



SURVEY ON TIKTOK USAGE, SLEEP PATTERNS, AND ACADEMIC PRODUCTIVITY AMONG UNIVERSITY STUDENTS

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Abstract:

The rise of TikTok has raised concerns about its effects on students' sleep and academic performance. This study surveyed 250 university students in Sialkot to examine relationships between TikTok usage, sleep quality, and academic productivity. Results indicate that excessive TikTok use, particularly before bedtime, significantly disrupts sleep patterns and contributes to distraction, procrastination, and lower academic outcomes. Grounded in Uses and Gratifications Theory, the study highlights that while TikTok fulfills social and entertainment needs, excessive engagement produces unintended negative consequences. The findings underscore the need for awareness campaigns, sleep hygiene education, and structured study schedules to mitigate the adverse effects of social media on students' health and academic success.

Keywords: TikTok, Sleep Patterns, Academic Performance, University Students, Social Media Impact

Chapter 1

Introduction

In the 21st century, the popularity of social media platforms, particularly TikTok, has grown exponentially, especially among adolescents and young adults. The highly engaging nature of short-form video content, coupled with features that encourage continuous scrolling and content creation, has made these platforms an integral part of daily life for many students. This widespread use has raised concerns about its potential impact on youth well-being, particularly in societies like Pakistan, where social norms and expectations regarding appearance and behavior are often stringent. Excessive engagement with such platforms may influence daily routines, academic focus, and sleep patterns, prompting the need for systematic research to understand its effects on the overall health and productivity of young people. (Safdar, 2023; Syed et al., 2023). Previous research has indicated that excessive use of social media platforms, including TikTok, can negatively affect various aspects of young adults' well-being. Among university students, high engagement with such platforms has been linked to reduced academic performance, decreased concentration, and disrupted study routines. Additionally, prolonged use, particularly during late hours, has been associated with poor sleep quality and irregular sleep patterns, which may further impact students' cognitive functioning and overall academic success. Despite these findings, there is limited empirical evidence in the Pakistani context, highlighting the need for focused research on how TikTok usage affects students' academic outcomes and sleep health. (Primack et al., 2017; Twenge, 2017). Furthermore, social interactions on platforms like TikTok may contribute to increased social anxiety among university students. Engaging with constant notifications, peer comparisons, and online feedback can heighten stress and distract students from their



academic responsibilities. This heightened social anxiety may also disrupt sleep patterns, as students may stay awake longer to engage with content or worry about online interactions, ultimately affecting both their sleep quality and academic performance. Despite these potential impacts, there is limited research in the Pakistani context examining how TikTok use influences students' social experiences, sleep health, and academic outcomes, highlighting the need for focused investigation. (Andreassen et al., 2017; Syed et al., 2023B). In addition to psychological effects, numerous studies have identified a significant association between social media use and sleep disturbances. Increased screen time, particularly among young adults and university students, has been shown to disrupt sleep schedules and reduce overall sleep quality. Such sleep disturbances can lead to a range of adverse health outcomes, including fatigue, reduced cognitive functioning, and decreased academic performance. These findings underscore the importance of investigating how platforms like TikTok may influence students' sleep patterns and overall well-being. (Cain & Gradisar, 2010; Levenson et al., 2016). Less sleeping time leads to various health issues (Faelens et al., 2021; Safdar, 2023B; Safdar & Abbasi 2020).

Problem Statement:

The rapid growth of social media platforms has significantly transformed the daily routines of university students, with TikTok emerging as one of the most popular applications among youth due to its short, engaging video content. While the platform offers entertainment and creative expression, concerns are increasingly being raised about its excessive use and its potential influence on students' academic life and sleep patterns. In Pakistan, particularly in cities like Sialkot, limited empirical research has been conducted to examine how TikTok usage affects university students' academic performance and sleep health. The absence of context-specific evidence makes it difficult for educators, parents, and policymakers to understand the real implications of this growing digital trend. Therefore, this study seeks to address this gap by investigating the relationship between TikTok usage, academic performance, and the prevalence of sleep disorders among university students in Sialkot.

