

# Why do we need to sleep? - By Fatima Charifo

## Introduction

The actual reason for sleeping seems to be unclear at times. Perhaps this is because during sleep, by visual observation, it can be said that a sleeping individual is doing nothing significant or beneficial, except for being idle in the activity.

### Method:

However, scientific and systematic methods (from surveying population samples to investigating the brain's activity with a neuroscientific approach) could reveal statistics explanatory of this phenomenon that occurs every night and that makes up about 36% of our whole lives.<sup>(1)</sup>

The actual reasons for sleeping can be determined from the absence of it. The investigation of the effects of sleep-deprivation would therefore be excellent indicators of the purpose and importance of sleep biologically.

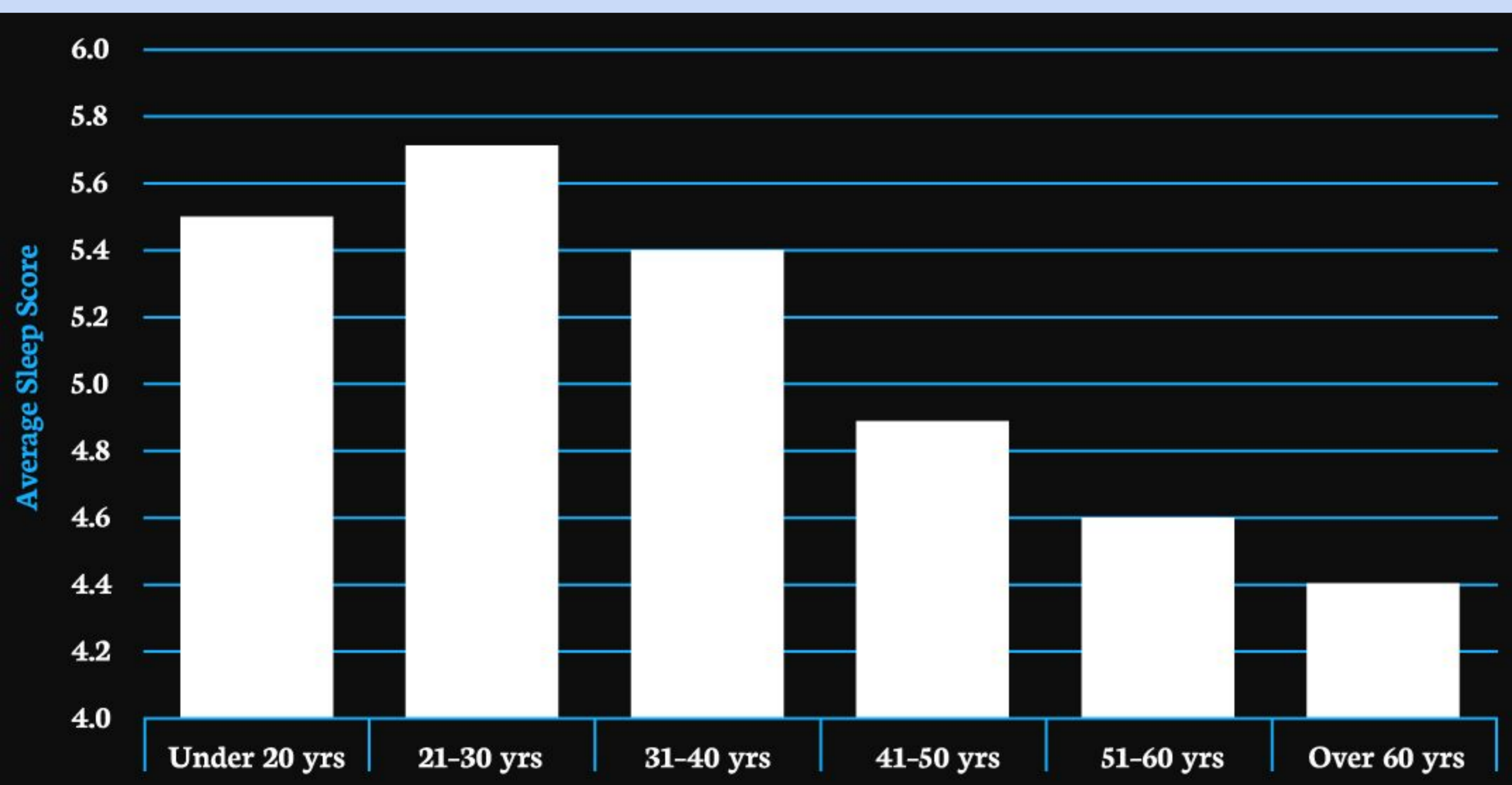


Figure 1 - Data from The Great British Sleep Survey by Sleepio. The sleep quality regarding the population of the UK seems to decrease with age.<sup>(2)</sup>

As it can be seen from the graph, those under 20 years (which includes teenagers) seem to have a lower average sleep score than that of the younger class of adults (21-30 years). This is worrying data as the early stage of life is when growth and development occurs at its most.

## Poor sleepers are...



		vs	
7 times more likely to feel helpless	56%		7%
5 times more likely to feel alone	53%		10%
3 times more likely to struggle to concentrate	62%		17%
Twice as likely to suffer from fatigue	88%		29%
Twice as likely to have relationship problems	77%		35%
Twice as likely to suffer from low mood	77%		27%
Twice as likely to struggle to be productive	74%		27%

Figure 2 - Data from The Great British Sleep Survey by Sleepio, showing some of the effects of poor sleep.<sup>(2)</sup>

## What happens during sleep:<sup>(3)</sup>

We have a sleep cycle which repeats itself every 90 minutes, alternating between REM (rapid eye movement) and NREM (non-rapid eye movement) sleep. Each part of the cycle can be divided into stages:

- Stage 1: The process of falling asleep - described as light sleep.
- Stage 2: One becomes disengaged from surroundings. Breathing and heart rate are regular, while body temperature drops.
- Stages 3 and 4: Deepest and most restorative sleep occurs, in which tissue growth and repair occurs and blood pressure drops while breathing slows.

REM recurs every 90 minutes. It is when the brain is active and dreams occur, the eyes dart back and forth quickly. Also, the body becomes immobile and relaxed.

## Bibliography:

- (1) - (TED (2013). Why do we sleep?. [video] Available at: [https://www.ted.com/talks/russell\\_foster\\_why\\_do\\_we\\_sleep?language=en#t-45515](https://www.ted.com/talks/russell_foster_why_do_we_sleep?language=en#t-45515)
- (2) - Great British Sleep Survey. (2019). Great British Sleep Survey 2012. [online] Available at: <https://www.sleepio.com/2012report/#impactOfPoorSleep>
- (3) - Sleepfoundation.org. (2019). What Happens When You Sleep? - National Sleep Foundation. [online] Available at: <https://www.sleepfoundation.org/articles/what-happens-when-you-sleep>

From this data it can be interpreted that poor sleep negatively impacts not only physical health (such as by inducing fatigue as shown) but also mental wellbeing - this is evident by difficulty to concentrate three times more than a 'good sleeper'. There is also a noticeable patterns of negative feelings associated with poor sleep (such helplessness and loneliness). These statistics also indicate that sleep may be important for maintaining good mental health.

## Conclusion:

It can be concluded that sleep is very important for the body and its restoration (healing). It can also be said that sleep quality tends to degrade with age. The seemingly unproductive act of sleeping actually aids in our functioning during the day.