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Final Paper

**The Second Alarm**

**Introduction:**

An individual's time management skills especially for college students is very important. Being able to have enough time during the day to complete a multitude of tasks without overwhelming oneself is vital to stay successful. But one of the leading causes to someone's time management skill being interpreted is an individual's oversleeping habits. Oversleeping can have a serious amount of consequences for college students who are already balancing a number of responsibilities. It can lead to missed classes, assignments, and meetings, which can ultimately impact their grades and academic success. Oversleeping can also affect one's mental health, causing them to feel lethargic, unmotivated, and even depressed. This unhealthy habit happens to a majority of individuals around 55-60% of men and women tend to oversleep due to hitting the snooze button on they're alarms. Being in arms reach it can be very simple to hit the snooze button. On average around 6.31% of women and 5.56%of men admit to hitting the button multiple times since it's so simple to turn off your alarm and go back to bed. To go more into detail the **snooze button** is a button on an alarm clock that stops the alarm from making noise for a short time so that the sleeper can rest for a few more minutes.

To improve time management skills, it's important to develop healthy sleeping habits. In order to prevent the habit of hitting the snooze button or oversleeping we are developing a device that will be able to detect sound at a higher frequency and sense light differences. The sound detection will be used to detect when the alarm will be going off and once the alarm is detected it will begin to sense light differences in the room. If there are no changes in the room then the device will begin to go off on its own. The user will have to get up and manually turn the device off therefore getting them up out of bed. The device will be installed in a specific spot in a room where it will be able to detect light differences, for example putting the device in the top corner of your room. The goal is to get the person out of bed while also getting rid of the habit of hitting the snooze button/oversleeping.

**Literature Review:**

**Sleep Duration in Adolescents Correlates with Daily Stressors**

<https://doi.org/10.1016/j.sleh.2016.05.006>

From a developmental perspective sleep deficit is common for adolescents. When adolescents attempt to compensate for their insufficient sleep, (i.e. delaying their sleep time and wake time on weekends) they inadvertently contribute to worsening their sleep deficit. Creating an irregular circadian rhythm and thus impacting their everyday functioning. Both younger, (ages 12-13,) and older, (ages 14-16,) adolescents with a less than optimal TST, (Total Sleep Time,) were associated with increased emotional and behavioral problems. Reducing the drastic shift between weekday and weekend sleep-wake patterns, which contribute to an irregular circadian rhythm, is an important factor in mitigating the risk for further sleep deficits and daytime impairment.

**How Many Times People Hit Snooze** <https://www.apartmenttherapy.com/how-many-times-do-most-people-hit-the-snooze-button-and-more-fascinating-alarm-clock-stats-243011>

A little more than one third of (35.7%) of women and (43.39%) of men admit that they never hit the snooze button, while the rest in the case study admitted to hitting the snooze at least once. But around (6.31) of women and (5.65%) of men admit to hitting the snooze button multiple times.

**Effects of Hitting Snooze**

<https://link.springer.com/article/10.1186/s40101-022-00317-w>

The article examines the effects of using a snooze alarm on sleep inertia, a state of drowsiness and impaired cognitive and motor performance that can occur after waking up. The study involved 22 healthy participants who were randomly assigned to either a snooze or no-snooze group. The results showed that the snooze group experienced less severe sleep inertia than the no-snooze group, suggesting that using a snooze alarm may help reduce sleep inertia and improve alertness after waking up. The study highlights the potential benefits of using a snooze alarm but notes that further research is needed to determine the long-term effects on sleep quality and daytime functioning.

**Average American Sets 4 Alarms to Wake Up**

<https://studyfinds.org/snooze-button-social-life/>

The article investigates the relationship between snooze button reliance and social life. According to the article, the study found that people who frequently hit the snooze button in the morning are more likely to have a negative impact on their social life. The study involved 2,000 American adults and found that snooze button users are more likely to be less productive, less motivated, and more socially isolated than those who wake up immediately after their alarm goes off. The article highlights the importance of developing good sleep habits, such as getting enough sleep and waking up at the same time every day, to improve productivity, motivation, and social interactions.