Significance of the Study:

This study is significant as it provides empirical insight into the relationship between TikTok usage, academic performance, and sleep patterns among university students. By focusing on these two critical aspects of student life, the study highlights how excessive engagement with short-form video content may influence learning outcomes and sleep health. The findings will be useful for educators in understanding emerging digital challenges faced by students and in developing awareness strategies within academic institutions. Parents and students may also benefit by gaining a better understanding of healthy social media usage. Moreover, this research will contribute to the limited local literature on social media effects in Pakistan and can serve as a foundation for future academic and policy-oriented studies in this area.

Research Objectives

1. To investigate the relationship between TikTok usage and the academic performance of university students in Sialkot.
2. To assess the association between TikTok usage and the prevalence of sleep disorders among university students.

Research Questions

1. Is there a relationship between TikTok usage and the academic performance of university students in Sialkot?
2. To what extent is TikTok usage linked with sleep disorders among university students?



Chapter 2

Literature review

One study examined the relationship between student use of TikTok and academic achievement (Kumar, Alzahrani, & Kinsara, 2020). Studies have demonstrated a negative correlation between TikTok usage and academic performance among university students. Students who spend more time on TikTok tend to have lower grade point averages (GPAs) compared to their peers. Furthermore, excessive use of the platform has been associated with increased procrastination, which can disrupt study routines and contribute to decreased academic achievement. These findings suggest that high engagement with TikTok may interfere with students' time management, focus, and overall learning outcomes. Another study examined the relationship between TikTok use and academic achievement among high school students (Abdullah, Ali, & Ahmed, 2020). Research has indicated a negative correlation between TikTok usage and academic performance among university students. Those who spend more time on the platform tend to have lower grade point averages (GPAs) than their peers. Excessive use has also been linked to increased procrastination, which can disrupt study routines and further reduce academic achievement. These findings suggest that heavy engagement with TikTok may adversely affect students' time management, concentration, and overall learning outcomes.

Social media addiction is associated with poor academic performance (Błachnio et al., 2019). One study examined the relationship between TikTok addiction and academic performance in college students (Kang, Sung, Choi, & Lee, 2020). Studies have shown a significant negative correlation between TikTok addiction and academic achievement. Students addicted to TikTok scored lower than students who were not addicted.

Another study examined the relationship between TikTok addiction and executive function (Zhao, Chen, Zhang, & Wang, 2021). Executive functions refer to the mental processes that allow an individual to plan, focus, and complete tasks. One study found that TikTok addiction was inversely related to executive function. In addition, studies have shown that students who are addicted to TikTok. Distraction is one of the biggest challenges of social media platforms like TikTok. One study examined the impact of TikTok on students' academic performance, focusing on attention (Wang, Han, Zheng, & Yao, 2021). A study found that students who used TikTok as a form of entertainment had lower academic performance than students who did not use TikTok. Additionally, the study found that students who were more distracted by TikTok scored lower than students who were less distracted. Motivation is another factor that affects learning performance. One study examined the impact of TikTok on student learning motivation (Lin & Liu, 2021). Studies have shown that TikTok has a positive effect on students' motivation to learn. Students who used TikTok for educational purposes were found to be more motivated to learn than students who did not use TikTok. In addition, the study found that TikTok improved students' ability to acquire information and reinforced the information they received. Studies have shown that excessive use of social media platforms such as TikTok is associated with a number of negative outcomes, including depression, anxiety, and low self-esteem (Chen, Yang, & Gao, 2020; El-Gaillar, Moran, & Hawkes, 2020). TikTok's emphasis on looks and popularity may cause adolescents to prioritize likes and followers over authentic self-expression, leading to mental fatigue (El-Gayar et al., 2020). Additionally adolescents who use TikTok excessively may experience insomnia and addiction due to the addictive nature of the app (Chen et al., 2020). This effect may be especially prevalent among young Nigerians due to interpersonal and aggression issues (Ezenduka, 2019).



