



A Study on the Influence of Algorithmic Media Exposure on Academic Self-Regulation and Psychological Well-Being Among University Students (18–25 Years) in Navi Mumbai

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Abstract: Students spend more time online because social media sites use algorithms to show them content that is relevant to them. This study examines the impact of algorithm-driven media exposure on academic self-regulation and psychological well-being among students aged 18 to 25 in Navi Mumbai. The survey, which was done with Google Forms, had about 100–110 students take part. The study found that students who use social media sites like YouTube and Instagram more often have mood swings, put things off, and get distracted. Many students concurred that using social media excessively interferes with their ability to focus and study.

The research indicates that algorithm-driven content significantly affects students' academic concentration and mental well-being. To keep up with academic discipline and emotional health, it's important to use social media in a balanced and responsible way.

Index Terms - Addiction to social media, bad use of social media, content driven by algorithms, mental health, anxiety and depression, digital literacy, and teenage health

I. INTRODUCTION

After the Covid pandemic the use of digital platforms increased very fast across the world. During lockdown people stayed at home for a long time and they started spending more time on their phones and laptops. Many people began binge watching web series and short videos. Platforms like Instagram TikTok YouTube and Facebook became a daily part of life. The time spent on these platforms increased a lot. At the same time many creators started producing web series and online content instead of only focusing on theatre movies. Digital platforms slowly became the main source of entertainment news and social connection.

The growth of digital platforms did not start during Covid but the pandemic made it grow much faster. Social media platforms use algorithms that show content based on what a person likes watches and searches. When a user watches one type of video the platform shows similar videos again and again. This makes people stay online for a longer time. The system is designed to keep the user engaged. As a result many young people spend several hours every day scrolling watching and reacting to content.

Social media started in the early 2000s when people began using the internet not only to search for information but also to connect with others. One of the first popular social networking sites was Friendster which was launched in 2002. After that MySpace became very popular among young users

for sharing music and personal profiles. In 2004 Facebook was created and it changed the way people connect online. At first it was only for college students but later it opened for everyone. Over time other platforms like YouTube in 2005 and Twitter in 2006 were launched. These platforms allowed people to share photos videos thoughts and daily updates. Slowly social media became a major part of everyday life across the world.

Psychologically this continuous use of social media can affect thoughts feelings and behavior. When students see others posting about success travel or social life they may start comparing themselves. This can create stress anxiety and fear of missing out. Many students also feel pressure to stay active online so that they do not feel left out. Over time this habit may turn into social media addiction where a person finds it difficult to control the time spent online.

Excessive use of social media can also affect academic life. When students spend more time online they may delay their assignments and study tasks. This delay is known as academic procrastination. A student puts off work even when they know it is important. It's easy to use social media to get away from schoolwork. Students may choose to watch videos or talk to friends instead of doing their work. Research shows that lack of self control plays an important role in this process. When students are not able to manage their time and attention they may give in to digital distractions. Social media also increases fear of missing out which makes students check their phones again and again.

This research is founded on the Uses and Gratifications Theory formulated by Katz, Blumler, and Gurevitch. The theory posits that individuals deliberately select media platforms to fulfill their personal needs, including entertainment, relaxation, social interaction, and information. Students use social media sites like Instagram and YouTube to meet these needs. Systems that use algorithms look at how people use them and suggest content that is relevant to their interests. People are more interested to increase their screen time by watching their personalized content. Because of this students may experience distractions, reduced academic self-regulation, and changes in their mental health. The Uses and Gratifications Theory explains why students keep interacting with algorithm-driven social media content and how it affects their daily lives and schoolwork.

In today digital age the relationship between social media use psychological well being and academic performance has become an important area of study. It is necessary to understand how algorithm driven media consumption influences students daily life. By studying these factors researchers can better understand how digital habits shape mental health and academic self- regulation among university students.

II. OBJECTIVES

- To assess the extent of algorithm-driven social media consumption among university students.
- To investigate the correlation between exposure to algorithm-curated content and academic self-regulation.
- To examine the effects of customized digital content on students' focus, efficiency, and goal-setting.
- To examine the correlation between exposure to social media algorithms and psychological well-being, encompassing stress, anxiety, mood, and self-esteem.
- To pinpoint the primary issues and themes emphasized in political advertisements and discourse on digital media platforms.

