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A Cross Sectional Survey on Estimating the Prevalence of Insomnia Attributable to Smartphone Addiction among Homoeopathic Students of MNR Homoeopathic Medical College

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Abstract:- Nowadays smart phone addiction is one of the over ridding cause of insomnia among youngsters. It is described that smart phone use in bed at night negatively impacts sleep outcome and even cause psychological problem like anxiety and depression. In this scenario this study was conducted to find the prevalence of insomnia as a consequence of smart phone addiction among Homeopathic students of MNR Homeopathic medical college of Sangareddy district. Telangana.

Using a purposive sampling method an online survey using self administered questionnaire was sent to students of MNR Homeopathic medical college, Sangareddy. They were asked to fill the questionnaire via Google forms. The statistical score for the responses were calculated and analysis was performed.

In this study overall 64.2% of the study participants are having Mobile addiction and 44.3% of students with mobile addiction are having insomnia. Over use of smart phones will overshadow students academics and will also result in poor health. Certain measures need to be taken to prevail over this addiction.

Keywords:- *Sleep, Symptoms, Study, Mobile phone.*

I. INTRODUCTION

Insomnia is defined as trouble in initiating or maintaining sleep. It is most common sleep disorder. Diagnostic and Statistical Manual of Mental Disorders – defines Insomnia as discontent with sleep quantity or quality associated with one or more following symptoms(1).

- Difficulty in initiating sleep
- Trouble in maintaining sleep with frequent awakening
- Early morning awakening with inability to return to sleep.

This condition can be short term as

- Acute insomnia-It can lasts for one night to few weeks (or) lasts for long time
- Chronic insomnia- It can lasts for 3 nights a week for 3 months or more.(2)

Sleep onset Insomnia can be relatively common complaint among adolescents.(3).Insomnia affects the one – third of adults around and approximately 10% on a clinically significant base. It is more common in females, the elderly ,and there with medical or psychiatric comorbities.(4).

Some 30 to 74 % of patients with other and stage conditions, including AIDS, Heart diseases, COPD and Renal diseases experience insomnia. Patient with cancer may have changes in sleep efficiency . other etiologies of insomnia are co-existing physical illness such as thyroid disease and co-existing psychological illness such as depression ,and anxiety and some medications.(5)

Mohammed N. Khan mentioned in his study titled Mobile Devices and Insomnia: Understanding Risks and Benefits that Insomnia can result in low energy levels ,mood swings, poor quality of life and work performance and feeling un refreshed upon awakening .Three main factors regulating sleep are homoeostatic factor –(level of sleep depth, duration of prior sleep, wakefulness) endogenous circadian factor and behavioural factor .Excessive usage of mobile may influence the behavioral factors.(6)

In the last decennium, there is an improvement in science and technology in worldwide , one such technology is smart phone. A smart phone is useful tool in access the internet, social network. The highest smart phone users in age between 18 to 29 with 83 percentage.(7)

A study conducted by Tamura, Tomoko on association between excessive use of mobile and insomnia among Japanese adolescents , concludes that long hours of mobile phone use was associated with insomnia, particularly in students using mobile phones per 5 hrs or more a day(8).

Excessive use of mobile at night time or bed time can change the sleeping time and shortens the sleeping time. The mobile phone has emitted the electromagnetic field (EMF) which influence melatonin .it is hormone produced by pineal gland which influence the circadian timing system(10) So due to EMF emitted by mobile phones disturbs the circadian rhythm leads to decreased melatonin production, hence

lower the melatonin production cause poor sleep.[11]sleep disturbances is an important risk factor for development of depression during adolescents.[9]

II. MATERIALS AND METHODS

In this cross sectional prevalence study using non randomized purposive sampling method by an online survey using Self descriptive questioner via Google form was send to BHMS students of MNR Homoeopathic medical college, Sangareddy, Telangana State. This study was done on May 2022.Consent is taken from all the students who had participated in this study. Their scoring was then calculated, assessed and analyzed by the feedback obtained from the questioner to evaluate the grading of mobile addiction and how smart phone addiction is affecting their sleep was also assessed.

