

**The Relationship Between TikTok Use Before Bed and Sleep Quality  
Among College Students  
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### **Abstract**

Prior research suggests that by using social media before bed that it is linked to having a decreased sleep quality throughout the night, mostly seen in young adults. Researchers have limited knowledge about specific platforms, such as TikTok, and how it affects perceived sleep quality in college students. This study will look to examine the relationship between the frequency of watching TikTok videos before bed and perceived sleep quality in undergraduate college students. A convenient non-random sample of 200 students between the ages of 18 and 25 will be recruited through university affiliated social media groups, the college newsletter, and campus bulletin boards spread around campus. This study will be cross-sectional and will be conducted through an online survey. Participants will complete questions related to how often they use TikTok before bed and their perceived sleep quality. There are some limitations to this study which include, untested survey questions and a non-random sample, as this might affect the reliability of the results and limit the generalizability.

## **Introduction**

Social media has become a major part of many people's everyday life, especially for college-aged individuals. A recent survey by the American Academy of Sleep Medicine (2024) revealed that 93% of Generation Z or more commonly known as Gen Z reported that they stay up past their intended bedtime due to social media use. This statistic shows a growing concern regarding how digital media - mainly platforms like TikTok - could influence important aspects of one's life such as sleep quality. As college students engage with short-form content late at night, it is necessary to understand the potential consequences that could come with.

This study looks to investigate the relationship between the frequency of watching TikTok videos before bed and the perceived sleep quality in college students. Tiktok is a widely popular app to this day and with its use of addictive content design, it is better to understand its potential impact on sleep may improve wellness initiatives and inform digital health education for students.

The literature review is going to be structured as follows. The first section will examine the research related to social media usage before bed and its overall effects on sleep quality. The second section of the literature review will dive into studies that focus on TikTok use and how its unique features and behavioral impacts may influence sleep. Following these two sections, the rationale below, will propose the research question.

## **Literature Review**

### ***Social Media Use Before Bed***

Social media use is defined as the time spent actively engaging with digital platforms to view, share, or interact with content (van der Schuur et al. (2018). This section will look into

how nighttime engagement with social media affects one's sleep. Garrett et al. (2016) found that students who frequently used social media before bed reported lower sleep quality and would experience more sleep disturbances. Abu-Snieneh et al. (2020) also stated that high social media use would negatively impact students' sleep and academic performance.

The timing of social media engagement is also crucial to understanding more. Exelmans and Scott (2018) noted that students who habitually checked social media before going to bed, would face a greater sleep disruption. Van der Schuur et al. (2019) showed that social media-related stress was linked to longer sleep latency and increased daytime sleepiness.

Pre-sleep arousal and emotional responses, contributed to this association as according to Cheng et al. (2024), in a meta-analysis, found that compulsive social media use was strongly associated with sleep disturbances, mostly in younger individuals. Ozer et al. (2024) found that emotional regulation difficulties linked to social media led to reduced sleep quality.

The influence of screen light and emotionally stimulating content is another key part in poor sleep. Abu-Snieneh et al. (2020) stated that screen exposure before bed can contribute to physiological stimulation, which can delay sleep onset. Exelmans and Scott (2018) noted that Page 3 students with high levels of fear of missing out (FOMO) were more likely to use social media late at night, which would worsen their sleep quality.

Finally, emotional investment and sleep disturbances are related. Van der Schuur et al. (2018) found that females experienced greater daytime fatigue that is associated with social media stress. Ozer et al. (2024) supported that negative emotional arousal before bed was linked with poor sleep quality.

### ***TikTok Usage and Sleep Quality Among College Students***

TikTok is defined as a video-sharing platform where users create and engage with algorithmically personalized short-form content (Kinsella & Chin, 2024). This section will talk on how TikTok's platform design influences nighttime use and perceived sleep quality. Kinsella and Chin (2024) argued that TikTok's infinite scroll design creates a heightened cognitive arousal before going to bed. Li et al. (2023) talked on the concept of "TikTok self-control failure," where users would struggle to stop scrolling, this contributes to bedtime procrastination and poor sleep quality.

Constant short-video interaction can increase sleep problems. Nabors and Leblanc (2022) showed that students who frequently used TikTok before bed would have a greater difficulty falling asleep and reported a lower sleep quality. Papathanasiou and Zisiou (2023) found a negative correlation between excessive TikTok use and sleep quality throughout college students.

Addiction related behaviors and psychological factors can also play a huge role that can contribute to sleep problems. Wang et al. (2021) stated the feeling of missing out mediated the link between TikTok use and a reduced sleep quality, with those who experience a higher feeling of missing out were more likely to engage with "doom scrolling" with TikTok at night. Zhou and Li (2022) found that compulsive TikTok use was also associated with reduced melatonin levels and would delay sleep onset.

