

Background:

Proportion of shift workers has taken a leap in the last 2 decades. Prevalence of Shift Work Disorder (SWD) is reported at 10-20% in the general population. Emergency Physicians (EP) & nurses are an important subset of the population whose health and wellbeing impacts morbidity and mortality of the rest of the population. This study aims to examine the prevalence of symptoms of SWD & its association with demographics, shift work patterns, sleep cycles, sleep hygiene, daytime sleepiness, personal health, occupational complaints & job satisfaction while covertly raising awareness about the same in the emergency medicine community.

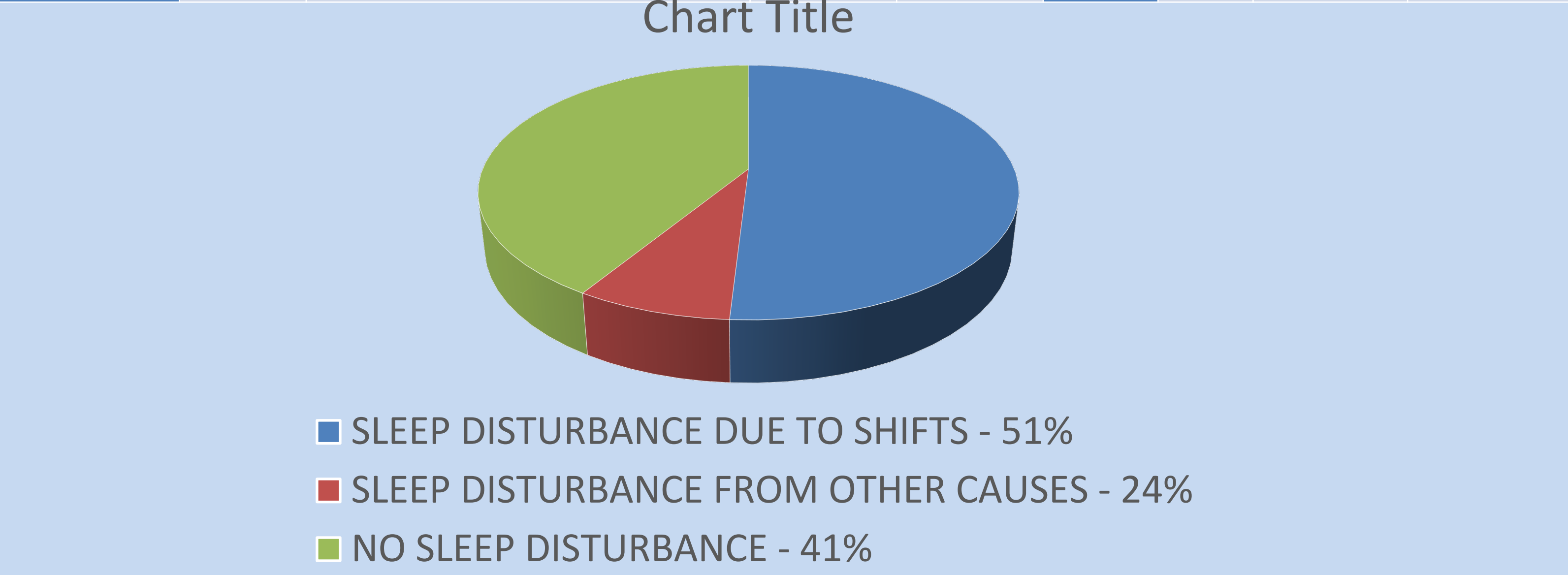
Sample, Methods & data collection:

A cross sectional survey of nurses and doctors working in emergency departments of at least 12 major urban hospitals across India was conducted during October 2016 – March 2017. Peer validated questionnaire with standard scales, descriptive & objective questions was emailed only to individuals who were known to be working in Emergency departments as nurses and doctors. This convenience-sample of email addresses was obtained through personal and professional contacts of the researcher. Those who volunteered responses were included in the study. No identifying information was collected. Those who reported diagnosed sleeping disorders were excluded from the analysis. For analysis, responses were divided into 2 groups – those who reported symptoms of SWD and those who did not. With aid of a professional biostatistician, these 2 groups were then compared for unique characteristics and statistically significant variables using t test, chi square test, odds ratio and logistic regression wherever applicable. Considering estimated prevalence of 10% based on available literature, a sample size of 139 positive participants was required for 95% confidence interval(CI).

•Results & Discussion:

- Prevalence rate of symptoms of SWD in emergency medicine providers in India is 27%. Symptoms of SWD occurred more frequently in people who performed shift work and night shift work compared to those who did not work in shifts.(p=0.048).
- Women are 3 times more likely to have SWD than their male counterparts.(p=0.0416) (OR = 3.006, 95% CI - 1.043-8.665)
- Shift work disorder is strongly associated with bad sleep hygiene. (p<0.0001 for SHI score >26)
- Though SWD is associated with higher ESS scores(p=0.015), SWD patients may have normal ESS scores. Having a normal ESS score does not exclude SWD or other sleeping disorders.
- People with SWD reported lower job satisfaction scores (p=0.037).
- (66.5%)majority of the study population report high job satisfaction scores(>3/5),
- People with SWD are more likely to use sleeping aids. (p=0.0014)(OR= 1.19, 95% CI -1.011-1.405.)
- Majority (60%) of study population can be said to have a delayed phase sleep cycle(evening type person), thus making them likely to function or perform better in shifts that start later in the day.
- Mean age of emergency medicine providers in India is approximately 31 years underlining the fact that it is a young and upcoming specialty.
- Mean BMI of study population is 26, suggesting most of our study population borders on overweight category.
- Commonest (>15%) health complaints recorded were fatigue, poor interpersonal relationships, irritability/mood swings, dark circles, weight gain, migraine, depression, irritable bowel, GERD, frequent URTIs among many others.
- Commonest occupational complaints were argument with coworker, dissatisfied patient, delayed management, inappropriate disposition and clumsiness in fine motor activity.

	N	VARIABLES	Mean	SD		N	Mean	SD
NO SWD	168	Age	31.29	7.64	SWD	48	33.42	7.87
		BMI	26.98	5.99			26.27	5.56
		Avg. night shifts per week	2.48	1.51			2.5	1.17
		Total_ESS	7.67	4.62			9.69	5.26
		Total_SHI	19.35	7.72			26.15	6.55
		Job satisfaction	3.4	0.94			3.09	0.8
		Avg. weekly work hrs.	52.38	12.43			51.46	13.53



Conclusions & Perspective:

Prevalence of symptoms of SWD in Emergency medicine workers is reportedly higher than the general population,. Subjects reporting to having symptoms of SWD objectively reported excessive daytime sleepiness thus potentially affecting all daily activities & walks of life. Lower job satisfaction scores reported by these subjects may support this claim. It can be hypothesized that shift work leads to unhealthy sleep hygiene which may be a major factor in development of symptoms of SWD. This can also mean that raising awareness on the subject itself may be sufficient in limiting the issue to a great extent.

Acknowledgements : Thanks to all my colleagues and supervisors.