The Hidden Risks of Sleeping Pills in India: A Study in Saharanpur

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Abstract
Sleep disorders, especially insomnia, are increasingly common due to rapid lifestyle changes, stress, irregular routines, and excessive use of electronic devices. The present study aimed to assess the usage pattern, awareness, and health risks associated with sleeping pills among individuals in Saharanpur, Uttar Pradesh. The study utilized both primary and secondary data collected through a structured questionnaire involving 50 respondents and an extended analysis of 100 respondents. Results revealed a high prevalence of inadequate sleep, along with significant use of sleeping pills without proper medical supervision. Commonly reported side effects included daytime drowsiness, headache, dizziness, and early signs of dependency. A considerable proportion of respondents showed limited awareness regarding the risks of long-term use of sedative medications. The study concludes that although sleeping pills offer short-term relief, their misuse may lead to serious health complications. Strengthening public awareness and promoting safe sleep practices are essential to reduce dependency and improve sleep health outcomes.

Keywords: Insomnia, Sleeping pills, Zolpidem, Sleep deprivation, Drug dependency, Public Awareness, Saharanpur

1. Introduction

Sleep is a vital biological process essential for maintaining physical, psychological, and emotional health. Adequate sleep plays an important role in tissue repair, hormonal regulation, immune function, cognitive performance, memory consolidation, and emotional stability (Guyton & Hall, 2016; Kryger et al., 2017; WHO, 2022). Healthy sleep is also necessary for maintaining concentration, productivity, metabolic balance, and overall quality of life. However, rapid urbanization, changing lifestyles, occupational stress, academic pressure, irregular work schedules, and excessive use of smartphones and electronic devices have significantly increased the prevalence of sleep disorders worldwide (National Sleep Foundation, 2021; CDC, 2021; WHO, 2022; Gupta et al., 2020).
Among various sleep disorders, insomnia is one of the most common conditions affecting millions of people globally. It is characterized by difficulty in initiating sleep, maintaining sleep, or obtaining restorative sleep despite adequate opportunity for rest (APA, 2013). Chronic insomnia negatively affects physical health, cognitive function, emotional stability, and social well-being (AASM, 2020). Individuals suffering from insomnia commonly experience fatigue, anxiety, depression, daytime drowsiness, poor concentration, irritability, and reduced quality of life (Buysse, 2013; Kryger et al., 2017; Morin & Benca, 2012). Studies further indicate that prolonged sleep deprivation

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increases the risk of obesity, hypertension, diabetes mellitus, cardiovascular diseases, weakened immunity, and mental health disorders (Cappuccio et al., 2010; WHO, 2022; Sharma & Gupta, 2019).

To manage sleep-related problems, many individuals rely on sleeping pills such as Zolpidem, benzodiazepines, and other sedative-hypnotic medications. These drugs act on the central nervous system by suppressing brain activity and inducing sedation (Rang et al., 2015). Although effective for short-term management of insomnia, prolonged or unsupervised use may lead to dependency, tolerance, dizziness, cognitive dysfunction, memory impairment, abnormal sleep behavior, and reduced natural sleep quality (Holbrook et al., 2000; Glass et al., 2005; Kripke, 2016; AASM, 2020). Research has also shown that long-term use of sleeping medications may contribute to withdrawal symptoms and psychological dependence, making natural sleep increasingly difficult without medication support (Morin & Benca, 2012).

In developing countries such as India, self-medication and unsupervised use of sleeping pills are becoming increasingly common, particularly among students, working professionals, and elderly populations facing stress and sleep disturbances (WHO, 2022; Gupta et al., 2020). Lifestyle-related factors including excessive screen time, caffeine intake, smoking, alcohol consumption, reduced physical activity, and mental stress further disturb circadian rhythm and negatively affect sleep quality (Hershner & Chervin, 2014; National Sleep Foundation, 2021). The growing prevalence of insomnia and sleeping pill dependency has therefore emerged as an important public health concern in India, especially among urban and semi-urban populations (ICMR, 2022; Sharma & Gupta, 2019).

