, compared to those who slept seven to eight hours per night.

Objective - 4: To find out the most effective treatment and therapy for the disorder.



Interpretation: Cognitive behavioural therapy for insomnia (CBT-I) and Prescribed Medication are the most effective treatments for Insomnia. As **32 cases** are treated with CBT-I and **40 cases** are treated with prescribed medication. In this modern era Yoga & Meditation have a large impact on society. Which also helps in Insomnia treatment as **20 cases** are treated from the same.

Over-the-counter sleep aids - Non-prescription sleep medications contain antihistamines that can make you drowsy, but they're not intended for regular use. Talk to your doctor before you take these, as antihistamines may cause side effects, such as daytime sleepiness, dizziness, confusion, cognitive decline and difficulty urinating, which may be worse in older adults.

This is also a very useful Insomnia treatment as **16 cases** are treated with this method.

Where improvement in lifestyle is also a great method to cure/treat Insomnia as **12 cases** are treated with the same.

Conclusion

- It is found that there is no sign of more risk in any of the genders.
- We can also see that the symptoms are so vast and common that 4-5 symptoms can easily be found in each insomniac.
- This report also proves that CBT-I and Prescription medications are the best method to treat insomnia.
- But new methods such as Yoga & Meditation are also beneficial.
- Comorbidity is also very normal in insomnia.
- Depression and Anxiety are common causes for insomnia but it can also be seen vice-versa.
- Insomnia can cause depression & anxiety in the patient as its aftereffects.

- Insomnia also causes various behavioural, emotional and psychological changes such as irritation.
- This research also shows that insomnia is not just a sleep disorder. And it causes various side/after effects.

Delimitations

- First of all, the research is limited to the sample size. As the sample size is very small and limited to 120 cases.
- The assumptions of this research cannot apply to the whole population.
- This research does not include each and every factor related to insomnia. As various researches conducted on a daily basis and area of psychology is very vast and complicated.
- Various treatment methods such as **Insomnia Treatment with Melatonin Rich Milk**, because it's not popular in India.
- This report contains most of the important review of literature but many other important literatures are not covered in this report due to time limitation.

References (APA style)

Books

- *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*

Journal Article

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