NIGHT SHIFTS AND USE OF STIMULANTS AND SEDATIVES: a transversal study of a Portuguese medical population

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MATERIALS AND METHODS:

OBJECTIVES:

We evaluated the impact of night shifts in the Portuguese medical population and the frequency of reported use of stimulants and sedatives to aid in circadian transitions.

RESULTS:

When we take into account circadian misalignment, only 7% reported never sensing a change in the sleep pattern (difficulty initiating sleep, difficulty staying awake or non repairing sleep) for two or more days after a night shift, and 1.2% reported never feeling excessive sleepiness in consequence of night work. With regard to depressive and anxiety symptoms 17 out of the 217 participants scored positive for Major Depressive Disorder according to the PHQ-9 Questionnaire. ⁷

We surveyed the medical staff from two hospital centres via professional email address, inviting them to complete an anonymous electronic questionnaire regarding their night work, sleep disturbance, use of stimulants and sedatives. We included the PHQ-9 to assess for depressive symptoms.

BACKGROUND:

The adverse effects of night work and shift work on the well being of physicians is well reported and this includes affected mood, clinical performance and sleep disturbances. Some previous studies account for a substantial use of sedatives by the medical staff to aid in shift work and circadian transitions. ^{1,2,3}

Stimulant Use During A Night Shift (N=65)

Stimulant Use After A Night Shift (N=63)

93%

Report some change in the sleep pattern

Sedative use after a night shift (N=51)

CONCLUSIONS

Excessive night work is an important problem in the medical population and has a significant impact in sleep and mood. This is the first study of its kind conducted in the Portuguese medical population. Previous studies on sedative and stimulant use were conducted on Emergency Doctors only.^{4,5,6} The results of this study should be interpreted carefully and taken into account the external factors beyond shift work that may influence either use of sedatives and stimulants, either the general mood of this specific medical population. The excessive work load that has been subjectively felt in the Portuguese medical population is here accounted for, and considering the influence that excessive fatigue, circadian misalignment and altered mood have on human error, preventive interventions and more adequate schedules should be discussed to diminished this impact. More studies of this kind needed be conducted in the general medical population to confirm this results on a country wide scale.

REFERENCES:

1. Sleep and Circadian Misalignment for the hospitalist: A Review. Eric W. Schaefer, MD, Mark V. Williams, MD ePhyllis C. Zee, MD, PhD. 2011, Journal of Hospital Medicine, Vol. 0, pp. 1-8.; 2. Adverse metabolic and mental health outcomes associated with shiftwork in a population-based study of 277,168 workers in UK Biobank al, Cathy A. Wyse et. Feb de 2017, Annals of Medicine, Vol. 02:16, pp. 1-9.; 3. Health consequences of shift work and insufficient sleep. Goran Kecklund, Jhn Axelsson. 2016, BMJ, Vol. 355, pp. 1-13.; 4. The use of sleep aids among Emergency Medicine residents: a web based survey. Handel, Daniel A, Raja, Ali e Lindsel, Christopher J. Oct de 2006, BMC Health Services Research, Vol. 6, pp. 1-8.; 5. Emergency medicine residents' use of psychostimulants and sedatives to aid in shift work. MD, Bradley D. Shy, PhD, Ian Portelli e MD, Lewis S. Nelson. 2011, American Journal of Emergency Medicine, Vol. 29, pp. 1034-1036.; 6. Modafinil and zolpidem use by emergency medicine residents. McBeth BD, McNamara RM, Ankel FK, Mason EJ, et al. Acad Emerg Med, Vol. 16, pp. 1311-7.; 7. Preliminary validation study of a portuguese version of the patient health questionnaire (PHQ-9). S.Monteiro, et al. 2013, Journal of European Psychiatry, Vol. 28, p. 1.