Original Article

Intervening Effects of Academic Performance between TikTok Obsession and Psychological Wellbeing Challenges in University Students

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ABSTRACT

Aim of the Study: This study examines how TikTok addiction affects academic performance, mental health, and social interactions of the University Students. Teachers and parents are concerned about the potential implications of this application which affects the educational performance of the students. Studying influence of TikTok finds its theoretical underpinnings in uses and gratification theory (Smith & Short, 2022).

Methodology: This cross-sectional descriptive-analytic study was done in June–August 2022 at Minhaj University Lahore and data was collected from undergraduate students. Following survey method, the research design involved questionnaire for data collection whereas reliability and validity were established by Cronbach's Alpha. Using simple random sample technique, the researcher collected the data from the sample size of (N=240) Minhaj University Lahore including student rosters from mass communication, sociology, international relations, political science, history, English, and Urdu departments.

Findings: The results through structural equation modeling (SEM) showed significant association among Tiktok addiction and mental illness which leads to depression and anxiety as well as the poor academic performance.

Conclusion: This study concludes that Tiktok is the most popular app for Pakistani youth and involves both appropriate and inappropriate content. Digital literacy should be introduced in educational institutions so that the excessive use of social media applications can be restricted, and the worsening psychological wellbeing of students may be halted.

Keywords: TikTok Addiction, Uses and Gratification Theory, Mental Health, Academic Performance.

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Introduction

TikTok, formerly known as Musically, has recently hit the milestone of 500 million active users each month, and the app is currently available in 34 different languages (Wu, 2021). Since the app released, users have been excessively using TikTok clones and other applications that are quite similar to TikTok, to enjoy the fame and escapism from boredom. The company known as Byte Dance is the one that was in charge of introducing this Chinese app (Daniele, 2022).

A behavior that cannot be willingly controlled is referred to as an addiction (Heather, 2017). Today's high-tech culture is rife with addiction issues, one of which is internet use (Cook, 2020). Recent research has demonstrated that students' increased social media usage is directly responsible for their declining mental health and academic performance (Braghieri et al., 2022). Students' addiction to social media is a potential threat to their physical and psychological well-being. Their dependence on social media make them experience anxiety, when they do not use social media applications, they may feel missing out something significant (Kim, 2016). Excessive use of social media affects academic performance of college students (Bhandarkar et al., 2021).

TikTok is a social networking app that has pooled many users since its emergence (Scherr & Wang, 2021). It is the most effective tool available anywhere in the globe, including Asia, the United States of America, and other regions of the world, for making short films that can be viewed on mobile devices (Warburton, 2022).

This application can be read in any of the seventy-five languages and is available for purchase in 150 different marketplaces (Koskiaita, 2021). Tiktok enables users to create short films that range from 15 to 60 seconds in length, including music, effects, and sound-bites. TikTok is immensely popular among teenagers (Shutsko, 2020). Being an interactive app also makes it favorable among users as they can comment on the videos share by different tiktokers (Vizcaíno-Verdú & Aguaded, 2022). Tiktok has become the mostly used app on social media and it has surpassed many other popular applications of the digital media (Zulli & Zulli, 2022). Several Research studies propose uses and gratification theory appropriate to study students' gratification seeking patterns through social networking sites (Falgoust et al., 2022)

Problem Statement

Excessive use of social media is constantly increasing in students. Tiktok addiction distracts students in class, thus causing lower grades in studies. Students use Tiktok only for conversing and socializing which cost the time wastage and in return they cannot manage their academic tasks efficiently. Students mostly talk about non-academic activities on social media which affects their grades (Fatima Zahra et al., 2022). Due to students' dependency, they are more likely to benefit academically from using social media. This paper aims to explore that how students' use of social media influences their academic performance.

Study Objectives: Main objectives of the study are to examine:

- correlation between TikTok obsession and depression.
- association between Tiktok obsession and anxiety.
- intervening role of educational performance between Tiktok obsession and depression.
- intervening role of educational performance between Tiktok obsession and anxiety.

Study Hypotheses

H1. An obvious association between TikTok dependence and the poor educational accomplishment of the students.
H2. A definite correlation between TikTok dependence and depression in students.
H3. A certain association between TikTok obsession and anxiety.
H4. Academic performance establishes correlation between TikTok dependence and depression.

