



" INCIDENCE OF SLEEP DISTURBANCES AND EFFECTS OF SCREEN TIME ON QUALITY OF SLEEP AMONG INDIVIDUALS USING SCREEN IN GURUGRAM, HARYANA."

Nursing

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ABSTRACT

Introduction: Sleep is an essential aspect of life, one-third of population is affected by some or other kind of sleep disturbances. The widespread use of portable electronic devices may lead to disturbed sleep, tired eyes, mental health problems, overall associated with poor quality of sleep. The **main aim** was To find out incidence of sleep disturbances and to identify and develop sleep hygiene bundle to individuals using screen in Gurugram, Haryana who have disturbed sleep due to prolonged screen exposure. The **objectives** of the study were: To identify the incidence of sleep disturbances among individuals using screen from home, To assess the quality of sleep among individuals using screen from home, to find out the association between quality of sleep of individuals with their selected demographic variable. To find out the correlation between screen time and quality of sleep among individual working from home, to identify and develop sleep hygiene bundle among individuals using screen from home in Gurugram, Haryana. **Methods:** The conceptual framework for this study was developed by the researcher based on Sister Callista Roy Adaptation model. **Design:** A quantitative approach, in which Non-Experimental Descriptive survey design of individuals using screen in Gurugram, Haryana has been adopted. **Tools and Techniques:** Socio Demographic profile and Standardize Pittsburgh Sleep quality scale was used to assess sleep disturbances and sleep quality. Data collected through google forms via social media from 100 individuals who were using screen in Gurugram, Haryana. **Results:** findings of the study revealed that incidence rate of Sleep disturbances found to be 98 per 100 individuals, with a mean score of 2.00 ± 0.921 . The assessment of sleep quality was 54.38% with a mean score of 11.42 ± 5.02 . The level of sleep quality scores kept with a maximum of 21 and minimum of 3. Overall, 88% of the participants had poor sleep quality and 12% had good sleep quality which indicates worse sleep where none of the individuals scored 0. There is a significant association between the level of quality of sleep with the Education and time of screen usage of individuals. The higher education and frequent use of screen in night persisting the association with quality of sleep. The correlation value shows that there is a positive weak correlation between the sleep quality and Screen time. The calculated p value were less than the table value at the 0.05 level of significance. **Conclusion:** The investigator concludes this study as most of the participants displayed sleep disturbances. The level of sleep quality among individual's manifests, Majority of the participants had poor sleep quality. The higher education and usage of screen during night time among participants shown the significant association with the level of quality of sleep. Finally, there was a positive weak correlation between screen time and level of quality of sleep. Based on these findings Sleep hygiene Bundle was developed by the researcher in the form of video stating nutrition tips, yoga, exercises and basic tips on dos and don'ts.

KEYWORDS

incidence, sleep disturbances, effect of screen time, quality of sleep, sleep hygiene bundle.

INTRODUCTION

"Sleep is not an optional lifestyle luxury- It's a non-negotiable biological necessity."

-Matt Walker

Health defined as a state of complete physical, mental, and social well-being, and not merely the absence of disease where sleep plays a major role in maintaining overall health.[1] There are many studies on how to maintain health or to reach to a certain level of health, but health itself cannot be calculated. Earlier health has been defined as the presence or absence of disease. Nightingale defined health as a state of being well and using every power the individual possesses to the fullest extent on the other hand, Illness is a highly personal state where the person's physical, emotional, intellectual, social, developmental, or spiritual functioning is affected such as sleep deprivation affecting the overall growth and development of an individual.[2] Illness is usually considered as having a disease but illness could occur without disease. Illness is a state where person feel ill or unhealthy. Sleep plays an important role in neuronal signalling and helps in maintaining overall health and well-being of an individual.[3]

Sleep is an essential aspect of life, one-third of population is affected by some or other kind of sleep disturbances. The most common sleep disturbances are obstructive sleep apnoea (OSA), frequent snoring, difficulty initiating or maintaining sleep (DIMS; insomnia symptoms), and excessive daytime sleepiness (EDS). Disturbed sleep or a short sleep is a major cause behind many sleep related disorders like obesity, coronary heart disease, chronic kidney disease, poor mental health, suicidality and various psychiatric morbidities.[4] These complications have intensified during the pandemic and the 2019 novel Coronavirus illness (COVID-19) pandemic poses a significant threat to international health. To manage the unfold of the epidemic, countries round the world have adopted a series of effective measures, like cities lockdowns, home quarantine and production suspension. These measures have achieved conspicuous results. However, these

measures inevitably bring inconvenience to residents' lives, that changes their lifestyles and more affects their health.[5] Due to this unprecedented time, people were locked down at home hence use of electronic devices, screen time has been increased which is uncommon than traditional usage.

