## Sleep And Its Relation To Human Well-being

"Sleep is for the weak", a phrase often heard in today's tech world and on any teenager's chat groups. We find it cool pulling all-nighters and roaming around with dark circles shadowing under our eyes. Oftentimes, whilst binge-watching our favourite web series, studying for next day's test or when cramming up assignments at the very last minute, we forget our age-old comrade, sleep. Bumping into students sleeping on the MTR on their way to school has been becoming increasing these days. The more we progress with technology, the more we fall short on hours of sleep. With mobile devices coming in handy, it really makes us question if they are changing our lives to be better or are they for the worsening of it. Sleep occurs when one's consciousness is temporarily suspended though the brain is still in its active form. A good night's sleep typically lasts for around six to ten hours. It helps in the recuperation of organs, detoxification of substances in our body and the retention of memory, especially for the long term. An added benefit is that your mind will be fresh and ready for the hustle the next day brings.

What are the benefits of sleep? In my perspective, a person can attain the advantages of sleep in terms of two aspects, mental and physical. Physically, sleep can be used as a protection against several diseases. For instance, heart disease, stroke and high blood pressure. Several studies have also found out that sleep can help in controlling and regulating one's appetite, hence their including their body weights. Mentally, a person's memory is improved, makes one smarter and reduces stress as one will be able to concentrate more on their work. Apart from this, with sound sleep, a person is merrier and their mood is kept under control. However, an article by Lauren Martin on elite daily, proves otherwise. She has reinforced that people with high IQ levels, tend to stay up late at night when opposed to their less intelligent counterparts, following Satashi Kanazawa's report on young Americans published on Study Magazine. Which brings us to my dilemma and point of interest for this paper; is sleep necessarily needed at high amounts when we are considering high IQ levels and exam scores?

Sleep and memory, though they seem paradoxical when put next to each other as when you sleep, you tend to forget everything and sleep and for memory, you try to actively remember things, are in fact very highly correlated. Sleep remains to be one of the major routines in the retention of memory. And with sleep, a person's performance in various fields increases by $20-33 \%$ With various new studies and researches, it is quite evident that sleep is important for the processing of newly acquired information and long-term memory storage. Memories are first encoded when we engage in any form of activity involving the brain. These encoded memories require consolidation and need to undergo the process of memory stabilization so that they cannot be easily changed or disrupted. Memory consolidation consists of two specific processes, synaptic consolidation and system consolidation. It is said to be promoted by slowwave sleep. When one is in deep slumber, or in their first few hours of sleep, memory is said to be consolidated, and through the activation patterns in the brain while sleeping, memories are mirrored of what had been learnt throughout the day and are solidified and retained through such reactivation and rehearsal.

During adolescence, there is a natural tendency for one to go to sleep later. Plus, with immense technology, particularly mobile phones, our brains are tricked into believing that daylight is still
there and is confused whether or not to sleep due to the emission of blue light. This may lead to sleep deprivation and with prolonged lack of sleep, we may end up having insomnia. As a teenager, myself, it is necessary that I learn to balance sleep, my social life and studies. So, it really makes one ponder, if a good amount of sleep is proportional to good grades. According to the research done by a group of students from the Department of Psychology in the University of Minnesota in 2010, manifests a "positive correlation between amount of sleep per night with GPA, and a very negative correlation between average number of days per week that students obtained less than five hours of sleep and GPA". Surveys were distributed in classrooms on the University of Minnesota campus with questions regarding their sleep quality, quantity and their GPAs. It was found that students who slept for longer hours on average each night tended to have better grades indicating a clear-cut difference in the GPA of students who slept longer when compared to others.

Another research carried out by Megan L. Zeek and her team for the American Journal of Pharmaceutical Education, investigates sleep patterns and frequency of daytime sleepiness to assess the association between sleep duration and academic performance among students. Again a paper questionnaire was made for students at a pharmacy school to fill up. The results were that more than half of the students slept for less than seven hours at night during a typical school week. The percentage rose up to $80 \%$ during the days before an exam. Despite the sleep that they get at night, it has also been found that approximately $50 \%$ of the students felt drowsy and sleepy throughout their day at school every day. It is highly notable that this finding has led on to a conclusion of longer sleep duration the night prior to an examination resulted with higher course grades.