H5. Academic performance determines the correlation between TikTok dependence and anxiety.

Importance of Study

With rapidly increasing use of Tiktok its implications are being observed significantly. This study investigates the connection between TikTok dependency and mental health factors such as academic performance, depressive symptoms, and overall well-being among university students. It also offers a chance for academic organizations and students' guardian to realize the impact of TikTok obsession on students' educational success. In addition, it is also being argued that how does this addiction, influences students' involvement is studies.
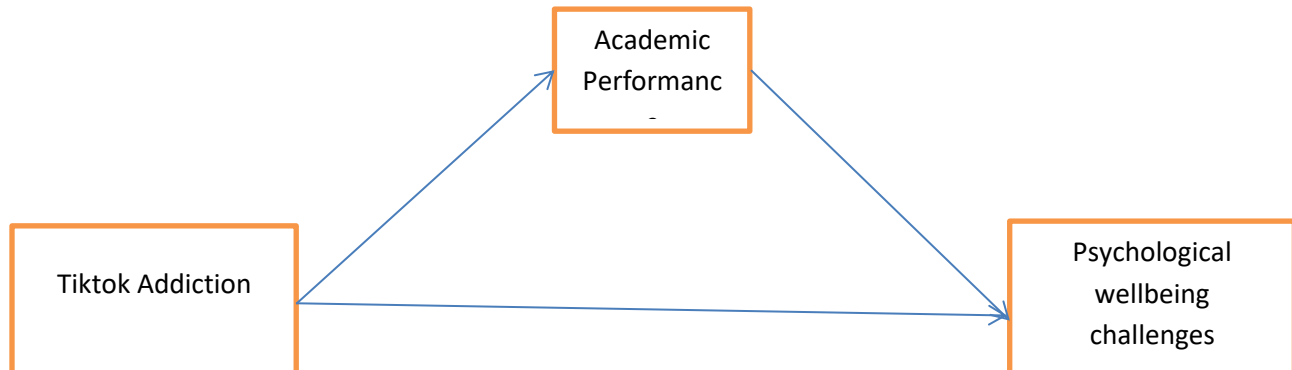
Literature Review

Tiktok provided an opportunity to the people all over the country to express themselves on social media. Especially the people of rural areas readily accepted this application who always considered themselves neglected on the representation platforms (Busalim et al., 2019). College students use tiktok application for gratifying their needs as stated in different studies employing the uses and gratification theory as a theoretical framework (Falgoust et al., 2022). Social media gratify various needs of masses by providing them different platforms for networking, entertainment, business shopping and communication (Bylieva et al., 2019). The need to express themselves publicly was the most significant factor for tiktok users however overall they have different needs for which they use this application excessively (Dias & Duarte, 2022). Excessive use of social media brings negative psychological effects especially in youth. Most of the TikTok users use this application for entertainment initially however over the period of time they can be prone to its problematic use, linked with maladaptive behaviors which can cause them negative psychological effects (Smith & Short, 2022). Today people welcome to new social media applications which provide them combined features and linkage in different programs thus making their job easy for networking and reaching out maximum audience. With the ease of content creation and gratification sought by users TikTok has become immensely popular all over the globe since its emergence (Scherr & Wang, 2021). The use of social media is rapidly increasing in young students, which is alarming, and this addiction badly affects their academic performance (Hanus & Fox 2015). Many students are active users of social media platforms including Facebook, Twitter and Instagram. Social media is said to be used for connectivity with family and friends as well as it is also a source of online academic activities and relevant information and material sharing. However some students may trapped up in negative connection thus wasting a lot of their time and ultimately show poor academic performance (Nadia et al., 2019). Achieving good grades reflects academic gratification and subsequently professional success which earn them a sense of achievement (Linnenbrink & Pintrich, 2002). The findings of a research study indicates that the most significant impetuses for users to liking behavior are gratification, information pursuing, societal interaction, and individual norms, and that they subsequently support their continuous objectives toward the Facebook. The findings also discovered that subjective norms donate strongly to the projections of liking behavior and intention of using social media consistently (Hossain et al., 2019).