2. Methodology

2.1 Study Area

The present study was conducted in selected urban and semi-urban localities of Saharanpur district, Uttar Pradesh, India. The area was selected due to increasing urbanization, lifestyle transitions, and rising prevalence of sleep-related disorders in similar Indian settings (Sharma & Gupta, 2019; ICMR, 2022).

2.2 Data Collection

Both primary and secondary data sources were used to ensure a comprehensive and reliable analysis.

a. Primary Data: Collected through a structured questionnaire and direct interaction with respondents to assess sleep patterns, sleeping pill usage, awareness levels, and related health effects. Survey-based methods are widely used in epidemiological and public health research to evaluate behavioral and lifestyle-related variables (Kothari, 2014).

b. Secondary Data: Obtained from textbooks, peer-reviewed journals, WHO reports, CDC publications, and authentic online health databases related to sleep disorders and pharmacological treatments (WHO, 2022; CDC, 2021; Kryger et al., 2017).

2.3 Sample Size

The study included both primary and extended datasets for comparative evaluation; primary survey: 50 respondents and extended analysis: 100 respondents

The respondents included students, working professionals, adults, and elderly individuals representing different socioeconomic and age groups, as recommended in community-based health studies for better variability and representation (Creswell, 2014).

2.4 Sampling Technique

A simple random sampling technique was adopted to minimize selection bias and ensure equal probability of selection among respondents. This method is commonly used in quantitative research to improve validity and reliability of findings (Kothari, 2014).

2.5 Tools and Techniques of Analysis

The collected data were analyzed using: Percentage method for quantitative representation of responses, Comparative analysis between 50 and 100 respondent datasets and Descriptive statistical interpretation for identifying patterns and trends

Such statistical tools are widely applied in public health and epidemiological research for behavioral assessment studies (Gordis, 2014; WHO, 2022).

3. Results

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The present study reveals a significant burden of sleep-related disturbances among respondents in Saharanpur, with a clear pattern of insufficient sleep, sleeping pill usage, and limited awareness regarding their effects.

Table 1: Sleep Duration Pattern (n = 100)

Sleep Duration	Number of Respondents	Percentage (%)
< 5 hours	25	25%
5–6 hours	35	35%
6–7 hours	30	30%
> 7 hours	10	10%

The data indicate that a majority of respondents are experiencing inadequate sleep; 25% of respondents sleep less than 5 hours, which reflects severe sleep deprivation. 35% sleep 5–6 hours, also below the recommended healthy duration. 30% sleep 6–7 hours, which is borderline adequate. Only 10% achieve more than 7 hours, considered optimal for adult health.

Table 2: Sleeping Pill Usage Pattern (n = 100)

Usage Pattern	Number of Respondents	Percentage (%)
Regular use	15	15%
Occasional use	25	25%
No usage	60	60%

The results show moderate dependence on sleeping medications; 15% use sleeping pills regularly, suggesting possible dependency risk. 25% use them occasionally, indicating intermittent reliance. 60% do not use sleeping pills, showing that most respondents still rely on non-pharmacological coping methods.

Table 3: Awareness Level about Sleeping Pills (n = 100)

Awareness Level	Number of Respondents	Percentage (%)
Fully aware	40	40%
Partially aware	30	30%
Unaware	30	30%

Awareness regarding sleeping pills is moderate but insufficient; Only 40% are fully aware of their effects and risks. 30% are partially aware, indicating incomplete understanding. 30% are completely unaware, which is concerning.

Table 4: Reported Side Effects (Among Users, n = 100)

Side Effect	Percentage (%)
Headache	20%
Dizziness	18%
Daytime drowsiness	30%
Dependency symptoms	12%
No side effects	20%

Among those using sleeping pills, various side effects were reported; Daytime drowsiness (30%) was the most common complaint, affecting daily functioning. Headache (20%) and dizziness (18%) were also frequently reported. Dependency symptoms (12%) indicate early signs of possible medication dependence. 20% reported no side effects, which may reflect short-term or controlled usage.