TikTok has been shown to help build new friends and online communities. However, teenagers can be exposed to cyber bullying, harassment and sexual assault. Adolescents, especially girls, have reported receiving unwanted sexual messages and comments on their TikTok accounts (Gangadharbatla, 2020; Kaya & Bicen, 2021). Participation in tests and popular associations can lead to a loss of interest in physical activities and decreased social interaction, which can lead to mental and physical health problems in adolescents (Kaya & Bicen, 2021).

Studies have shown that social media use can lead to procrastination and poor academic performance (Jowhari, 2018). The addictive nature of TikTok can interfere with school work, lead to lower grades, and lower academic performance (Kaya & Bicen, 2021). Chronic exposure to TikTok has been shown to cause extreme slowdowns (Sehawatpour, 2019). Nigerian youths are particularly vulnerable to these influences due to the increasing distraction of social media in school settings. TikTok has been criticized for promoting pornographic content, including videos that sexually exploit children and encourage questionable behavior. App algorithms have been shown to lower adolescents' moral and ethical standards by increasing exposure to harmful content such as nudity, sexual dialogue, and political hate (Wang, Chen, & Liang, 2021). Adolescents in Nigeria may also be vulnerable to these influences due to limited parental control and peer pressure (Ezenduka, 2019). Hafeez and Hussain (2023) measured effects of TikTok use and sleep quality among females' college undergraduate of Pakistan. To measure the phenomenon of concern, data was collected from 500 undergraduate students aged 18-25 years old. The collected data measured aspect of TikTok use and sleep quality among the young females. The results of the study revealed that more use of TikTok significantly affected the sleep quality and less educational performance. These results significantly contribute the literature having a relationship among social media use and psychological issues.

TikTok use makes pre-sleep mental excitement and daytime exhaustion. TikTok is quite possibly of the most popular application (Wang & Scherr, 2021). The study explored TikTok's never-ending stream of content, the requirement for time stamps or notification of genuinely being "all found a workable pace," and concealing the phone's clock simplify it to disregard time on TikTok. In any case, there is an absence of information about how TikTok use may consequently obstruct our circadian rhythms, especially our rest cleanliness. By zeroing in on pre-rest mental excitement, this study expected to close this information hole by examining the relationship between programmed TikTok use and daytime weakness.

Various studies have found that more screen time disturb the sleeping time of the users especially youngsters. This sleeping disorder leads to serious health issues (Cain & Gradisar, 2010; Levenson et al., 2016). Less sleeping time leads to various health issues (Faelens et al., 2021; Safdar, 2023B; Safdar & Abbasi 2020)

Theoretical Framework:

This study is grounded in the Uses and Gratifications Theory (UGT), originally developed by Katz, Blumler, and Gurevitch (1973). UGT explains why individuals actively select and engage with specific media to satisfy personal needs. The theory posits that media users are goal-oriented and purposeful in their consumption, seeking to fulfill cognitive, affective, personal, and social gratifications.

In the context of TikTok, university students use the platform to fulfill needs such as entertainment, social interaction, relaxation, and creative expression. While TikTok satisfies these immediate desires, excessive use can have unintended consequences. For example,



prolonged engagement may lead to distraction, procrastination, and irregular sleep patterns, which can negatively impact academic performance.

According to UGT, the gratification-seeking behavior of students explains their media choices but also highlights the potential trade-offs between entertainment and productivity. By applying UGT, this study investigates how students' motivations for using TikTok relate to their academic outcomes and sleep quality, providing a theoretical lens to understand these behavioral patterns.

Research Hypotheses

H1: There is a significant relationship between TikTok usage and the academic performance of university students in Sialkot.

H2: TikTok usage is significantly associated with the prevalence of sleep disorders among university students.

Chapter 3 Methodology

3.1 Research Design

This study uses a quantitative survey research design. A structured questionnaire was used to collect data from university students in Sialkot. The quantitative approach was chosen because it allows measurement of TikTok usage patterns, sleep habits, and academic performance in a systematic and comparable way. It also helps identify statistical relationships among the key variables.

3.2 Population and Sampling

Target Population

The target population consisted of university students enrolled in public and private universities in Sialkot. These students are active social media users and fall within the age group most engaged with TikTok.