Theoretical Framework

Ifinedo (2016) maintains that uses and gratification theory as a potential theoretical framework working for studying social media and its implication on young students. The literature review also guides about the uses and gratification theory as a theoretical foundation for this research study. Many of the students use this application for the purpose of entertainment, communication, social interactions, social support, information and escapism (Falgoust et al., 2022). With comparison to other social media application TikTok provides its users easy features, connectivity and networking which gives the users rather enhanced gratification (Scherr & Wang, 2021). Tiktok users use this application for having escapism from daily routine, expressing themselves on social media and gratifying their needs (Dias & Duarte, 2022). As uses and gratification needs theory states that audiences make their own choice while selecting a media similarly the Tiktok application can be more attractive to some people depending on an individual's psychological needs (Smith & Short, 2022). Research studies indicate that with reference to Uses and

Gratifications theory the TikTok application was found meeting realism, frostiness, connectivity, public networking, bandwagon, surveillance, and escapism (Vaterlaus & Winter, 2021). The Tiktok usage of youth is for the purpose of seeking gratification which comes through establishing and managing relationships (Bucknell Bossen & Kottasz, 2020). Mostly people use such applications for seeking entertainment or they make purchase decisions by acquiring information related to different products (Yang & Ha, 2021). Many of the social media users seek out gratification by reaching out their interpersonal relations with the help of different interpersonal networking applications (Eginli & Tas, 2018).

Proposed Model of Study

Psychological wellbeing challenges have been examined by measuring anxiety and depression in students (Campana, 2022).

Methodology

Research Design

This was a cross-sectional study conducted in a population of university students.

Research Population

The research population consisted of students enrolled in different BS programs at Minhaj University Lahore for four-year program 2019 and 2023. These students willingly participated and responded questionnaires.

Sample Size

In order to improve the reliability and precision of these findings, the inquiry included a random sample of (N=240) respondents. The validity and reliability of this questionnaire were validated using the Cronbach's Alpha technique, which yielded an alpha value of 0.7. (0.041). The investigation was first authorized by the principals of the schools. After that, the researchers went to the departments of faculty of social sciences i.e., mass communication, sociology, international relations, political science, history, English, and Urdu at MUL in order to gather student lists.

Sampling Technique

Simple random sample technique has been used in this study.

Data Collection Tool

The TikTok addiction scale: The TikTok addiction scale was modified from the Social Media Addiction Scale by Sahin (2018). In this study, a Likert scale was utilised, with a total of 29 items extending from 1

for strongly disagree to strongly agree for 5. The range of values ranged from 29 to 145. Cronbach alpha has a value of 0.79.

Academic Performance: The Scale to examine educational achievement by Osharive (2015) was employed and modified to be used in this study to gauge students' educational performance. To assess academic performance this scale has been further broken down into the five subscales, including students' social media addiction (least value: (29); extreme value: (144); Cronbach alpha: (80); academic performance (least value: (4); supreme value: (21); Cronbach alpha: (83); experience of students to social media networks; and the usage of social media; and students' educational performance. Two subscales, namely "the use of social media by males and females" and "using social media with reference to an age group," were not included in the study since they weren't relevant to the questions being asked. There were overall 20 questions on the scale. A 5-point-Likert-scale, with 1 denoting "Strongly-Disagree" and 5 denoting "Strongly-Agree," was employed to gauge participants' judgement. 20 was the least amount and 100 was the maximum number. Cronbach alpha has a value of .83.

Depression: Radolff Center for Epidemiological-Studies-Depression (CES-D) Scale, which consists of 20 statements, has been modified for data collection. Participants' opinions were gathered using a 5-point Likert scale, with 1 being a strong disagreement and 5 signifying a strong agreement. 20 was the minimum and 100 was the maximum figure. Cronbach alpha has a value of .91.

Anxiety: The anxiety scale also analyzes the students' academic performance (Zimmerman et al., 2010). In order to gather information from respondents, a 5-point Likert scale was used, with 1 denoting strong disagreement and 5 denoting strong agreement. Twenty statements form the basis of the questionnaire. 20 was the minimum and 100 was the maximum figure. Cronbach alpha has a value of 0.77.

Data Analysis Procedure

SPSS 25.0 version was used was data screening and analysis.