A. Questionnaire About Insomnia In Students Due To The Over Usage Of Mobiles

1. We are conducting a study on insomnia due to over usage of mobile phones. we assure you that your identity will not be revealed. Do you agree to submit this form and help us in our survey?
   - Yes
   - No
1. Your Name?
2. Your Age?
3. Your Gender?
4. Educational Qualification?
5. Do you have trouble falling (or) staying asleep?
   - Yes
   - No
6. How many hours do you use mobile before going to sleep?
   - Less than 1hour
   - 1-2 hours
   - 2-4 hours
   - More than 4 hours
7. How many hours do you sleep at night?
   - More than 8 hours
   - 5-6 hours
   - 4-5 hours
   - Less than 4 hours
8. Have you been spending more time on mobile at night? If yes how long
   - Few days
   - Few weeks \
   - Few months
   - More than a year
9. Do you have any sleep disturbance? If yes since how long?
   - Since 1 month
   - Since a year
   - More than 1 year
   - Since childhood
10. How much time do you take to fall asleep after shutting down your phone?
    - Less than 30minutes
    - 1-2 hours
    - More than 2 hours
    - Sleepless all night
11. Do you feel drowsy all day?
    - Yes
    - No.
12. Do you feel irritable or anxious all day
    - Yes
    - No
    - Sometimes
    - Never
13. Are you trying to reduce your phone usage time? If yes then how?
14. Have you lost interest in your daily life activities?
    - Yes
    - No
    - Sometimes
    - Never
15. Do you use any medication to fall asleep?
    - Yes
    - No
    - Never
    - Sometimes
16. Do you have a feeling of unease when unable to use the phone?
    - Yes
    - No
    - Sometimes
    - Never
17. Do you sleep with your phone/ or lose sleep due to phone use?
    - Yes
    - No
18. How often do you check your phone during the midnight after falling asleep?
    - Always
    - Sometimes
    - Rarely
    - Never
19. Do you feel an urge to use your smart phone as soon as you wake up?
    - Always
    - Sometimes
    - Rarely
    - Never
20. Do you feel burning sensation or redness in eyes due to excess usage of mobile at night?
    - Yes
    - No
    - Sometimes
    - Never
22. Do you have any stress which makes you sleepless?
    - Yes
    - No

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III. RESULTS

The study was done in online mode (Google form). Students of MNR Homoeopathic medical college who are willing to participate were included in this study. This study was done on May 2022. 179 students participated in this study, where 115 students are having smartphone addiction of which we categorized into mild, moderate and severe addiction.36(31%) students are having mild addiction(using 1 – 2hours per day) ,49(42%) students are moderately addicted (using 2-4 hours per day)and 30(26%) students are having severe addiction(using more than 5hours).

Among 179 study participants 54 students are having insomnia of them 3 study participants are having insomnia due to stress. Remaining 51 students are having insomnia because of smartphone addiction of them, 26 students are severely addicted, 21 are moderately addicted and 4 have mild addiction.

Total study participants	Number of study participants having mobile addiction	Number of study participants having insomnia
179	115	54

Table 1: Number of Participants

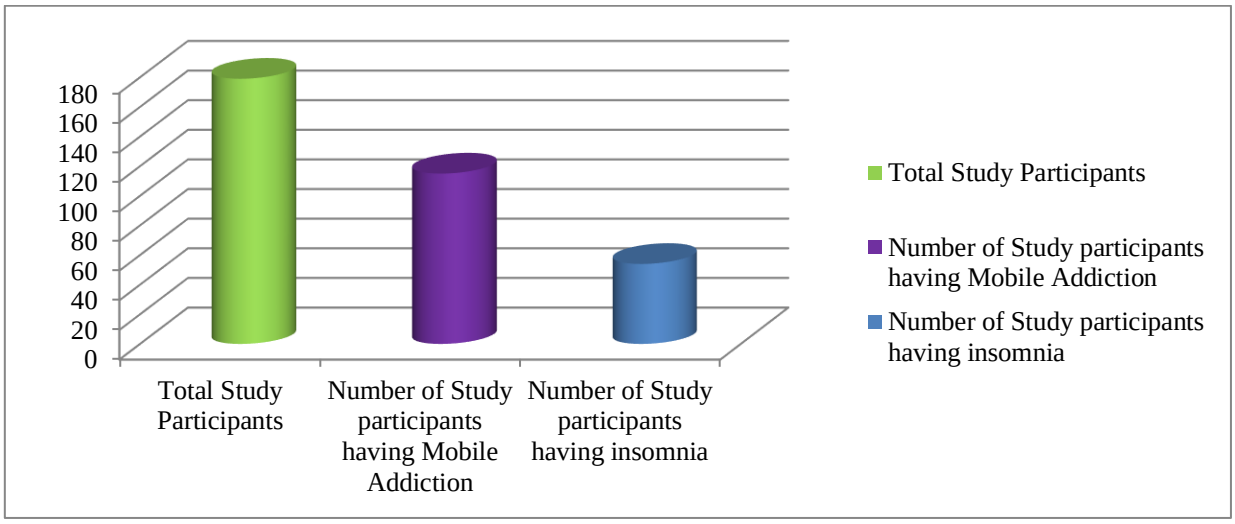

Fig. 1: Number of Participants:

