



# **Libyan International University Faculty of Basic Medical Science**

## **A Comparison Of The Three Commonest Sleep Disturbances**

Submitted by: Mohamed Faiz El-Jwhri, 3<sup>nd</sup> year, faculty of Basic Medical Science, at Libyan

International University.

**Supervisor:** Dr. Sarah El-megerihi, tutor at the BMS Faculty, Libyan International University. **Date of submission**: 14<sup>th</sup>- April- 2018

**Report** submitted to fulfill the requirements of the Reproductive block.

#### **Abstract:**

In this report, a comparison has been made to discover the three main sleep disturbances and how can we differentiate between them. Sleep disorders are serious enough to interfere with normal physical, mental, social and emotional functioning. Obstructive Sleep Apnea is characterized by periodic narrowing and obstruction of the pharyngeal airway during sleep, while Central Sleep Apnea is defined by the cessation of air flow without respiratory effort. And Insomnia disorder is characterized by chronic dissatisfaction with sleep quantity or quality that is associated with difficulty falling asleep.

#### **Introduction:**

Sleep is a condition of body and mind which typically recurs for several hours every night, in which the nervous system is inactive, the eyes closed, the postural muscles relaxed, and consciousness practically suspended [1]. A sleep disorder, is a medical disorder of the sleep patterns of a person. Some sleep disorders are serious enough to interfere with normal physical, mental, social and emotional functioning [2]. Sleep disturbance is a common complaint in older people. The major factors contributing to sleep disorders in both normal ageing and dementia may be one or a combination of: 'Normal' physiological changes associated with ageing; Physical or mental health disorders; Unhealthy sleep hygiene [3]. According to Webmed website, the first three and commonest sleep disorders are: Obstructive sleep apnea, Central sleep apnea and Insomnia [4].

#### **Method:**

This report discusses the three commonest sleep disturbances: Obstructive sleep apnea, central sleep apnea and insomnia. The first study was placed in School of Medical Sciences, University of New South wales, Sydney, NSw, Australia. While the second study was placed in San Antonio, Texas. And the third study was placed in Department of Psychiatry, University of Pittsburgh School of Medicine USA.

#### **Discussion:**

The first study shows that Obstructive sleep apnea (OSA) is an increasingly common, chronic, sleep-related breathing disorder. OSA is characterized by periodic narrowing and obstruction of the pharyngeal airway during sleep. Untreated OSA is associated with long-term health consequences including cardiovascular disease, metabolic disorders, cognitive impairment, and depression. Common symptoms include excessive daytime sleepiness, fatigue, non-refreshing sleep, noct-uria, morning headache, irritability, and memory loss. Untreated OSA is also associated with lost productivity and workplace and motor vehicle accidents resulting in injury and fatality. 65% of the total number of patients who complaint from sleep disturbances are diagnosed with obstructive sleep apnea, ranging from mild OSA to sever OSA [5].

While the second study shows that Central sleep apnea (CSA) is defined by the cessation of air flow without respiratory effort. This condition is in contrast to obstructive sleep apnea (OSA), in which ongoing respiratory effort is present during respiratory events. Although these definitions are quite distinct, in reality, considerable overlap is present between OSA and CSA from the standpoint of underlying mechanism and clinical presentation. CSA is relatively uncommon, as compared with OSA. However, considerable overlap exists between CSA and OSA, from the

standpoint of pathogenesis as well as disease manifestations. It is always almost the same number of patients who suffer from CSA with patients who complain from OSA [6].

And the third study shows that Insomnia disorder is characterized by chronic dissatisfaction with sleep quantity or quality that is associated with difficulty falling asleep, frequent nighttime awakenings with difficulty returning to sleep, and/or awakening earlier in the morning than desired. Although progress been made in our understanding of the nature, etiology, and pathophysiology of insomnia, there is still no universally accepted model. Prevalence estimates of insomnia vary, with 30% to 43% of individuals reporting at least one nighttime insomnia symptom. Most reports suggest prevalence rates of insomnia disorder at 5% to 15%. Insomnia is a chronic problem in 31% to 75% of patients, with more than two-thirds of patients reporting symptoms for at least 1 year [7].

#### **Conclusion:**

As a conclusion for this report, some sleep disorders are serious enough to interfere with normal physical, mental, social and emotional functioning. The first study has fairly shown that Obstructive Sleep apnea is the most dangerous and life threating one. While the other two sleep disorders (Central sleep apnea and insomnia) are considered to be less common and less sever.

### Bibliography

- 1. Cambridgecollege.edu. (2018). *Cambridge College: Higher Education for Adult Learners*. [online] Available at: https://www.cambridgecollege.edu/ [Accessed 11 Apr. 2018].
- 2. Openlab.citytech.cuny.edu. (2018). *Citations | Guide to Sleeping for a better health.*. [online] Available at: https://openlab.citytech.cuny.edu/sleepingguide/citations/ [Accessed 11 Apr. 2018].
- 3. Dementiamanagementstrategy.com. (2018). *Sleep Disturbance*. [online] Available at: http://www.dementiamanagementstrategy.com/Pages/ABC\_of\_behaviour\_management/Management\_strategies/Sleep\_disturbance.aspx [Accessed 11 Apr. 2018].
- 4. Center, N. and Disorders, S. (2018). *Sleep Disorders: Symptoms & Types*. [online] WebMD. Available at: https://www.webmd.com/sleep-disorders/guide/sleep-disorders-symptoms-types [Accessed 13 Apr. 2018].
- 5. Osman, A., Carter, S., Carberry, J. and Eckert, D. (2018). *Obstructive sleep apnea: current perspectives*.
- 6. Atul Malhotra, R. (2018). *What Is Central Sleep Apnea?*. [online] PubMed Central (PMC). Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3417331/ [Accessed 11 Apr. 2018].
- 7. Ncbi.nlm.nih.gov. (2018). *Insomnia with physiological hyperarousal is associated with hypertensi -PubMed -NCBI*. Available at: https://www.ncbi.nlm.nih.gov/pubmed/?term=Insomnia+with+physiological+hyperarousal+is+as sociated+with+hypertension [Accessed 11 Apr. 2018].