Result and Discussion

According to the respondents' demographic information, 209 (87%) of the respondents are male students, and 140 (58%) of the respondents are between the ages of 18 and 25. 60 (25%) of the bachelor's level students from each year were chosen in about equal numbers. According to research on how much time students spend on TikTok, 112 students (or 46% of them) watch TikTok videos for 3 to 4 hours on average. Additional research reveals that only 41 (18%) students spend more than 4 hours on TikTok.

Table 1: *Characteristic of the Respondents*

Item	Frequency	Percent
Male	140	58%
Female	100	42%
Age Group		
18-25	209	87%
26-32	31	13%
Semester		
1-2	60	25%
3-4	60	25%
5-6	60	25%
7-8	60	25%
Time Spent on Tiktok		
1-2 hours	87	36%
3-4 hours	112	46%
More than 4 hours	41	18%

N=240

When analyzing PLS-SEM structural models, R^2 value is useful. Regarding the R^2 value's acceptancy threshold, numerous assumptions have been made. According to Chin (1998), R^2 values of 0.67, 0.33, and 0.19 are strong, moderate, and weak, respectively. Anxiety has an R^2 value of 0.23 and depression has 0.19 in the measuring model below.
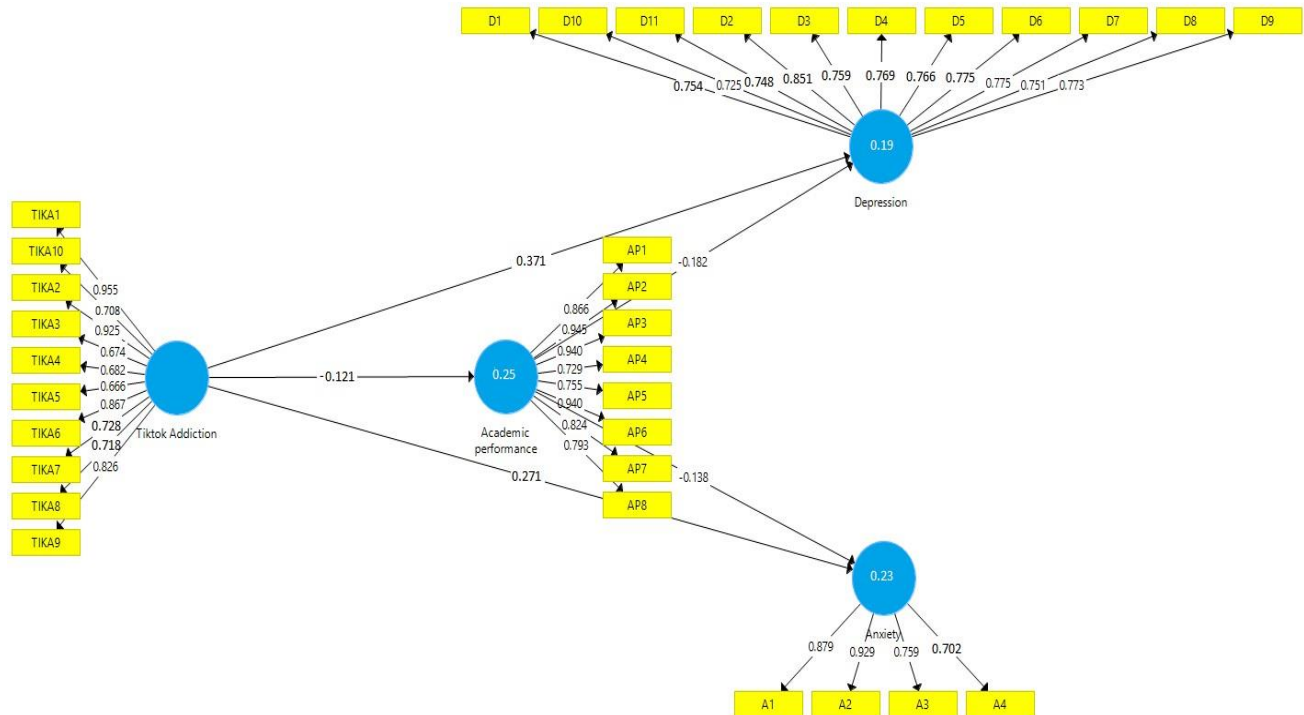

Figure 3: Calculation of Discrepancy elucidated in Endogenous-Variables (Measurement-Model)

PLS Algorithm used to produce the measurement model in question, which shows the range of path coefficients in internal model, the filling of items from various concepts in the external model, and the values of R squared in the construct(s).