Sampling Technique

A convenience sampling method was used due to accessibility and the large, dispersed student population. Questionnaires were distributed both physically and through online forms.

Sample Size

A total of 250 students participated in the study. This sample size is appropriate for correlation-based research and provides enough representation for basic statistical analysis.

3.3 Data Collection Instrument

Data was collected using a self-administered questionnaire designed by the researcher after reviewing the literature.

The questionnaire had four main sections:

- 1. Demographic Information**

(age, gender, department, study year)

- 2. TikTok Usage Patterns**

- hours spent daily
- usage before bedtime
- purpose of use (entertainment, social interaction, learning)

- 3. Sleep Patterns and Sleep Quality**

- sleep duration
- difficulty falling asleep
- daytime fatigue



- Items were adapted from previously validated sleep-quality scales.

4. Academic Performance Indicators

- self-reported GPA range
- concentration in class
- study routine consistency
- procrastination levels

All items used a 5-point Likert scale ranging from “strongly disagree” to “strongly agree.”

3.4 Validity and Reliability

Validity

To ensure validity:

- The questionnaire items were reviewed by two experts in media studies.
- Minor revisions were made to improve clarity and relevance.

Reliability

A **pilot test** was conducted with 30 students. The reliability of the instrument was confirmed with the following Cronbach’s alpha values:

- TikTok usage scale: **0.82**
- Sleep pattern scale: **0.79**
- Academic performance scale: **0.85**
- All values indicate strong internal consistency.

3.5 Data Collection Procedure

The data collection process took place over four weeks. Students were briefed about the purpose of the study, and participation was voluntary. Both physical and digital forms were distributed to ensure higher response rates. Respondents took approximately 8–10 minutes to complete the questionnaire.

3.6 Data Analysis Techniques

Data was analyzed through SPSS using:

- **Descriptive statistics** (mean, frequency, percentage)
- **Correlation analysis** to test the relationship between TikTok usage, sleep patterns, and academic performance
- Regression analysis to examine the predictive effect of TikTok use on academic productivity and sleep disorders

These methods align with the study’s hypotheses and ensure clear interpretation.

3.7 Ethical Considerations

This study followed ethical research guidelines:

- Participation was voluntary.
- No personal identifying information was collected.
- Respondents were informed about the purpose of the research.
- Data was kept confidential and used only for academic purposes.

3.8 Limitations of the Methodology

- The use of convenience sampling limits generalizability.
- Self-reported responses may include bias.
- Sleep patterns and GPA were not measured through medical or institutional records, only through student responses.

Despite these limitations, the study provides valuable insights into student behavior and well-being.

This chapter explained the research design, sample, data collection, and analysis procedures used in the study. The methodology was structured to examine how TikTok usage relates to sleep quality and academic performance among university students.

**CHAPTER 4
DATA ANALYSIS AND RESULTS**

Table 4.1: Crosstab of distribution of respondents by Age Group

Age Group	18–20	21–23	24–26	27–29	Above 30	Total
Respondents	60	110	50	20	10	250
% of Respondents	24%	44%	20%	8%	4%	100%