To give the evidence for increased usage of screen, numerous studies from China also reported that high screen time (e.g. using a computer, playing video games, and watching TV/video programs) was positively associated with depression, anxiety, sleep disturbances and poor sleep quality.⁵ A recent study reported that 18.6% of high school students regularly used mobile phone for over 4 hours per day, while another study reported an average of 4.4 hours per day spent on mobile phone among college students Long term usage of mobile phones predicts the new incidences of most sleep disturbances and mental disorders while discontinuation of Long term mobile phone usage is associated with betterment of these problems. Despite the convenience and practicability, the excessive use of mobile phone has also raised a myriad of sleep problems.[6]

Similarly in India, rapidly growing digitalization and a new shift from traditional mode of working and learning to online mode has been increased rapidly. According to "Healthy living survey" the Index rating behaviour (e.g., sleeping habits and exercise) is given a 66 percent weightage and rest account for satisfaction with health. Adult consumers in India will spend an average of 3 hours, 30 minutes per day with traditional media in 2019, or 70.1% of their daily media time. Digital systems will account for the remaining 29.9%, or 1 hour and 29 minutes. This survey was done in 2019 by EMarketer Since then the use of electronic devices has been increased during lockdown period. Poor sleep quality has been related to pain, mood, fatigability, stress. Various primary sleep disorders have been observed in lockdown, including a high prevalence of obstructive sleep apnea (OSA), insomnia and restless legs syndrome (RLS).[7]

Sleep disorders due to prolonged usage of screen may lead to myriad of sleep problems. An interview conducted by BBC news stated that despite the fact that prolonged screen exposure causes more health problems, families have become more careless about the hours of screen used and its impact on health as the stress of work from home and outbreak of pandemic seems more on their priority list than concerning about sleep and screen hygiene.[8]

The extensive use of portable devices and the normalization of screen media devices within side the bedroom is followed with the aid of using an excessive occurrence of inadequate sleep, affecting a majority of adolescents, and 30% of toddlers, pre-schoolers, and school-age children.[9] However numerous research have proven a high-quality effect of display utilization which ends up in disturbed sleep, tired eyes, mental health problems, overall associated with poor quality of sleep. Although these symptoms can be avoided by following sleep hygiene bundle or by maintaining a regular bed time habit. Increased use of electronic devices majorly during COVID-19 may lead to sleep disturbances, there were numerous studies stating various exercises, nutrition tips, meditation, yoga which can maintain better sleep hygiene. Providing suitable environment during bedtime can initiate and maintain better sleep. Sleep hygiene bundle if followed regularly may have better sleep outcomes.[10]

NEED OF THE STUDY

Sleep plays a vital role in growth and development of neurons in the brain, for the better concentration and attention, it is important for individual to sleep. Sleep is as essential to survival as is food and water. Sleep is an unpredictable and dynamic cycle that influences on how you work.

Globally, Prevalence estimates of disturbed sleep range from 35% to 41% among adults. Insomnia symptoms have prevalence rates ranging from 23% to 34%. OSA (Obstructive Sleep Apnea) is reported to be 2% to 4% among working men and women and 20% among individuals over 65 years of age. Snoring ranges from 48% to 59% in the general.[11]

When the researchers progressed to identify the ground cause of the sleep disturbances, numerous studies given the proper evidence. Most surveys related to prolonged screen time causes sleep disturbances says that excessive screen time is associated with poor sleep through several mechanisms, along with night time exposure to bright lights, which may also suppress melatonin production, and displacement of different activities that are useful for sleep, such as physical activity. Given those associations, the "American Academy of Paediatrics" recommends averting screens at least 1 hour earlier than bedtime. This practice may mitigate sleep disturbances, especially given that sleep quality may be poorer because of stressors or anxiety related to the COVID-19 pandemic.[12]

To support the Global evidences, India reported higher rate of sleep problems. A study has fixed the level of sleep deprivation to be pretty much as high as 33% among youngsters in India. The effect of lack of sleep on well-being is profound and broad. Daytime tiredness in youngsters can prompt diminished efficiency. Sleepless individuals are less powerful in settling on quality choices and are bound to encounter distress, obesity and are more likely to get coronary illness.[13]