TikTok's personalized algorithm would increase the likelihood of prolonged use. Smith and Johnshon (2023) found that users who spent more time on TikTok at night compared to other social media platforms, would report more frequent nighttime awakenings and poorer sleep ratings.

Screen exposure from mobile devices impacts physiological processes. Zhou and Li (2022) stated that blue light that is emitted from phones while engaging in TikTok usage before bed would suppress melatonin production. Nabors and LeBlanc (2022) supported this by talking on how physiological and psychological arousal are compounded when TikTok is used before bed.

### **Rationale and Research Question**

The evidence shown, suggests a strong relationship between social media use and lower sleep quality. Garrett et al. (2016) found that frequent nighttime social media use would increase sleep disturbances. Abu-Snieneh et al. (2020) reported that long exposure to social media before bed could negatively impact cognitive functions and sleep quality. Ozer et al. (2024) pushed that emotional investment in social media would contribute to sleep difficulties.

Specific research on TikTok supports these different findings. Kinsella and Chin (2024) reported that TikTok's design would lead to increased cognitive arousal before sleep. Li et al. (2023) showed that users often struggled to get off the app, which resulted in procrastination to go to bed. Wang et al. (2021) found that the fear of missing out would predict compulsive TikTok use at night, which would worsen sleep.

Based on this evidence, it is likely that the frequency of watching TikTok videos before bed and perceived sleep quality in college students are related. This research question should be further tested to determine the relationship.

**RQ: Is there a relationship between the frequency of watching TikTok videos before bed and perceived sleep quality in college students?**

## **Methods**

### ***Participants***

This study will gather a convenience non-random sample. Two hundred participants will be recruited for this study. Other than being a member of the population, participants must also meet the following criteria: they must be currently enrolled college students between the ages of 18 and 25. Participants will be recruited by posting in the campus newsletters, bulletin boards, and by posting a survey invitation on university-affiliated social media groups. These methods stay consistent with a convenience sample of the student population.

### ***Procedures***

A cross-sectional only survey is proposed. Participants will receive an email or social media post with the link to the survey. Participants will have to complete an informed consent form after they click the link to the survey. If the participants agree to participate, they will then see the survey questions. The estimated time to complete the survey will take about 8-10 minutes. Following answering all the questions, the participants will be thanked for their time.

## **Measures**

***First Variable***

The variable being measured is the frequency of TikTok use before bed. A new measure has been created to measure this variable. The new measure has 5 question items, and uses a Likert-type scale. The new measure has the participants respond on a 1-5 strongly agree to strongly disagree. A sample question is, "I often lose track of time watching TikTok before bed." Reliability and validity have not yet been tested for this measure.

***Second Variable***

The variable being measured is perceived sleep quality. A new measure has been created to measure this variable. The new measure has 5 question items, and is using a Likert-type scale. The new measure has participants respond on a 1-5 strongly agree to strongly disagree scale. A sample question is, "I feel well-rested after a night of sleep." Reliability and validity have not yet been tested for this measure.

***Demographics***

The demographic questions will include questions about age, race, and gender

***Limitations***

A low response rate is expected as this is an online survey and this is a limitation. Reliability and validity have not been tested for either of the measures for this study, and this is a limitation. Generalizability is a limitation as this study has a non-random convenience sample.



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## Appendices

### **TikTok Use Before Bed (5 items)**

1. I frequently scroll through TikTok at night before going to sleep.
2. I often lose track of time watching TikTok before.
3. I use TikTok as a way to relax right before sleeping.
4. I have trouble stopping TikTok use once I start watching it at night.
5. I usually spend more than 30 minutes on TikTok before going to sleep

### **Perceived Sleep Quality (5 items)**

1. 1. I feel well-rested after a night of sleep.
2. I often wake up feeling tired, even after a full night's sleep.
3. I have difficulty falling asleep after using social media at night.
4. I believe my sleep quality is negatively affected by my bedtime habits.
5. I sleep soundly throughout the night without many interruptions.

### **Demographics Questions**

- What is your age? (open-ended)
- What is your gender?
  - Male
  - Female
  - Nonbinary
  - Prefer not to say
  - Other: \_\_\_\_

- What is your race or ethnicity? (Select all that apply)
  - White
  - Black or African American
  - Asian
  - Hispanic or Latino
  - Native American or Alaska Native
  - Native Hawaiian or Pacific Islander
  - Other: \_\_\_\_