

A Study to Identify the Prevalence of Sleep Disorders Among General Population with a View to Develop a Need-Based IEC on the ‘Sleep Disorder and its Management’ in Selected Geographical Area of Bhilai, C.G.

Sakshi Sahu^{1*}, Abhilekha Biswal², Roja Princy³

¹M.Sc. Nursing Final Year, P.G. College of Nursing, Bhilai, India

²Principal, P.G. College of Nursing, Bhilai, India

³HoD, Department of Mental Health, P.G. College of Nursing, Bhilai, India

Abstract: The collective term sleep disorder refers to conditions that affect sleep quality, timing, or duration and impact a person's ability to properly function while they are awake. The present study is aimed at assessing prevalence of sleep disorder in general population with a view to develop a need-based IEC on the ‘sleep disorder & its management in selected geographical area of Bhilai, CG. A descriptive survey research design was adopted in the study and study was conducted by using cluster area sampling technique. The tool consists of a modified questionnaire of socio demographic data and rating scale comprising of 5 sections to identify early signs of sleep disorder. The score obtained based on self-evaluated sleep pattern of various sleep disorders. As hypersomnia scored high with a mean percentage score of 44.2% it is proved that it is highly prevalent in the area of study. Insomnia is also proved to be at higher risk in general population as mean percentage score is 40.1%. Other prominent sleep disorders are circadian rhythm disorder, sleep apnea and Parasomnia with mean percentage score of 39.05, 38.3 and 32.9 respectively.

Keywords: sleep disorder, prevalence, IEC.

1. Introduction

Rest and sleep are the two most basic human needs. Human being spends about one quarter to one third of lives sleeping and is proved as an important requisite for healthy life. People need about seven to nine hours of restful sleep each night. Surveys conducted by the NSF (1999-2004) reveal that at least 40 million people suffer from sleep disorders and 60 percent of adults report having sleep problems a few nights a week or more. Most of those with these problems go undiagnosed and untreated.

A. Objectives

- 1) To identify the prevalence of sleep disorder among general population.
- 2) To find out association between sleep disorder and selected sociodemographic variables among general

population.

- 3) To develop a need-based IEC on “sleep disorder and its management”.

B. Hypothesis

H₁: There is significant association between sleep disorders and selected sociodemographic variable among general population.

2. Material and Methods

A quantitative descriptive research survey approach with survey design was used for the study. This is non experimental in which the researcher investigates the selected geographical area of Bhilai. The tool includes socio demographic data and self-structured rating scale comprising of 5 section to assess sleep disorder. The study was conducted on selected 100 people who fulfill the inclusion criteria and residing in Bhilai.

Inclusion Criteria

- People who are between the age group of 13- 60 years.
- Willing to participate.

Exclusion Criteria

- Not present (out of station) during study.
- Have distraction in environment during night (like sound, light).
- Caregiver of fully dependent family member like small children or sick/ bed ridden members.
- Taking drugs which affect sleep or sleeping pattern like sedative, hypnotic.

3. Result and Discussion

A. Distribution of subject according to sociodemographic data

In present study, related to sociodemographic data elicits that maximum people (58%) belongs to the age group of 20-39 years and most of them are female (69%) and married (50%). Majority of sample were students (48%) and had a regular work and study schedule (78%) that follows Hindu religion (61%) who takes 7-9 hours of sleep at night (62%), along with this 53% people had habit of sleeping at day time and 68% sample use gadget in bed for less than one hour.

B. Assessment of sleep disorders among general population

Distribution of subjects based on alteration in sleep pattern:

In order to achieve the first objective, symptoms of specific type of sleep disorder as per criteria was assessed, Subjective symptomatological assessment shows that 70% are at risk of insomnia, 52% are at risk of developing parasomnia, 66% are at risk of developing circadian rhythm disorder and 71% are at risk of developing hypersomnia. Moreover 6% of the study subjects were found to have symptoms of hypersomnia.

These finding has supported by a study conducted by Léger & Uchiyama on an international survey of sleeping problems in the general population of the USA, France, Germany, Italy, Spain, the UK and Japan in 2015. A representative sample of the general population aged ≥ 15 years was recruited from each country. Questions focused on the nature of sleeping problems, the impact of problems on daily functioning and behavior with regard to resolving sleeping problems. The prevalence of sleeping problems was 56% in the USA, 31% in Western Europe and 23% in Japan.

Prevalence of sleep disorders:

Self-evaluated sleep pattern for various sleep disorders were analyzed to identify the prevalence. As hypersomnia scored high with a mean percentage score of 44.2% it is proved that severity of it is high among study subjects. Insomnia is also proved to be at higher risk in general population as mean percentage score is 40.1%. Other prominent sleep disorders are circadian rhythm disorder, sleep apnea and Parasomnia with mean percentage score of 39.05, 38.3 and 32.9 respectively.