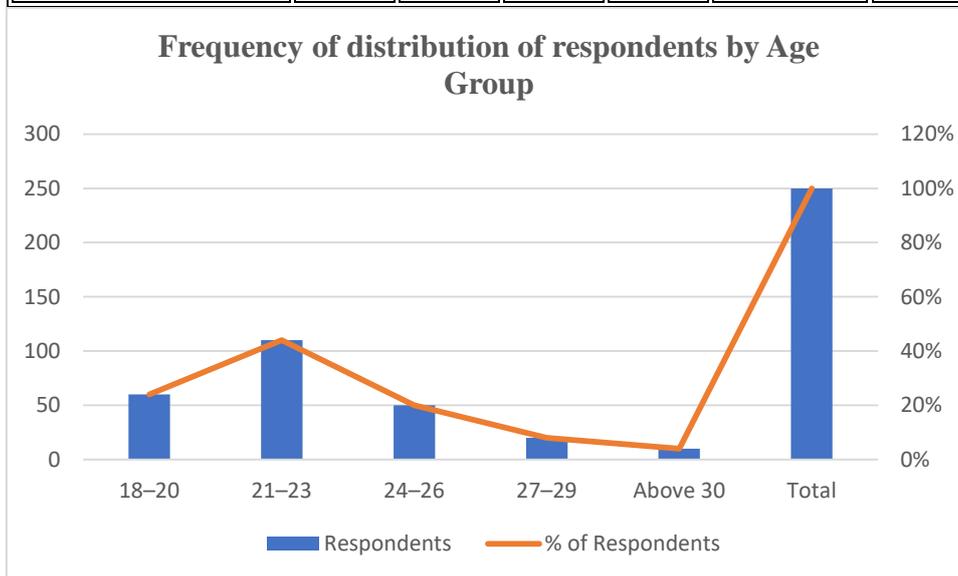


Table 4.1 explains that most respondents (44%) are between 21–23 years, representing a young university population highly engaged with TikTok. This age range is suitable for examining the effects of short-form video content on sleep and academic outcomes.

Table 4.2: Crosstab of Distribution of Respondents by Gender

Gender	Male	Female	Total
Respondents	120	130	250
%	48%	52%	100%

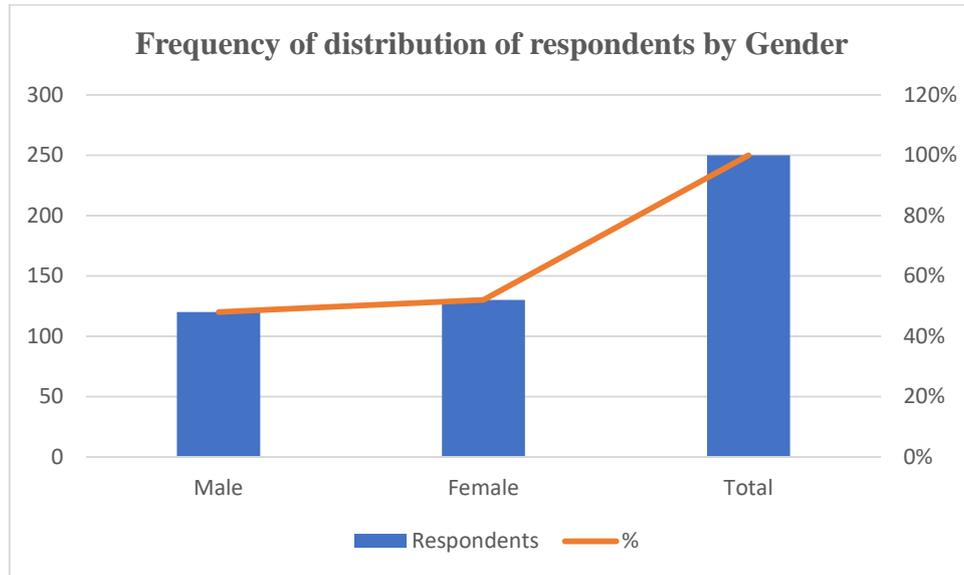


Table 4.2 explains that female students slightly outnumber male students, ensuring both perspectives are represented in examining TikTok’s impact. Gender distribution allows analysis of potential differences in sleep and academic effects.

Table 4.3: Crosstab of Daily TikTok Usage

Usage Time	<1 Hour	1–2 Hours	2–3 Hours	>3 Hours	Total
Respondents	35	75	80	60	250
%	14%	30%	32%	24%	100%