Thus, I believe it is essential for students and adults of all ages to understand the importance of sleep and to not forgo it for anything else. There should also be courses on the importance of maintaining good habits for a healthier life in colleges and schools to have a head start in achieving good grades. How lengthy should an optimal session be? In fact, it varies from person to person and usually a normal person could go on sleeping for around six to ten hours, with eight hours being the most desirable. Through these findings, one thing is clear, which is that the longer the duration of your sleep, the higher your GPA. But what happens when you oversleep?

Oversleeping can be caused by various reasons. One of them maybe that the lack of sleep throughout the weekdays may take a toll on a person's circadian rhythm, and due to the nonregular patterns of one's sleeping schedule, they may oversleep on the weekends to compensate the loss, which is not desirable in maintaining a healthy body. Another reason could be because of depression. Oversleeping can also be considered as a sleeping disorder just as how insomnia can be and the effects are almost like a jet lag. A person may feel tired all the time as their external bodies may not be able to synchronize with their internal cores. People with these conditions tend to nap excessively during daytimes as well, which can result in the bad moods and temper of a person. According to some researchers, they suspect that oversleeping may decrease levels of serotonin, an important chemical and neurotransmitter in the human body which helps in the regulation of mood and social behaviour.

When talking about good mood and appropriate social behaviour is very closely linked to a happier and a more fruitful life. In Dalai Lama's words, he mentions "Sleep is the best meditation". It is also understated that sleep is needed for a healthy body and a healthy mind. The American Academy of Sleep Medicine has published an article on sleep regularity and its
importance for the happiness and well-being of college students. The results were as such that irregular sleep schedules throughout the week were significantly associated with lower selfreported morning and evening happiness, healthiness, and calmness during the week. With a more optimistic outlook and a good mood, a person can get through a day happily. And for that to happen, sound sleep is necessary. Also, a person who lacks sleep, is a person who closely resembles being in a state of drunkenness. Their ability judge their social behaviour and to act appropriately in public decreases. Majority of car accidents are caused because of this. It is estimated that approximately $20 \%$ of all car crashes in the United States of America was caused by drowsy driving between 8 p.m. to 6 a.m. according to the Transport Accidents Commission. And simply drinking caffeine will not be the solution to this problem. There should be more awareness regarding these matters. One of the ways could be that posters and and leaflets may be produced and be available to the general public to force them to act properly in public or to avoid driving alone at late nights or early mornings. Our attention span and emotional stability is highly dependent on sleep. Though enough sleep may not directly correlate to a happier life, it still gives us a safer life and prevents us from getting involved in accidents.

In my point of view, sleep is necessary for all human as we are not nocturnal beings. Undoubtedly, there is a difference between waking up from a good night's sleep when compared to late nights and shortened sleep schedules. Speaking from personal experiences, I have witnessed myself getting better in terms of bodily health and mental well-being. I am also a firm believer that the thoughts and ideas a person gets at night are very precious and unique. Some of the greatest inventions and scientists were developed by burning the night candle. Also, as mentioned in the beginning, people with higher IQs tend to sleep later at night. So is a long duration of sleep really necessary? It may not always be the case. According to your own genes expressions, your optimal amount of sleep may differ from others. But it is necessary for us to strike a balance between everything that leads to doing well in school and to always remember to take everything in a limited amount, even if it is good for our lives. As, the saying goes, even the healthiest of things turn poisonous when taken in beyond their limits. Whether or not, sleep directly correlates to good grades and a happier life, it may not always be the case. Sometimes, there is not only one factor that leads to one single consequence.

As young adults, even though we have the more time than others, we tend to overlook the importance of sleep in our lives and sacrifice it for other activities. Not understanding that it may be one of the reasons to the increasing stress levels in teenagers these days, we still go on and struggle at the very last minute. Planning ahead can really boost the brain's activity and more ideas can be brought out to the pool. Plus, an added amount of long-term memory that follows a good night's sleep is beneficial to our lives as well! I also believe that it is not only the duty of students to maintain good sleeping habits but also of other stakeholders. Parents, can be living examples of having good sleeping schedules and pass it onto their children. Educators should have the responsibility to not cram assignments and exams very close to each other. They should be spread out so that students can recuperate and perform better with consolidated memory.

To sum it all up. All the findings have led on to one simple conclusion that sleep is necessary and is in fact good for our minds and body but it should be in adequate amounts for better grades and a happier life. Hence, next time when you see a student falling asleep on the MTR, lend a shoulder, maybe? And let them sleep. I believe that if we join hands with different parties of our society, we will be able to produce a better and a healthier living environment for today and for the forthcoming generations.

