

**NIGHT SHIFT: A PHARMACIST'S PERSPECTIVE****Beatrice Y. Danladi* and Dr. Muddala Vara Prasanna Rao (Pharm. D)**

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Practice, Vels Institute of
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Advanced Studies.**ABSTRACT**

Objective: The objective of the study is to analyse the major effects of night shift among IT workers in southern Chennai and give advice based on the perspective of a pharmacist. **Method:** a study questionnaire was prepared and a survey was carried out. It was distributed to IT night workers and the results were analysed using percentages and chi square test. **Results:** The results showed that the night workers have a disturbance in their circadian rhythm and so it affects other physiological and mental parts of their health. **Conclusion:** This study was able to analyse the health effects associated with night shift from the perspective of a pharmacist. It has

been well observed that night work or night shift goes a long way to affect the health and habits of individuals. The study was able to prove that night shift affects the circadian rhythm which in turn causes various disorders like insomnia, depression, stress and other health occurrences. Possible advice has been given to an extent which the community pharmacist is allowed to. It is important that these simple guidelines be followed to ensure good health of an individual even if they have to work night shift. "Take care of your health so that you can live to work as you work to live".

INTRODUCTION

It is an obvious fact that many people are into the IT industry today. With the exponential growth of the industries especially in southern Chennai, more people are getting employed in the shifts and it gives every cause of alarm the community pharmacist. The normal body is used to working in the day time and resting at night. When this norm is being disturbed due to night shift the body undergoes negative health effects such as disturbance of the circadian rhythm, depression etc. As community pharmacists there are a few things we can do to help

manage the health of people who work night shift as it is unavoidable due to the fact that most people have no other choice but to work at night.

The circadian rhythm is basically a 24-hour internal clock that is running in the background of the brain and cycles between sleepiness and alertness at regular intervals. It is also known as sleep/ wake cycle. For most adults, the biggest dip happens between 2-4am and 1-3pm. It is normal for the body to have deep sleep at those times even though it varies from person to person. From research that has been done in the past, it is obvious that night work has a negative impact on the quality and quantity of sleep. Melatonin rises during the phase of maximum sleepiness, if we sleep at a stage of declination when melatonin level is low; it causes short sleep and more night awakenings. Continuous disruption in circadian rhythm has a major influence on physiological, psychological and pathological functions of the human body. Past studies to investigate dietary intake and behavioural patterns suggest that night workers had poorer dietary habits and metabolic profile compared to day workers.^[1] As night shift workers tend to disturb the normal circadian rhythm, it explains why most of them are not able to go back to sleep immediately after work. The circadian rhythm function is influenced by a part of the brain called the hypothalamus and it is also a function of light. When the place is dark it sends message to the brain that it is time to sleep and so it is naturally difficult to sleep during the day. To maintain a healthy cycle, night shift workers should make the room as dark as possible when they retire to sleep every morning. The brain will easily receive the signal and help sleep. As a pharmacist, I advise that quality sleep should not be compromised. Try to sleep at once not taking breaks in between, what is important is not the total number of hours you slept for but the number of hours you slept for at a go. That is quality sleep.^[2]

Based on studies, not everybody working night shift is depressed or suffers from depression. There is no proved fact that depression is associated with night shift, but based on my research among IT night shift workers in Chennai, a number of workers suffer depression. This may be due to reduced social activities, family time and relaxing activities. The social life of the night workers is usually affected and brings them to a point of isolation. This could be a major lead to depression.^[3] It is well established that the degree and quality of social interaction are related to physical and mental health of a person.^[4] The workers can visit a counsellor once in a while and should try to create time even if it's every weekend for social activities. It is safer for the health of the people. Progressive depression could lead to more