**Sleep/Wake Patterns are Associated with Poor Academic Performance**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5468315/>

College students are notorious for suffering from sleep deficiency, however, there are more variables at play than just sleep duration. A students quality of sleep varies depending on their circadian rhythm and the time that they go to sleep/wake up. Students who frequently change their sleep patterns, (i.e. sleep timing & light exposure levels,) will experience the effects of a misalignment between their circadian rhythm and their sleep/wake cycle. Results have shown a positive correlation between the SRI, (Sleep Regularity Index,) of a student and their academic performance. Meaning that a regular sleep pattern is associated with higher academic performance, where every increase of 10 in a students SRI was associated with an averaged increase of 0.10 in their GPA. This means that waking up at a consistent time can be an influential factor in a college student’s academic success.

**CDC talking out importance of getting enough and shows statistics** [**https://www.cdc.gov/media/releases/2016/p0215-enough-sleep.html**](https://www.cdc.gov/media/releases/2016/p0215-enough-sleep.html)

The article cites a study conducted by the CDC that found that one in three American adults are not getting enough sleep on a regular basis, which can lead to various health problems such as obesity, diabetes, and depression. The article also provides recommendations for adults to improve their sleep habits, including maintaining a consistent sleep schedule, creating a relaxing sleep environment, and avoiding stimulating activities before bedtime. The CDC hopes to raise awareness about the importance of getting enough sleep and its impact on overall health and wellbeing.

**Repercussions of Turning Off Alarm Clocks in the Morning**

[**https://nypost.com/2022/12/12/people-using-an-alarm-clock-are-chronically-tired-study/**](https://nypost.com/2022/12/12/people-using-an-alarm-clock-are-chronically-tired-study/)

The article reports on a study that suggests people who use an alarm clock to wake up in the morning are more likely to be chronically tired. According to the article, the study involved 1,000 American adults and found that those who rely on an alarm clock to wake up are more likely to experience fatigue, irritability, and difficulty concentrating during the day. The study also found that those who wake up naturally without an alarm clock are more likely to feel refreshed and alert throughout the day. The article highlights the importance of getting enough sleep and developing good sleep habits, such as maintaining a consistent sleep schedule and creating a relaxing sleep environment, to improve overall health and wellbeing.

**Circadian Rhythms** <https://www.sleepfoundation.org/circadian-rhythm>

Circadian rhythms are physical and mental changes that follow a 24-hour cycle, and are a part of our body’s internal clock. The master clock, located in the brain, synchronizes the different rhythms throughout our body. It itself is influenced by environmental cues, such as light. This explains why our body is tied to a day-night cycle, as well as how our rhythms can be thrown off due to an inconsistent sleep-wake cycle. A good way to regain your alertness is to maintain a consistent cycle of waking up at the same time and exposing yourself to natural light, especially early in the day.

Sleep affects all aspects of our day, so it’s important to maintain a healthy sleep cycle. People of all ages are susceptible to sleep deficit, and it is easily seen affecting every aspect of our daily lives. Ranging from emotional and behavioral outbursts, poor academic performance, impairment of cognitive and motor performance, as well as an increased likelihood of depression, among many other things.

Fixing the problems created by a sleep deficit is more than just getting extra sleep on the weekends. It’s quite the opposite, it’s about getting the same amount of sleep by maintaining a consistent schedule of waking up and going to bed at the same time every day. Waking up at the same time and exposing yourself to natural sunlight early in the morning doesn’t just improve your health, but it makes you more alert, refreshed, and able to have a productive day. Eventually leading to a sleep pattern where you don’t even need an alarm, naturally waking up on your own.

However, it can be difficult to achieve this if your circadian rhythm is out of sync, and especially if you can’t wake up in the first place to correct it.Often time we try to counteract this by setting multiple alarms. But even then we still hit the snooze button, exacerbating the problem, and succumbing to the sleep inertia and chronic fatigue that plagues our everyday life. Drastically reducing our ability to get things done. What’s needed is a foolproof way to ensure we wake up and get out of bed, and cannot be avoided with the tap of a button.