The Covid-19 Pandemic in the world brought several changes in the day-to-day activities. Teaching and learning are also one of the most affected area, in this scenario. Apart from learning, people do watch movies, play games and other activities in mobile phones and laptop. Dating back to 2019, the number of screen users increased from 29% to 54% and also Number of hours spent on screen has increased from 4 hours to 9 hours. The intensity and frequency of screen usage may affect ones' health and produces undue pressure on mind. So, ultimately people get less sleep and become victims of sleep disorders.[6]

The people of this generation are giving least importance to the rest and sleep. Instead, sleep is an essential requisite for human beings. In the ancient time monk and saint used to sleep for adequate time and achieved super immunity and extended their life span. Slowly, as the technology advances people are getting addicted to the changes like use of mobile phones, laptops, electronic gadgets. These advancement in the technology making individuals to become slaves of screen.

People are ignoring the roots of good sleep habits like nutritious diet, exercise, yoga, pranayama, meditation etc. and converting themselves as a robot working for someone.

REVIEW OF LITERATURE

A cross-sectional study was conducted to assess the stress imposed by the COVID-19 pandemic and ensuing social isolation could adversely affect sleep. Study 1, examined (N= 3,062) responders from 49 countries accessed the survey website voluntarily between March 26 and April 26, 2020, and 2,562 (84%; age: 45.2 ± 14.5 , 68% women) completed the study. In Study 2, 1,022 adult US responders were recruited for pay through Mechanical Turk, and 971 (95%; age 40.4 ± 13.6 , 52% women) completed the study. The survey tool included demographics and items adapted from validated sleep questionnaires on sleep duration, quality and timing, and sleeping pills consumption. The result found in Study 1.58% of the responders were unsatisfied with their sleep. Forty percent of the responders reported a decreased sleep quality vs before COVID-19 crisis. Self-reported sleeping pill consumption increased by 20% ($P < .001$). Multivariable analysis indicated that female sex, being in quarantine, and 31- to 45-years age group, reduced physical activity and adverse impact on livelihood were independently associated with more severe worsening of sleep quality during the pandemic.[4]

A non-experimental cohort study was conducted to assess the association between screen time and short sleep duration among adolescents varies by media type. The study examined how different uses of screen media are linked to sleep, and whether these associations were accounted for or differed across chronotype. It was a quantitative study N=11,361 children of age group 13-15 years shown heavy use of screen media was associated with shorter sleep duration, longer sleep latency, and more mid-sleep awakenings. The strongest associations emerged for using screen media to engage in social media or to use the internet.[14]

A non-experimental survey was conducted design to improve self-reported sleep for patients on a general medicine ward as measured by the Richards-Campbell Sleep Questionnaire (RCSQ) as well as the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) question addressing quietness at night. A non-pharmacologic sleep hygiene bundle composed of a short script with sleep hygiene prompts, such as whether patients would like the shades closed or the lights turned off, as well as a sleep package including an eye mask, earplugs, lavender scent pad, and non-cafeinated tea. Relaxing music was played at bedtime and signs promoting the importance of quietness at night were placed around the unit was used among N= 931 patients who received the intervention with an increase in the RCSQ global score from 6.0 (IQR 3.0-7.0) to 6.2 (IQR 4.0-7.8) from the pre- to post- intervention periods ($p = 0.041$), as well as increases in three of the five individual survey components. Additionally, HCAHPS "quietness at night" score increased on the unit from 34.1% pre-intervention to 42.5% post-intervention. Hence, shown a great results after the implementation of sleep hygiene bundle.[10]

MATERIALS AND METHOD

A quantitative, Non-Experimental Descriptive survey design was used to identify the incidence of sleep disturbances and to assess the effect of screen time on quality of sleep among individuals using screen with a view to develop sleep hygiene bundle.

A Non- Probability Purposive sampling technique was used.

A standardize tool was made in Google forms. The link (https://docs.google.com/forms/d/e/1FAIpQLScRY0aXJj8QLLn6p1bn0-wDfflCU-09MwpvHJsM_YkCsGA/viewform?usp=sf_link) of the questionnaire was sent through WhatsApp and other social media to the contacts of the investigators. The participants were encouraged to participate in the survey.

Online consent was sought from all the subjects and their confidentiality was ensured. Questionnaire was validated by five experts from medical surgical nursing and psychiatry fields.

Reliability was assessed by using Split Half Method where ($r = 0.80$). Thus, the tool found to be sufficiently reliable.