complicated mental illnesses in the future and as such should be curtailed for the good of the patient. Work like your life depends on it but rest like your life depends even more on it too. A community pharmacist can help to spot depression and sort it out, people tend to take pills unnecessarily when they are depressed, as a pharmacist, we should take note and be observant of what people request for when they visit us and use the opportunity to advise them on a healthy lifestyle. It is also advised that the company should have an employed psychologist or workers should be advised to see a psychologist regularly.^[5] It was observed that quite a number of the participants use pills to enable them to sleep well even without a doctor's prescription. Night workers will live more healthy lives if they visited the doctor at intervals and report any sleep issues instead of self-medication. It would help them to avoid building drug tolerance and other toxicities that could occur due to misuse of these drugs and provide better solution for good sleep. The aim of the study is to analyse the major effects of night shift among IT workers in southern Chennai and give advice based on the perspective of a pharmacist.

MATERIALS AND METHODS

The study questionnaire was developed using common questions that have been asked online and by various organisations for assessing their workers. Some of the questions were based on the author's curiosity. The questionnaire consisted of 13 simple and direct questions. The workers were asked how long they have been working and how many hours they work daily. Questions were also asked to find out their intake of caffeine at the course of work. Sleep and rest related questions were also asked to find out the quality and quantity of sleep they got after work and rest during work. The questionnaire also had a question related to depression. They were also asked about feeding habits as well as general health.

Data Collection

The paper hard copy was distributed at about three (IT) companies in southern Chennai. A total of 75 questionnaires were distributed and filled appropriately. This was done over a period of two weeks as it was difficult to get the workers to fill it since they were busy at that time.

Data Analysis

The question of 'how long have you been working night shift' was divided into two categories i.e. less than or equal to a year and above one year. The age of the workers were in two categories also, above 30 and below 30 years and a percentage was calculated. In analysing

the number of hours slept by the workers after shift percentages were analysed of those who slept for up to 8 hours and those who slept less than 8 hours. Chi square test was used to analyse if the workers slept well on off days. The feeding habits of the workers were also analysed.

Ethics

There was no ethical committee approval sought in this research. All data were anonymized before analysis. The participants were also informed about the de-identification of the material and the aim and objective of the study and their consent was sought.

RESULTS

A total of 70 participants were analysed. Out of 70 participants, 37 were observed to have worked for less than a year which gives about 53% and 33 for more than a year which shows about 47%. There is no much margin but it shows that it is less likely for people to work night shift for long and it is evidence that it is not the most enjoyable option but they do it anyway because they have little or no choice.

Table 1: Percentage analysis of the data.

No. of years worked	Less than a year n (%) 37 (53)	More than a year n (%) 33 (47)
Sleep normal on off days	16(23)	54 (77)
Depressed	53 (76)	17 (24)
Hours of sleep after work	<8hours 46 (66)	>8hours 24 (34)
People who smoke at work	23(33)	47 (67)
Pills to sleep after work	23 (33)	47(67)
Feeding	Eat well 25 (36)	Do not eat properly 45 (64)
Age	Above 30 2 (3)	Below 30 68 (97)

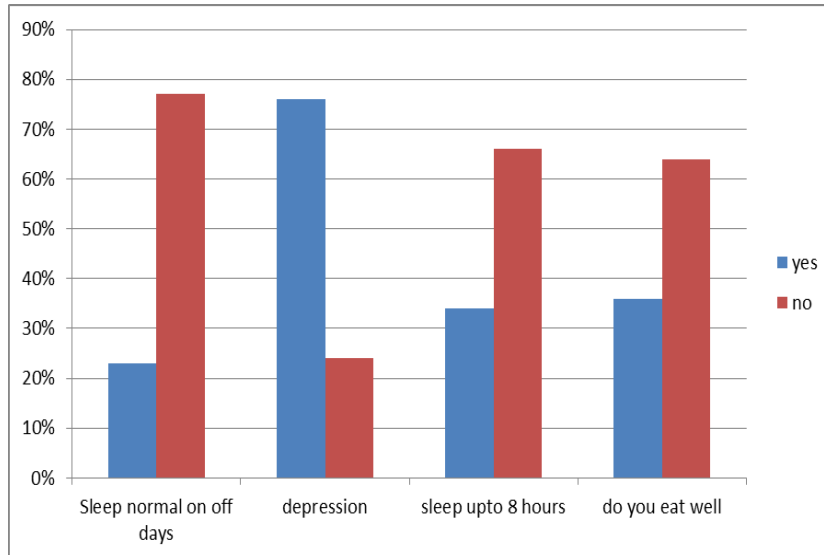


Figure 1: graphical representation of table 1.

