

Beware of the Blue Light

After a long day at school on my computer taking notes, working on projects, and writing research papers, I come home, only to find myself on my desk, typing on my computer once again. Before I know it, the black curtain of night falls as I am still awake finishing a homework assignment. The moon is full, I can hear the whistle of trees, the buzz of insects, and the occasional sound of cars passing by as my eyelids grow heavier with fatigue. Finally calling it a night, I shut down my overheating computer, and slip myself in between my bed-sheets; however, before actually going to sleep, I go on my phone for about 30 minutes. I respond to any texts I have missed, set my alarm for the next day, and place my phone on my desk right next to my bed. This night, and all the other times I have followed this routine, I have had trouble sleeping, waking up the next morning feeling like I have not slept at all. I thought it was just me, but I soon learned that I am not the only one experiencing this problem.

With the growth of technology and the popularity of social media, people, especially teenagers, are frequently on their phones or computers from the moment they wake up until the moment they go to sleep. The prevalence of smartphones is directly related to sleep deprivation and sleeping disorders. The blue light that smartphones emit is very bright and has short wavelengths which can pierce through human retinas' photoreceptors. The brain mistakes this blue light for sunlight, and the body assumes it is day time. This suppresses the production of melatonin, a hormone that controls the circadian rhythm, or the body's sleep-wake cycle, and makes it harder to fall and stay asleep (Stutzer). Keeping a smartphone in reach can also disturb sleep cycles caused by late-night notifications, texts, and calls. 72% of children starting from the

age of six to 17, keep a smartphone in their bedroom, which adds up to about an hour of lost quality sleep every night (National Sleep Foundation).

Today, sleep deprivation is becoming more and more apparent in teenagers who stay up late on a computer finishing homework, or on their phones, scrolling through social media. I try to get into bed by 11:00 pm at the latest, but I know most of my friends do not sleep until 1:00 am or later, and homework is not the culprit causing them to go to sleep late, it is because they are under their bed-covers on their phones, on social media, or surfing the web. I alone can name numerous people who are sleep deprived; imagine how much teenagers are suffering from this problem throughout Hawai'i! According to Hawai'i Health Matters, in 2013, 26.8% of teenagers in Hawai'i got sufficient hours of sleep, while in 2017, that number dropped to only 22.8%, which is significantly less than the average percentage of 27.3%. We must act now to prevent this number from going any lower.

Sleep deprivation can also lead to other problems such as anxiety, depression, slow reaction time, and a decrease in academic performance. If we do not address this problem now, in 50 years' time, the blue light that smartphones emit may have caused brain tumors, cancer, and other life-threatening diseases that can affect adults, teenagers, and children as young as six years old. If we act now, we can prevent this from happening by limiting the time we spend on smartphones, and removing all technological devices from the room at night. We should also allow ourselves at least 30 minutes away from a smartphone, a tablet, or a computer before we go to sleep. Since the majority of people are unaware of the science behind this problem, we should educate children and teenagers about the dangers and long term consequences of using and looking at a smartphone for extensive periods of time. We should also reach out and educate

parents on this matter. Parents should set a shining example for future generations by not only limiting their children's smartphone usage, but also limiting their own screen time as well. I understand that adults have work, emails, and clients to attend to, but in order to save their children, they must first save themselves.

Clarence T.C. Ching was a generous and hard-working man who always dreamt big, and strove to create a better future. He passionately cared for his community, and in his honor, the Clarence T.C. Ching Foundation was established, to keep his legacy and dream of "making Hawai'i a better place" alive. His lifelong relationships were not created by looking at a smartphone screen all day, he physically went out, donated funds to numerous organizations, and made a powerful, positive change in his community, and in the hearts of his fellow citizens.

Mr. Ching would never have imagined future children spending every day in front of a screen, unknowingly increasing their own risk of succumbing to life-threatening diseases. He definitely would have envisioned children running across the glimmering beaches of Hawai'i, smiling, and laughing their hearts out. We can make his vision a reality by educating others about the dangers of the blue light that mobile devices emit, and by limiting the time we spend on smartphones, tablets, and computers. By protecting ourselves today we can protect the minds and lives of children tomorrow.

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