The questionnaire elicited information about demographic profile,

screen time of participants, incidence of sleep disturbances and their quality of sleep. Time taken to fill the complete questionnaire was approximately ten minutes.

Tool assessed in the areas like duration of sleep, sleep disturbance, sleep latency, day dysfunction due to sleepiness, sleep efficiency, overall sleep quality and need meds to sleep.

Participants who were using screen for more than 3 hours a day, between age group 18-59 years, able to understand English and willing to give informed consent were included. The data collection was initiated in the month of January 2021. We were able to collect responses from 100 individuals who were using screen from home in Gurugram, Haryana.

RESULTS:-

N-100

Variables	Options	Frequency(f)	Percentage(%)
Age	20-30 years	80	80%
	31-40 years	17	17%
	41-50 years	2	2%
	51-60 years	1	1%
Gender	Male	53	53%
	Female	47	47%
Education	Senior secondary	9	9%
	Graduate & above	91	91%
Occupation	Self -Employed	11	11%
	Employed	41	41%
	Unemployed	4	4%
	Student	25	25%
	Homemaker	2	2%
	Healthcare worker	17	17%
Marital Status	Married	26	26%
	Unmarried	73	73%
	Separated/ Divorced	1	1%
Religion	Hindu	83	83%
	Muslim	5	5%
	Sikh	3	3%
	Christian	8	8%
Type of Family	Nuclear	68	68%
	Joint	30	30%
	Extended	2	2%
How many hours a day, you spend in front of screen (T.V, Computer, Tablet, Mobile phone)?	4 - 5 hours	20	20%
	5 - 6 hours	17	17%
	6 - 7 hours	15	15%
	8 hours or more	48	48%
Which device you commonly use to work from home?	Laptop	24	24%
	Desktop	2	2%
	Mobile Phone	71	71%
	Tablet	3	3%
Which time of the day you commonly use these devices?	Morning	14	14%
	Afternoon	27	27%
	Evening	15	15%
	Night	44	44%

Data given in the table 1 shown that:

Majority of 80% of individuals using screen were in the age group 20-30 years of age. Nearly half of them 53% of individuals were male and 73% of them were unmarried, where 91% of them were having the qualification as graduated and 41% of individuals using screen were employed. Nearly 83% of Individuals were Hindu and 68% of them were living in nuclear family. Maximum of 48% of individuals were using screen for more than 8 hours a day, where majority 71% of individuals were commonly using mobile phones and mostly individuals 44% of them were using screen at Night.



As per scoring in the tool, 0 score indicates - no difficulty in sleep 3 score indicates - Severe difficulty in sleep hence majority 40% of people scored 3 which reveals severe difficulty in sleep.

N-100

Table No. 2 Findings related to the incidence of Sleep Disturbances.

Descriptive Statistics	Sleep Disturbance
Mean	2.00
S.D.	0.921
Median	2
Maximum	3
Minimum	0
Range	3
Incident Rate	98 per 100 people

The data presented in table No.2: Reveals that sleep disturbances among participants, shown mean of (2.00 ± 0.921) i.e. 66.67%. As per scoring in the tool, 0 score indicates - no difficulty in sleep and 3 score indicates - Severe difficulty in sleep hence majority of individuals have scored 3 which reveals severe difficulty in sleep therefore, Incidence rate is 98 per 100 people, which indicates 98% of participants had sleep disturbances.

N=100

Table No. 3: Domain wise Findings related to PSQI(Pittsburgh Sleep Quality Index) Score.

Descriptive Statistics	Subjective sleep quality	Sleep Latency	Sleep Duration	Habitual Sleep Efficiency	Sleep Disturbances	Use of Sleep Medication	Daytime dysfunction
Mean	1.66	2.64	1.62	0.61	2.00	1.18	1.71
S.D.	1.075	0.482	1.332	0.942	0.921	1.366	1.200
Median	1.5	3	2	0	2	0	2
Maximum	3	3	3	3	3	3	3
Minimum	0	2	0	0	0	0	0
Range	3	1	3	3	3	3	3
Mean Percentage %	55.33	88.00	54.00	20.33	66.67	39.33	57.00

Table 3 shows the mean, mean percentage, S.D of Domain wise findings related to PSQI Score. It includes five components score of PSQI Scale, obtained mean score of Component 1- Subjective sleep quality was (1.66 ± 1.075) i.e. 55.33%. Component 2- Sleep Latency obtained mean score was (2.63 ± 0.482) which was 88%. Component 3- Sleep Duration, obtained mean score was (1.62 ± 1.33) which was 54%. Component 4- Habitual Sleep Efficiency, obtained mean score was (0.61 ± 0.94) which was 20.33%. Component 5- Sleep Disturbances, obtained mean score was (2.00 ± 0.92) which was 66.67%. Component 6- Use of Sleep Medication, obtained mean score was (1.18 ± 1.36) which was 39.33%. Component 7- Daytime dysfunction, obtained mean score was (1.71 ± 1.20) which was 57%.