From the table above, we can see that about 77 % of the participants are not able to sleep well even on of days.

Table 2: sleep normal on off days.

	YES	NO
Are you able to sleep normal on off days?	16 (23%)	54 (77%)

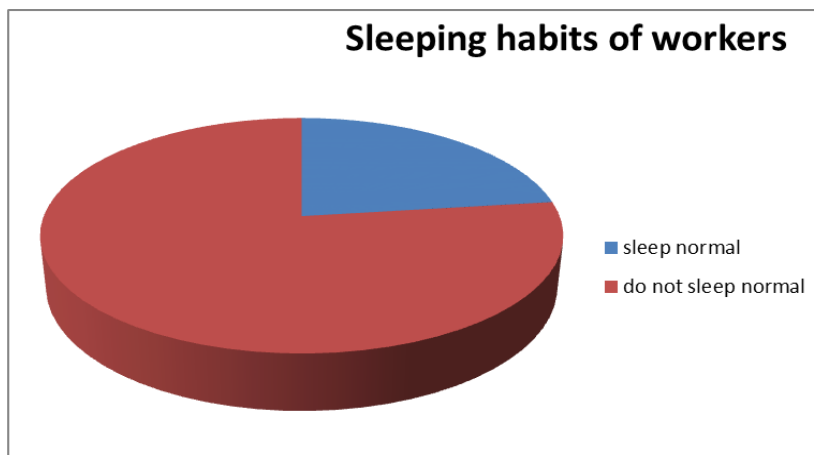


Figure 2: sleeping habits.

Using chi square test to analyse the table above, we could see that,

H0: they are likely to sleep normal on off days

H1: they are not likely to sleep normal on off days.

It was observed that the calculated value of $\chi^2 >$ the table value of χ^2 . Hence H0 is rejected at 5% level. This means that they are not likely to sleep normally on off days. We can also

deduce that the participants do not have the maximum hours of sleep even after shift. With a 66% against a 34%.

Table 3: Depression.

Depressed	53 (76%)
Not depressed	17 (24%)

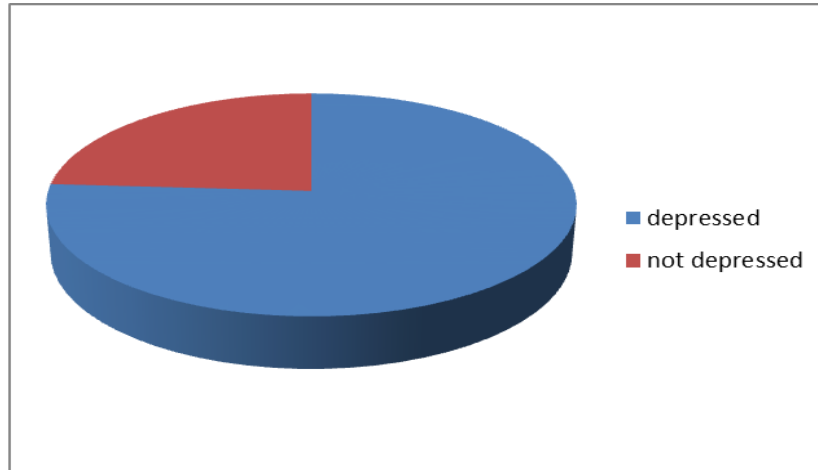


Figure 3: Depression.

From the analysis on table 3 it is observed that about 76% of the participants are depressed or the suffer depression from time to time. This is a good percentage to conclude that night shift is associated with depression and likely to be the cause of depression. Depression has been proved to exist among night workers.

