Quality of Sleep among the Patients in High Dependency Unit (Hdu)- A Descriptive Study

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Abstract

Background: Sleep is a vital physiologic process, serious outcomes results due to lack of sleep. The circadian rhythm plays an important role in our biologic function. Various studies have recorded the function of circadian rhythm in our body and the various environmental parameters which affect the sleep of the patients. Along with other factors critical illness also contributes to the vulnerability of the patient.The recovery of the patients depends on the quality of the sleep. Hence this study assess the quality of sleep among the patients in HDU.**Objective:**To assess the quality of sleep among the patients in HDU.**Methodology:** A Non-Experimental Descriptive Research Approach is used. 30 samples who had three days of HDU stay were selected by using NonProbability Purposive Sampling Technique. Data was congregated using Modified Pittsburgh sleep Quality Index.In order to establish the reliability of the tool test-retest method was used and the pearson's correlation coefficient was found to be 0.98. **Result:** Majority of them, 50% had age group of 41-50 years. 23% had age group of 51-60 years and 13.33% has 31-40 years and above 60 years age group. Majority 66.67% were male and few 33.33% were female. Majority 63.33% had three days of HDU stay whereas 36.67% had 4 days of HDU stay. 33.33% had diagnosis related to cardiovascular, 30% had respiratory related diagnosis, 20% were related to gastrointestinal, 13.34 % were from endocrine and few 3.33% were from other systems. The quality of sleep reveals that majority 40% of them had poor sleep (score 30-44), 26.66% had average sleep (score 15-29), 20% had good sleep (score 1-14), 13.33% had very good sleep (score 0)**Conclusion:** The findings indicate that the questionnaire was effective in assessing the quality of sleep among the patients in HDU. The study also concluded that majority of the patients in HDU had poor quality of sleep.

Keywords: *Assess, Quality of Sleep, High Dependency Unit (HDU).*

Introduction and Background

Sleep is a process which is clout by the one's own biologic and environmental aspect. The increasing evidence suggest that sleep disturbances are combined with inimical outcomes. Sleep is a composite biological rhythm. A person is said to be in a circadian synchronization,

when one's biological clock coincides with sleep wake cycles. This broach that when the persons body temperature is high the person is said to be awake and when body temperature is lowest the person is said to be asleep. Sleep anomaly occur intermittently in the critical care unit. Studies have shown that patients in Intensive Care Unit (ICU) have sleep latency, sleep fragmentation, numerous arousals. Day time sleep is been reported with a noticeable shift towards light stages of sleep. The recent studies have directed on actuating the best method to score the sleep in critically ill patients. Major aspect

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for deprivation of sleep includes the underlying causes such as pain, stress, anxiety.[1][2][3]

Sleep disturbances in the intensive care unit sounds development of delirium. This confess that satisfactory sleep is necessary for positive result. Various studies acknowledge pathological sleep patterns in critically ill patients havinghigh arousal and awakening index,abnormal circadianrhythm, REM sleep.[7]

Studies also report the environmental factors in the critical care unit contribute more to the sleep disruption. Noise is one of the aspect among the environmental factors which includes multiple sources such as alarms, staff conversations, pagers, mechanical ventilators. The nocturnal lights in the critical care unit accord for sleep disruption. The nocturnal light affect the melatonin secretion in the body which again causes sleep deprivation. The other aspect such as patient care activity such as monitoring vitals, collection of labs, and other care activity brings about sleep disturbance among the patients. Some studies have reported mechanical ventilation responsible for fragmented sleep among critically ill patients.[1][6] Lack of sleep affect the immune system, hormone levels, neurocognition and pulmonary mechanics. Changes in the sleep Structure flourished during a stay in the critical care unit may compellingly add to sleep disorders among patients.[6] There are various questionnaires which help to identify the sleep among the patients in critical care unit. The patients in critical care report poor sleep quality.[1][2]

Objectives

"To assess the quality of sleep among the patient's in HDU"

Material and Methods:

A NonExperimental Research design with quantitative approach was used. 30sampleswho had three days of HDU stay and consciouswere selected by NonProbability Purposive sampling technique. The tool included two sections; the first section; demographic data included age, gender, length of stay in HDU, Diagnosis and any invasive lines.The second section included a modified scale to assess sleep. The Modified Pittsburgh Sleep Quality Index consisted of 11 questions and 4 columns; the patient answered and the researcher marked the answer. The scoring embodied; if the score is 0 the sleep quality is opined to be very good, if the score is between 01-14 the sleep quality is good, Average quality of sleep suggests that the score is between 15-29 and the score between 30-44 conjecture a bad sleep quality. Experts validated the tool, the reliability was assessed using test retest method, and the correlation coefficient was found to be 0.98.