Table No. 4 Findings related to Total PSQI(Pittsburgh Sleep Quality Index) Score.

N=100

Descriptive Statistics	Mean	Median	S.D.	Maximum	Minimum	Range
PSQI Score	11.42	11	5.02	21	3	18

As per scoring in the tool, 19 self-related items are combined to form seven "components" score each of which has a range of 0-3 points. 0 score indicates - no difficulty in sleep and 3 score indicates - Severe difficulty in sleep hence majority of individuals have scored 3 which

reveals severe difficulty in sleep. All seven components are then added to yield one “global” score, with a range of 0-21 points, “0” indicating no difficulty and “21” indicating severe difficulty in all areas.

Table 4 shows the mean, mean percentage, S.D of findings related to PSQI Score. Obtained mean score was (11.42±5.02) which was 54.38%. Table reveals that the mean of 11.42 individuals score with maximum of 21 and minimum of 3 which indicates worse sleep where no individual scored 0.

Table No. 5: Findings related to Overall Quality of sleep N=100

OVERALL MEASURE OF PSQI SCORE		
Level of Scores	Percentage	Frequency

Table No. 6: Showing the association between quality of sleep of individuals with their selected demographic variable. N=100

Demographic Data		Levels (N=100)		Association with PSQI Score				
Variables	Options	POOR PSQI	GOOD PSQI	Chi Test	P Value	df	Table Value	Result
Age	20-30 years	72	8	2.852	0.415	3	7.815	Not Significant
	31-40 years	13	4					
	41-50 years	2	0					
	51-60 years	1	0					
Gender	Male	47	6	0.049	0.824	1	3.841	Not Significant
	Female	41	6					
Education	Primary	0	0	4.262	0.039	1	3.841	Significant
	Secondary	0	0					
	Senior secondary	6	3					
	Graduate & above	82	9					
Occupation	Self -Employed	10	1	3.369	0.643	5	11.070	Not Significant
	Employed	38	3					
	Unemployed	3	1					
	Student	20	5					
	Homemaker	2	0					
	Healthcare worker	15	2					
Marital Status	Married	23	3	0.149	0.928	2	5.991	Not Significant
	Unmarried	64	9					
	Separated/Divorced	1	0					
	widow/widower	0	0					
Religion	Hindu	75	8	5.976	0.201	4	9.488	Not Significant
	Muslim	3	2					
	Sikh	3	0					
	Christian	6	2					
	Any other	1	0					
Type of Family	Nuclear	58	10	1.552	0.460	2	5.991	Not Significant
	Joint	28	2					
	Extended	2	0					
How many hours a day, you spend in front of screen (T.V, Computer, Tablet, Mobile phone)?	4 - 5 hours	15	5	6.371	0.095	3	7.815	Not Significant
	5 - 6 hours	14	3					
	6 – 7 hours	15	0					
	8 hours or more	44	4					
Which device you commonly use to work from home?	Laptop	19	5	2.763	0.430	3	7.815	Not Significant
	Desktop	2	0					
	Mobile Phone	64	7					
	Tablet	3	0					
Which time of the day you commonly use these devices?	Morning	13	1	13.785	0.003	3	7.815	Significant
	Afternoon	24	3					
	Evening	9	6					
	Night	42	2					

Table No. 6 shows that the association between the level of quality of sleep and demographic variable. Based on the objective, Chi-square test used to associate the level of PSQI and selected demographic variables. . There is significance association between the level of quality of sleep and Education, time of screen usage variable. The calculated chi-square values were less than the table value at the 0.05 level of significance.

There is no significance association between the level of quality of sleep and other demographic variables (age, gender, occupation, marital status, religion, type of family, hours spent on screen and commonly used device). The calculated chi-square values were more than the table value at the 0.05 level of significance.

Table No. 7: Findings related to the correlation between screen time and quality of sleep. N=100

Pearson's Correlation	PAIR	
	PSQI Score	Screen Time

POOR SLEEP QUALITY.(6-21)	88%	88
GOOD SLEEP QUALITY.(0-5)	12%	12

Major findings:

- Maximum Score of PSQI= 21
- Minimum Score of PSQI= 0

Mean, standard deviation, median, range, mean % was computed to describe the level of score of PSQI. The data presented in table no. 4.6.