4. Discussions

The present study highlights a considerable burden of sleep deprivation, irregular sleep patterns, and sleeping pill usage among respondents in Saharanpur, Uttar Pradesh. These findings are consistent with global evidence indicating a rising prevalence of sleep disorders due to lifestyle transitions, psychological stress, and increased digital exposure (WHO, 2022; CDC, 2021; National Sleep Foundation, 2021). A large proportion

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of respondents reported insufficient sleep, with 25% sleeping less than 5 hours and 35% sleeping 5–6 hours (**Table 1**), reflecting a clear deviation from the recommended 7–9 hours for adults. Similar patterns have been reported in urban Indian populations, where occupational stress, academic pressure, and screen exposure significantly reduce sleep duration (Hershner & Chervin, 2014; Gupta et al., 2020). Excessive smartphone use and nighttime screen exposure further disrupt circadian rhythm by suppressing melatonin secretion, leading to delayed sleep onset and poor sleep quality (Chang et al., 2015; National Sleep Foundation, 2021). Chronic stress and irregular schedules are also well-established contributors to insomnia and disturbed sleep architecture (Morin & Benca, 2012; Kryger et al., 2017).

The study also indicates moderate reliance on sleeping pills, with 15% regular users and 25% occasional users (**Table 2**), reflecting a concerning trend toward pharmacological sleep management. Similar increases in sedative-hypnotic use have been documented globally, particularly among individuals experiencing stress-related insomnia (Glass et al., 2005; Kripke, 2016). Although benzodiazepines and Z-drugs are effective for short-term relief, long-term use is associated with tolerance, dependence, withdrawal symptoms, and impaired sleep quality (Holbrook et al., 2000; AASM, 2020). WHO (2022) further notes that self-medication practices in low- and middle-income countries contribute to unsupervised and prolonged use of such drugs, increasing dependency risk.

Awareness regarding sleeping pills was found to be insufficient, as only 40% of respondents were fully aware of their effects, while the remaining 60% had partial or no awareness (**Table 3**). Similar findings have been reported in community-based studies where poor knowledge contributes to misuse and dependency (Sharma & Gupta, 2019; Gupta et al., 2020). The American Academy of Sleep Medicine emphasizes that patient education and behavioral therapies such as CBT-I should be the first line of treatment for insomnia, rather than prolonged pharmacological use (Morin et al., 2006; AASM, 2020). Lack of proper counseling and easy access to sedatives may further worsen inappropriate usage patterns in community settings (ICMR, 2022).

Among users, the most commonly reported side effect was daytime drowsiness (30%), followed by headache (20%) and dizziness (18%), consistent with known adverse effects of sedative-hypnotics on cognition, alertness, and daily functioning (**Table 4**). Dependency symptoms reported by 12% of users suggest early signs of psychological or physiological dependence, which is a recognized risk of long-term benzodiazepine use (Holbrook et al., 2000; AASM, 2020). These effects can significantly impair productivity, academic performance, and increase the risk of accidents due to reduced alertness (CDC, 2021; WHO, 2022). Overall, the findings indicate that sleep disturbances and sleeping pill usage represent an emerging public health concern in semi-urban populations, driven by lifestyle factors, stress, and limited awareness. Strengthening sleep hygiene education, promoting stress management, and encouraging non-pharmacological interventions such as CBT-I are essential to reduce dependence on sedative medications and improve sleep health outcomes (WHO, 2022; CDC, 2021).

5. Conclusion

The present study demonstrates that sleep-related disturbances are highly prevalent among respondents in Saharanpur, with a majority experiencing insufficient sleep due to lifestyle factors, stress, and irregular routines. A notable proportion of individuals reported the use of sleeping pills, indicating a growing reliance on pharmacological methods for sleep management. However, limited awareness regarding the effects and risks of these medications was observed among respondents, which increases the likelihood of misuse and dependency. The study also identified common side effects such as daytime drowsiness, headache, dizziness, and early signs of dependence among users, highlighting potential health and safety concerns.

6. Authors' Contributions

Ms. Shahmeen conducted the study and drafted the manuscript. Dr. Mamta Chaudhary supervised and edited the work. Dr. Surendra Kumar and Namitosh Tyagi assisted in data and literature support. Dr. Pradeep Kumar correspondencing author and provided overall guidance. All authors approved the final manuscript.

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