Table 4: Use of Pills.

Use pills to sleep	23 (33%)
Do not use pills	47 (67%)

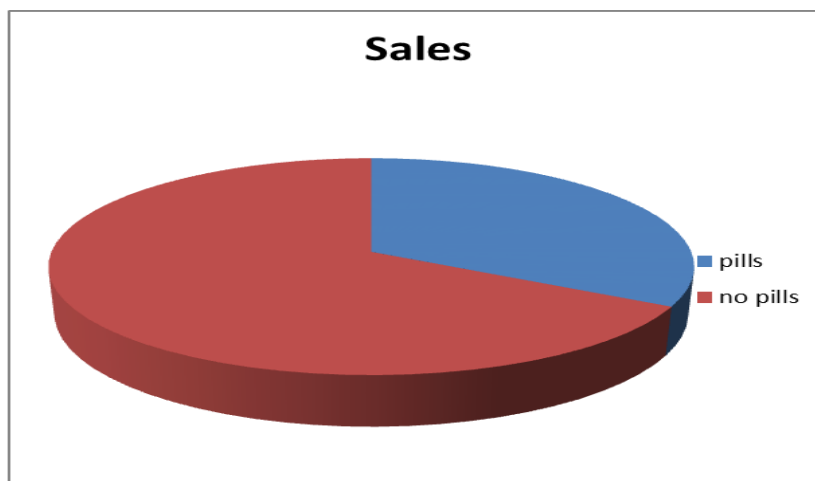


Figure: 4.

There is also a likely possibility to abuse sleeping pills as about 33% of participants use pills to sleep even without prescription. Even though majority do not use pills but it gives cause for an alarm.

Table 5: Age.

Below 30 years	2 (3%)
Above 30 years	68 (97%)

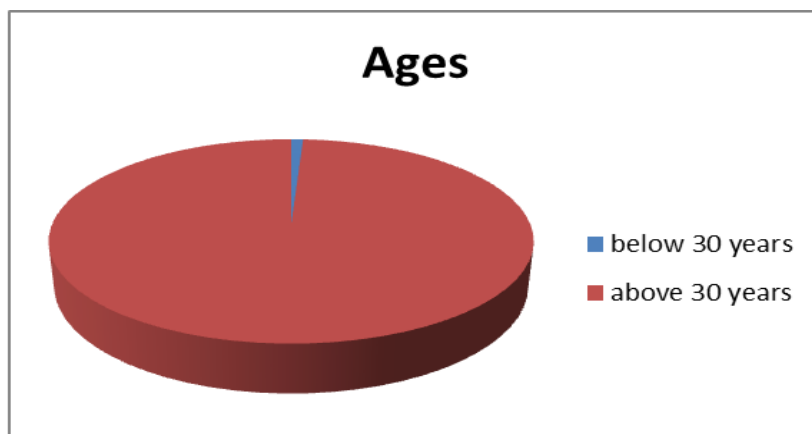


Figure: 5.

Based on the study, 97% of workers were found to be below 30 years of age and it can be concluded that night shift workers of IT companies are mostly young people.

DISCUSSION

From the results of the study, we can say that night shift affects the sleep cycle of the workers which in turn causes various issues like depression, improper feeding habits and use of drugs to sleep well. For the purpose of this study we limited the effects to only this much effects. As pharmacists we owe it to workers who visit us to advise them to sleep well, eat well and instead of self-medicating to visit a doctor and/ or a psychologist regularly to maintain good health.

SUMMARY AND CONCLUSION

This study was able to analyse the health effects associated with night shift from the perspective of a pharmacist. It has been well observed that night work or night shift goes a long way to affect the health and habits of individuals. The study was able to prove that night shift affects the circadian rhythm which in turn causes various disorders like insomnia, depression, stress and other health occurrences. Possible advice has been given to an extent which the community pharmacist is allowed to. It is important that these simple guidelines be

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