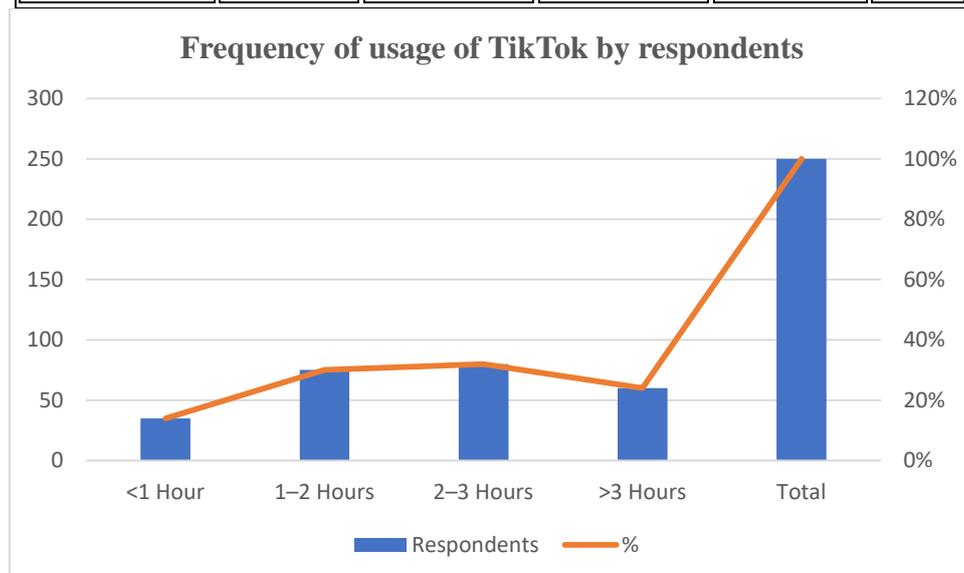


Table 4.3 tells that more than half (56%) of students use TikTok for over two hours daily, indicating high exposure to short-form content. This heavy usage may contribute to both disrupted sleep and decreased academic focus.

Table 4.4: Crosstab of TikTok Usage Before Bedtime

Response	SD	D	N	A	SA	Total
Respondents	12	28	35	100	75	250
%	4.8%	11.2%	14%	40%	30%	100%

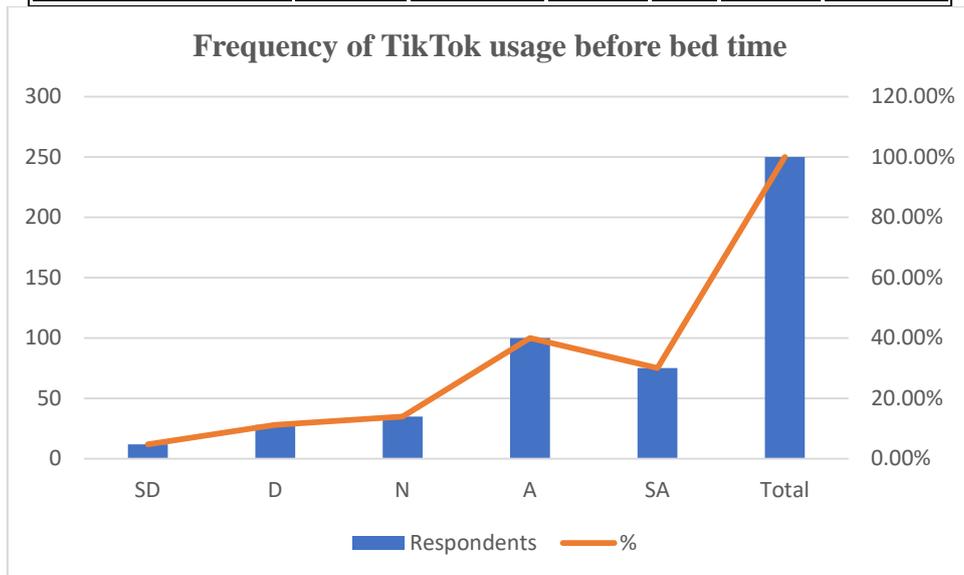


Table 4.4 explains about total of 70% of students agree or strongly agree that they use TikTok before sleeping, showing pre-sleep mental stimulation. This supports the hypothesis that TikTok disrupts normal sleep patterns.