The data presented in the table No. 4.8 reveals that 88% of the participants had overall poor sleep quality and 12% had good sleep quality.

Mean	11.42	6.65
SD	5.015	1.431
N		
Correlation	0.228	
Table Value	0.197	
P Value	0.022	
Result	Significant	

Table No.7: Reveals that the correlation between the PSQI score and screen time variable. Based on the objectives Correlation test was used to find out the correlation between the sleep quality and screen time. The correlation value shows that there is positive weak correlation between the sleep quality and Screen time. The calculated p value were less than the table value at the 0.05 level of significance.

DISCUSSION

The purpose of the present study was to identify the incidence of sleep

disturbances and to assess the effect of screen time on quality of sleep among individuals using screen from home in Gurugram, Haryana with a view to develop sleep hygiene bundle.

The current examination found that prolonged usage of screen is very common among Indian population who were using screen more than 3 hours a day. They had moderately earlier sleep time and longer sleep duration when compared with the cross-sectional study done by **Rafique N. Asoom L. et al.** (2020) to find out the prevalence of mobile-related sleep risk factors (MRSRF) and their effects on sleep in mobile users.[15] This non-experimental correlational study has confirmed that prolonged usage of screen was related with the poor quality of sleep. In addition, the recently studied incidence of sleep disturbances are more prevalent with prolong usage of screen. Finally, the cross-sectional study reflects a vicious circle between the prolonged usage of screen and sleep and/ or on the other hand mental health issues.

In a Bidirectional longitudinal study relationships were found between the length of mobile phone use and Sleep quality score, sleep duration, which indicates that the individuals who spend more time on screen are bound to have Excessive daytime sleepiness, and short week day sleep duration, and vice versa.[4] These discoveries are in part in accordance with past investigations utilizing cross-sectional or prospective design. On one hand, the extreme utilization of cell phone prompts a number of results, including uprooting of person's sleep time, expanded physiological and mental excitement, and concealment of melatonin discharge by screen light. These changes will additionally add to disturbance in sleep, for example, trouble in initiating sleep, delayed sleep stage, constant lack of sleep, and Excessive daytime sleep. On the other hand those young people with disturbed sleep-wake cycle or short week day sleep duration have more prone to use mobile phones screen till late night.[4] Similarly with results shown in the present study of late night usage of screen causes more sleep problems or more PSQI score. Moreover, Individuals with Excessive daytime sleep or high incidence of sleep disturbances are additionally disposed to invest more energy in mobile phones screen to keep up their alertness. Another intriguing finding that ought to be noted was the affiliations of length of screen usage decidedly predicts the seriousness of sleep disturbances, however a significant association was found between the qualification level and prolonged usage of mobile phone with the poor quality of sleep. While past examinations have detailed cross-sectional relationship between abuse of cell phone and a sleeping disorder, a few researchers have brought up an issue about whether sleep deprivation is the outcome or the reason for screen use.

NURSING IMPLICATIONS

Nursing Education

- Similar study can be done among various age groups and various settings.
- This study will help nursing curriculum to have more focus on sleep hygiene.
- The nursing students should be oriented to sleep hygiene chapters available in nursing profession.

Nursing Research

- The same study can be done in various settings in communities and children, old age.
- The finding of the study can be utilized for conducting research using large samples of individuals using screen from home.

Nursing Administration

- The current study highlights the significance of prevention and early recognition of excessive screen usage. For example, appropriate limitation could be set for the use of screen among employees and students.

Nursing Practice

- The finding of the study will help Nursing educators to introduce various types of service education programs to educate general public regarding healthy usage of screen.
- In the institute setting periodic conferences and in service education can be arranged to update the knowledge regarding healthy usage of screen.
- Nurse, Educators and general public must be able to identify sleep disturbances due to prolong usage of screen.

Limitation

- This study was confined to a small number (100) Individuals using

screen from home in Gurugram, Haryana.

Recommendations

- Similar study can be undertaken for a large sample to generalize the findings.
- Similar study can be done to assess prolong screen usage among IT people.
- Experimental prospective study can be done to find out screen effect on melatonin release and quality of sleep.
- Successive measurement of knowledge level of healthy screen usage among youngster could be done.

FINANCIAL AND MATERIAL SUPPORT: Nil

CONFLICTS OF INTEREST: Nil

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