Findings

Section- I

Description of samples characteristics in frequency and percentage.

Table 1: Distribution of demographic data in Frequency and Percentage

n=30

DEMOGRAPHIC VARIABLE		
	F	**%**
AGE		
31-40 years	4	13.4%
41-50 years	15	50.0%
51-60 years	7	23.3%
Above 60 years	4	13.4%
GENDER		

Cont... **Table 1: Distribution of demographic data in Frequency and Percentage**

n=30

Male	20	66.6%
Female	10	33.3%
Length of stay in HDU		
3 days	19	63.3%
4 days	11	36.6%
5 days	0	00.0%
DIAGNOSIS		
Endocrine	4	13.4%
Respiratory	9	30.0%
Gastrointestinal	6	20.0%
Cardiovascular System	10	33.3%
Any other	1	3.3%
ANY INVASIVE LINES		
Foleys catheter	1	3.3%
IV Cannula	28	93.3%
Fistula	1	3.3%

Section-II

Analysis of data on Quality of sleep among the patients in HDU

Table 2: Data related to quality of sleep among the patients in HDU.

n= 30

Quality of sleep	F	%
Very good (score 0)	4	13.3
Good (Score 1-14)	6	20
Average (Score 15-29)	8	26.6
Poor (Score 30-44)	12	40

Discussion

In this present study a Non Experimental Descriptive research design is been used. Non Probability Purposive Sampling Technique was used for selecting 30 samples who had three days of HDU stay and who were conscious. A written and informed consent was obtained. The patient answered and the researcher recorded the answer. The tool included two section; the first section had demographic data and the second section included the Modified Pittsburgh Sleep Quality Index. The study found that maximum 50% patients were from 41-50 years age group, 23.3% patients were from 51-60 years age group, few 13.4% patients were from 31-40 and above

60 years age group. Frequency of Males were more than that of the females. The further the demographic data was studied and it was found that maximum 63.3% people had 3 days of HDU stay whereas 36.6% patients had 4 days of HDU stay. Maximum 30% Patients were with respiratory disease. Most of the patients had IV cannula.Thedata was analysed further which revealed that maximum 40% of the patient had poor sleep (score 30-44), 26.6% of the patient had average sleep (score 15-29), 20% of the patient had good sleep (score 1-14), 13.3% of the patient had very good sleep (score 0). This suggest that the patients in HDU possess poor sleep quality. Further studies are recommended to find out the affected intervention to improve the quality of sleep among the patient in HDU

The above findings of the study are supported by a similarstudy;In this descriptive study102 samples were selected who met the inclusion criteria. Data was congregated using Pittsburgh Sleep Quality Index. The data revealed that 49% patient were found to have poor sleep quality. The study concluded with varied degrees of quality of sleep; the personal and environmental factors affects the quality of the sleep. The study suggested strategies to enhance physical and mental comfort and minimum sleep disruption to enhance the quality of sleep.(4)

A descriptive cross- sectional study was lugged out on 150 patients. The data was mustered using Pittsburgh Sleep Quality Index. The data was evaluated in percentage, mean, independent group test, one way ANOVA test, chi square test. The study found that the patients had poor sleep quality. The study suggested more supportive nursing care.(5)

A study was conducted on sleep deprivation. It studied the impacts of sleep deprivation on health and recovery from illness. The study unfolds that sleep deprived patients suffer from immune system dysfunction, impaired wound healing and behavioural change. The factors responsible for this are fear, anxiety, pain, noise, light exposure, and frequent awakening from caregivers. It also added that the underlying medical illness and medications dramatically affect patient's sleep. The suggested therapy along with minimum disruption from care givers during night. Also, certain protocols to reduce sleep deprivation should be used.(3)

Conclusion

The findings indicate that the questionnaire was an efficacious strategy in assessing the quality of sleep among the patient in HDU. The structured questionnaire was acceptable and appropriate method for assessment of the quality of sleep among the HDU patients.

Conflict of Interest -Nil

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Ethical Clearance-: Obtained from Institutional Research Committee and Hospital.

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