Table 2: *Assessing-Convergent-Validity*

Construct	Cronbach's Alpha	Composite Consistency	Average
TikTok-Dependency	.933	.920	.547
Educational Performance	.945	.954	.726
Depression	.827	.850	.524
Anxiety	.785	.828	.575

Convergent validity of the constructs is shown in Table 2. Internal consistency reliability and composite reliability must be to a lesser extent or equal to.70 (Hair et al., 2019). Findings show the data is trustworthy and dependable because the Cronbach Alpha value is higher than (70). Additionally, as indicated in Table 3, the construct validity conditions as well met.

This structural model shows the path coefficients' values, with the internal model showing P values and the outer model showing T values.
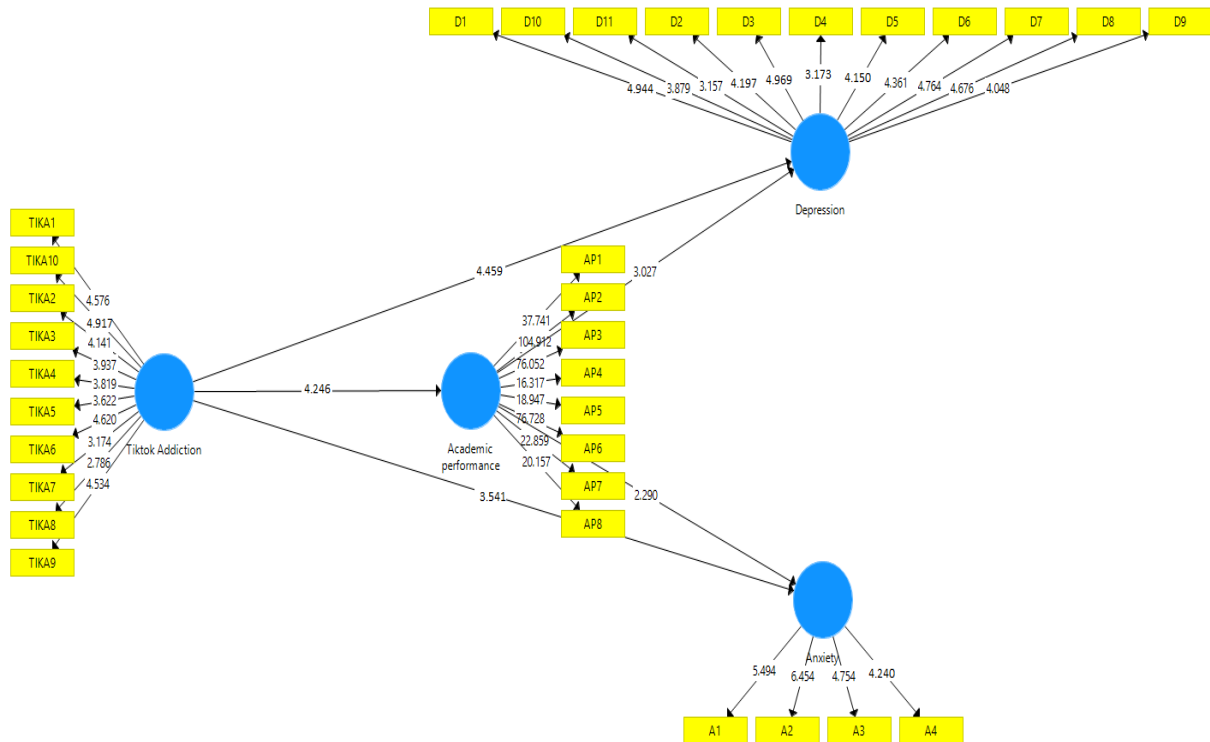
Figure-4: *Structural-Model*

Table 3: *Fornell-Larcker Criterion-Analysis for Discriminant-Validity*

	1	**2**	**3**	**4**
1. Educational-Performance	**.852**			
2. Anxiety	.133	**.758**		
3. Depression	.176	.270	**.596**	
4. TikTok dependency	.121	.240	.250	**.739**