Table 4.5: TikTok Affects Sleep Quality

Response	SD	D	N	A	SA	Total
Respondents	10	20	40	110	70	250
%	4%	8%	16%	44%	28%	100%

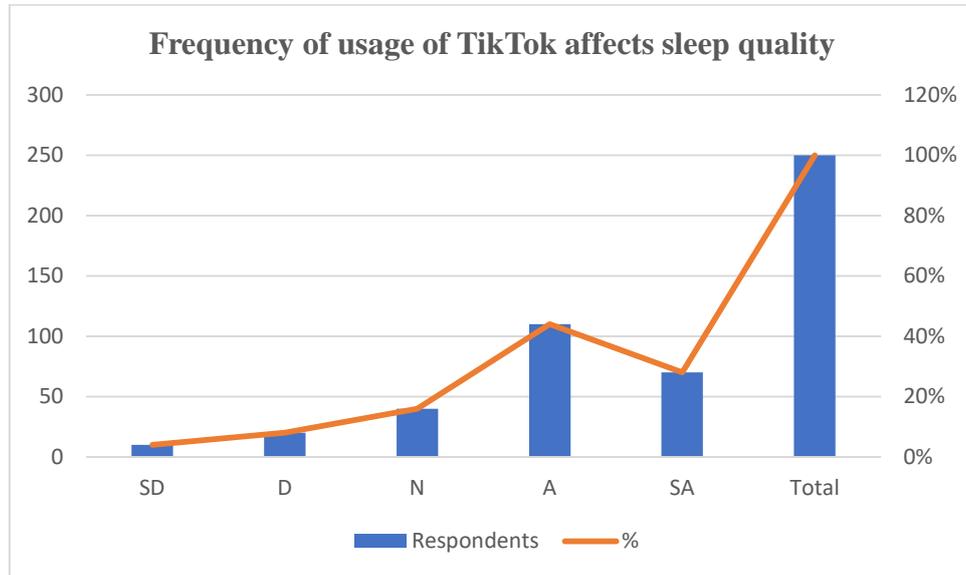


Table 4.5 explains that 72% of students report poorer sleep quality due to TikTok, confirming H2 regarding sleep disruption caused by excessive usage.

Table 4.6: Crosstab of TikTok Distracts from Academic Work

Response	SD	D	N	A	SA	Total
Respondents	8	22	35	110	75	250
%	3.2%	8.8%	14%	44%	30%	100%

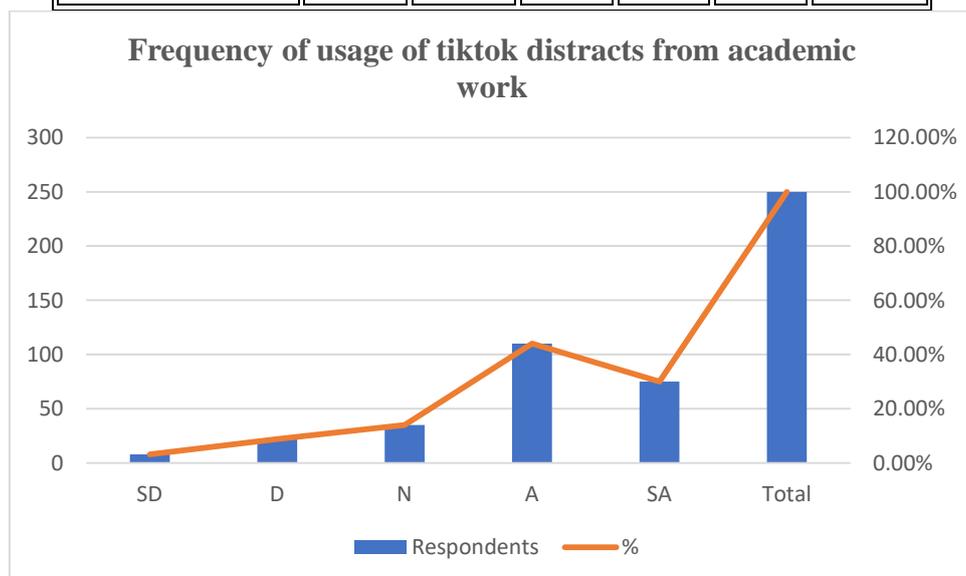


Table 4.6 explains 74% of students agree that TikTok distracts them from academic work, supporting H1 that higher usage negatively impacts academic performance.