Total number of students having mobile addiction	Among mobile addicted students-number of students having insomnia
115	51

Table 2: Number of students with insomnia among students of mobile addiction

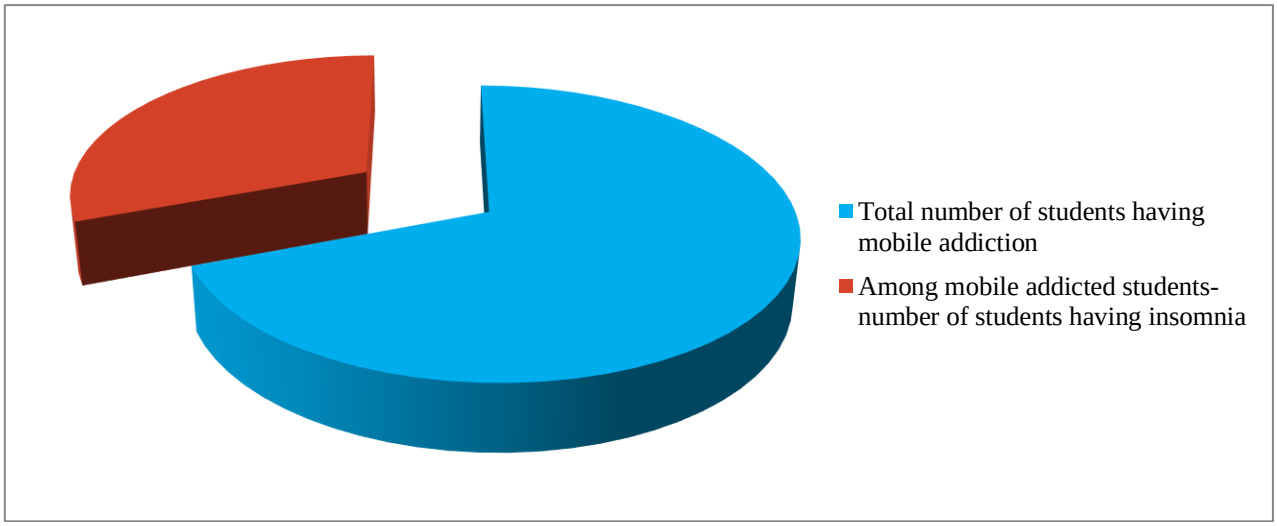

Fig. 2: Number of students with insomnia among students of mobile addiction:

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IV. DISCUSSION

In our day to day life we are observing that there are many insomnia cases which are usually affected by mobile addiction. In this study we have observed that Among 179 study participants of which 51(28.4 %) are males and 128(71.5%) are females, among them 115(64%) study participants are having mobile addiction and 54(30%) Among 54 participants on which 43(79.6%) are females and 11(20.3%) are males study participants are having insomnia. Of the total 115 students having smartphone addiction ,we categorized them into mild, moderate and severe addiction.36(31%) students are having mild addiction(using 1 – 2 hours per day) ,49(42%) students are moderately addicted (using 2-4 hours per day)and 30(26%) students are having severe addiction(using more than 5hours).Among 115 participants of mobile addiction 51(44.3%) study participants are having sleeplessness because of mobile addiction and 3 study participants are having insomnia because of some other stress , among them 2 of them are dependent on medication to fall asleep. Among 54 participants who had insomnia 43(79.6%) are females and 11(20.3%) are males. Majority of students fall into the category of severe addiction are having difficulty to fall asleep for more than 2 hours even after shutting down the mobile. Majority of them are fully dependent on mobile so that they are even checking their mobiles at midnights and as soon as they wake up, they even have burning sensation and itching in their eyes. During day time they have difficulty in concentrating in their academics as they always feel drowsy and restless.

V. CONCLUSION

In the present study 44.3% of study participants who are addicted to mobile are having insomnia. Mobile phone addiction can disturb sleep, which can have a genuine influence on overall mental health .it can affect ones memory, the ability to think clearly and reduce cognitive and learning skills thus leading to poor academic performance. There is a crystalline need to conduct further research examining the role of smartphone and its association with insomnia and to help the youngsters to overcome this addiction

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