Table 4: *Results of Testing Hypotheses*

	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values
TikTok Addiction-> Academic Performance	-0.121	0.074	0.097	4.246	0.001
TikTok Addiction -> Depression	.371	0.020	0.103	4.459	0.03
TikTok Addiction -> Anxiety	.271	0.058	0.075	3.541	0.01
Academic Performance -> Depression	-0.182	-0.193	0.060	3.027	0.003
Academic Performance -> Anxiety	-0.138	-0.146	0.060	2.290	0.022
TikTok Addiction -> Academic Performance -> Depression	.29	-0.015	0.020	3.092	0.001
TikTok Addiction -> Academic Performance -> Anxiety	.21	-0.012	0.016	2.050	0.02

N=240

Academic achievement and TikTok addiction are significantly correlated (-0.121, t = 4.246, p < 0.001). This outcome demonstrates unequivocally that student academic performance declines as TikTok addiction rises. These results support the H1 hypothesis. According to Badri et al., (2017) too much usage of social media applications like Facebook, Instagram, TikTok, and others has a negative impact on the educational performance of students. There is a clear correlation in TikTok obsession and poor educational performance in students. Additionally, it is reliable Hyman et al., (2006) noted, kids who make use of TikTok excessively, experience negative effects on their memory and learning processes, which ultimately lead to subpar academic achievement.

The results addressing the association between student depression and TikTok addiction are substantial (.371, t = 4.459, p =.003). The results demonstrate that higher TikTok use increases depression. This finding unequivocally supports the hypothesis that there is a causal link between TikTok obsession and student depression. The results of the study of the findings on TikTok Addiction and Anxiety showed a substantial association between the two variables (p = 0.01). According to this, TikTok addiction causes students to become anxious. The results confirm another study hypothesis, according to which there is a causal association between TikTok addiction and student worry. These results support Sha and Dong's findings from 2021, which suggested that TikTok addiction had a favorable connection with poor mental health. Additionally, they are consistent together with studies linking TikTok dependence to greater levels of stress, anxiety, and despair (Maguire & Pellosmaa, 2022).

According to the findings of Table 4, there is a bad correlation between academic achievement and depression (= -0.182, t = 3.027, p =.003). This finding unequivocally establishes the link between poor academic performance and depression in pupils. The results also show that there is a bad correlation between anxiety and academic performance (= -0.00, t = 2.290, p =.022). This outcome demonstrates unequivocally that adolescents who perform poorly in school also experience anxiety.

TikTok addiction and depression are significantly mediated by academic performance (r =.29, t = 3.092, p.001). These findings show that the link between sadness and TikTok addiction is mediated by academic achievement. The study's findings support the premise that "Educational performance mediates the association between the addiction of Tiktok and depression." Depression is caused by using social networking apps excessively (Zaffar et al., 2015).

TikTok addiction and anxiety are significantly mediated by academic achievement (0.21, t 2.050, p.002). The findings showed association amongst anxiety and the addiction of Tiktok is mediated by academic achievement. In this sense, the study's findings support another hypothesis, which states that academic performance arbitrates the link amongst sadness and TikTok obsessions. Additionally, it approves results of Liu et al., (2022) maintain that students' sadness and anxiety levels rise when they perform poorly academically.

Conclusion

The nature of entertainment has evolved over the period as a result of technological innovation. Students frequently use TikTok as an emerging instrument for expression and entertainment. The primary goal was to look for a correlation amongst the addiction of TikTok and academic achievement. According to the findings, it has been established that TikTok addiction and academic performance among Lahore students are positively correlated. Additionally, it has been established that academic performance plays a substantial moderating role in the relationship between depression and anxiety which cause them mental health problems. The study further examined how TikTok addiction and mental health issues are correlated. Students frequently use TikTok, which undoubtedly has badly impacted their academic performance and mental health. College students can be used as a sample in upcoming research projects to examine the effects of TikTok dependency on educational performance in addition to how this dependence is affecting their psychological and physical health, by using a qualitative approach, such as the in-depth interviews to have a thorough investigation of the subjects.

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