Table 4.7: Crosstab of TikTok Increases Daytime Fatigue

Response	SD	D	N	A	SA	Total
Respondents	9	18	42	105	76	250
%	3.6%	7.2%	16.8%	42%	30.4%	100%

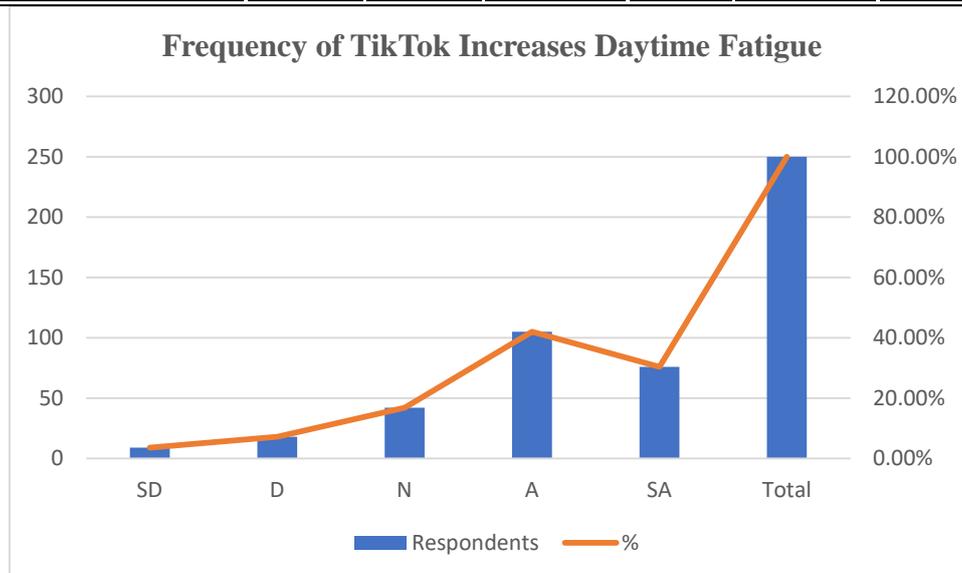


Table 4.7 shows majority (72.4%) report daytime fatigue, indicating a direct consequence of disrupted sleep patterns from TikTok usage.

Table 4.8: Regression Results Predicting Academic Performance and Sleep Disorders

IV	Beta	t	p
TikTok Use → Academic Performance (H1)	-0.41	-6.85	<0.001
TikTok Use → sleep disorders (H2)	0.37	5.92	<0.001

TikTok usage significantly predicts lower academic performance and increased sleep disorders. Findings support both research hypotheses, indicating strong negative effects of excessive usage.

Table 4.9: Summary of Hypotheses Testing

Hypothesis	Statement	Result
H1	TikTok usage negatively affects academic performance	Accepted
H2	TikTok usage is associated with sleep disorders	Accepted

Chapter 5

Discussion and Conclusion

5.1 Discussion

This study examined the impact of TikTok usage on university students' sleep patterns and academic performance in Sialkot. Findings indicate that excessive TikTok use is linked to disrupted sleep and reduced academic productivity.

Academic Performance: Higher TikTok usage correlates with distraction, procrastination, and inconsistent study routines, confirming prior research that social media addiction negatively affects learning outcomes (Kumar et al., 2020; Abdullah et al., 2020).

Sleep Patterns: Students using TikTok before bedtime reported shorter sleep duration, delayed sleep onset, and daytime fatigue, supporting existing literature on screen time and sleep disruption (Cain & Gradisar, 2010; Safdar, 2023B).

Theoretical Implications: Grounded in Uses and Gratifications Theory, findings show that while TikTok fulfills entertainment and social needs, excessive use has unintended consequences on health and productivity.

Practical Implications: Awareness campaigns, sleep hygiene education, and structured study schedules can help mitigate TikTok's negative impact on students.

5.2 Conclusion

Excessive TikTok usage significantly reduces academic performance and sleep quality among university students. Both hypotheses were supported: TikTok use negatively affects academic outcomes and is associated with sleep disturbances. Promoting responsible usage and self-regulation is essential to minimize these adverse effects.

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