C. Association between sleep disorder and socio demographic variables

Chi-square analysis was done to assess association between

sleep disorder and socio-demographic variables and finding proved a significant association between sleep disorder and working status as chi-square value 53.92 is higher than table value 7.82. Hence H1 is accepted with regards to relation between sleep disorder and working status and it is rejected with regard to age in years, gender, marital status, schedule of work, religion, duration of night sleep, habit of sleeping in day time & use of gadget in bed time with sleep disorder.

Booklet was given to them for make them aware about sleep disorder and how they can improve their sleep pattern.

The finding of the present study has an implication for the nursing education, nursing practice, nursing administration and nursing research.

Nursing Education:

- Students should be encouraged to conduct education on prevention and management of sleep disorder among general population through community-based awareness program which can be an effective way to reduce prevalence of sleep disorder and related condition.
- Various information-oriented activities can be carried out to increase awareness related to sleep disorder among rural and urban residents by street plays, distribution of pamphlets, organizing health awareness camps, rally and community celebration of mental health day in rural set-up.

Nursing Practice:

- The present study forms the basis for screening and early identification of sleep disorder.
- Awareness should be created among nurses regarding sleep disorder, appropriate precautions in caring for client who are having sleep disorder must be taken by nurses to maintain mental health status of people.
- Render psychoeducation to family members on how to observe sleep pattern as it can be an early symptom of relapse of mental illness.

Nursing Administration:

- The nurse administrator has the responsibility to provide a staff development program for the nursing personnel regarding sleep disorder.
- They also have the responsibility to make the nursing personnel aware of the current strategies, ethics and interventions adopted by the government for the

Table 1

S.No.	Disease condition	Sleep disorder present		High risk for sleep disorder		Sleep disorder absent	
		F	%	f	%	F	%
1	Insomnia	0	0	70	70	30	30
2	Parasomnia	0	0	52	52	48	48
3	Circadian rhythm disorder	0	0	66	66	34	34
4	Sleep apnea	0	0	61	61	39	39
5	Hypersomnia	6	6	71	71	23	23

Table 2

Types of sleep disorder	Range of score	mean	Mean%	SD	CV
Insomnia	0-20	8.02	40.1	2.24	27.93
parasomnia	0-20	6.58	32.9	1.34	20.36
Circadian rhythm disorder	0-20	7.81	39.05	2.11	27.01
Sleep Apnea	0-20	7.66	38.3	2.31	30.1
Hypersomnia	0-20	8.84	44.2	2.72	30.76

reduction of mental disorder.

- The nurse administrator should have the responsibility to render remedial teaching program for sleep disorder.

Nursing Research:

- Research should be directed to exploring nurse own attitude towards health promotion strategies and the likelihood of its effectiveness on level of wellness.
- Research studies can help to find out what criteria can be safe or trusted person who can assist with preparing for awareness of sleep disorder. There are areas in which additional study should be done to better inform the design of interventions and to improve the quality of mental status of people.
- The nurses should be encouraged to upgrade their knowledge on the research findings related to sleep disorders by other researchers so as to incorporate them in their clinical activities.

4. Conclusion

Since the study reveals that there is higher prevalence of hypersomnia and moderate risk for other sleep disorders it is

important to pay attention on sleeping pattern of people to prevent the occurrence of its related complications. Therefore, a need base IEC was prepared which is equipped with adequate knowledge on sleep disorder and all the aspects including prevention, treatment, care, and support which will enable to protect themselves and society with getting sleep disorder.

References

- [1] Potter P. "Basic Nursing fundamental" 5th edition: Mosby.
- [2] National Institutes of Health (NIH). (2012, January). NIH News in Health: Breaking Bad Habits., Retrieved July 10, 2020, from <https://newsinhealth.nih.gov/2012/01/breaking-bad-habits>
- [3] Sharma SK, Nursing Research and Statistic 1st edition: Elsevier publication 2011.
- [4] Basvanthapa BT, Nursing Research 1st edition: Jaypee Brothers, 2003.
- [5] Raj B. V. E. Nursing Research and Biostatistics 2nd edition, Emmess publications, 2014.
- [6] Gardner B, Lally P, & Wardle J. (2012). Making health habitual: the psychology of 'habit-formation' and general practice. *The British journal of general practice: the journal of the Royal College of General Practitioners*, 62(605), 664–666.
- [7] Daniels, "Nursing Fundamentals" published by Delmar learning.
- [8] Helen H., "fundamental of nursing" 2nd edition, Saunders publication.
- [9] Kozier, ERB "Fundamentals of Nursing" 5th edition, Addison Wesley publication.
- [10] Barbara L., "Foundations Nursing," Mosby publication.