III. SIGNIFICANCE OF STUDY

This study is significant because it helps to understand how problematic social media use influences the mental health and academic behavior of adolescents and young adults. It clearly explains the connection between social media addiction, psychological well-being, frustration, self-control, and academic procrastination. The study also compares different age groups to identify who is more affected and in what way. These findings are useful for parents, teachers, counselors, and policymakers in creating better awareness programs and support systems It also adds to what we already know by explaining not just the effects but also the reasons behind them. In general, the study encourages better digital habits and shows that young people need to use social media in a balanced and responsible way.

IV. LITERATURE REVIEW

1. **Boyd** talks about how social media became a big part of young people's lives in this study. The author shows that social media helps young adults stay in touch with friends and share their thoughts and ideas. The study also says that teens and young adults spend a lot of time on these sites every day. It shows that comparing yourself to others on social media makes you feel more anxious and sad. The study demonstrates that cyberbullying and online pressure diminish self-confidence and self-esteem. The author also talks about how being addicted to social media affects sleep and daily life. The study indicates that diminished face-to-face interaction undermines real-life social skills. The findings suggest that digital education and mental health support are important to reduce the negative effects of social media while keeping its benefits.
2. **Smith et al.** in this study investigate the influence of self-awareness on the reduction of social media usage during the COVID-19 pandemic. The authors elucidate that social media utilization escalated during the pandemic, leading to apprehensions regarding excessive consumption. The research was performed on psychology students to comprehend the influence of self-awareness on social media behaviors. The findings demonstrate that students with heightened self-awareness displayed enhanced self-control. The study also showed that being aware of yourself can boost your self-esteem and make you feel good. Using social media didn't directly change how people felt or how they saw themselves. Self-control acted as a bridge between being aware of oneself and using social media. The authors contend that enhancing self-awareness can reduce excessive social media consumption and prevent adverse outcomes.
3. **Brown et al.** look into how social media recommendation systems affect teenagers' online behavior and mental health. The authors assert that algorithms progressively increase the likelihood of individuals encountering harmful and radical content. The study shows that misogynistic and violent content is often sold as entertainment to get young people interested. The researchers conducted interviews with adolescents and educational administrators, supplemented by the analysis of over one thousand videos. The results demonstrate that recommendation systems normalize detrimental concepts and amplify repeated exposure. The research additionally revealed that such content influences the behavior and peer relationships of adolescents. Being around hateful ideas can be bad for your mental health and well-being. The authors say that better digital education and policy changes are needed to keep young people safe online.
4. **Li et al.** investigate the correlation between social media addiction and academic procrastination among college students in this study. The authors elucidate that social media addiction may exacerbate procrastination in academic endeavors and impact mental health. The research involved 825 college students from various regions of China. The results indicate that social media addiction exacerbates fear of missing out and diminishes self-control. Fear of missing out and lack of self-control were both linked to more academic procrastination. The research additionally revealed that these two factors interact in a chain reaction. This means that being addicted to social media makes it harder to control yourself, which makes you more afraid of missing out and makes you put things off more. The authors suggest that reducing social media addiction can improve academic performance and support student mental health.
5. In this study, **Khan et al.** investigate the effects of problematic social media usage on the psychological well-being and frustration of adolescents and young adults. The authors gathered data from students between the ages of 12 and 35 years. The results indicate that adolescents exhibiting significant social media addiction experienced diminished psychological well-being and increased frustration. Among young adults, social media addiction was associated with diminished psychological well-being but exhibited a weak correlation with frustration. The research indicated that adolescents exhibited higher levels of social media addiction than young adults. Young adults exhibited superior psychological well-being compared to adolescents. The

findings indicate that adolescents are more adversely impacted by problematic social media usage.

6. In this study, **Sharma et al.** look into the problems that come up when teens use social media. The authors assert that social media was created to facilitate interpersonal connections and the sharing of life experiences. But the study shows that social media can hurt people's mental health instead of helping them get along with others. Teenagers are more affected because they think they have to look perfect online. People also get more stressed and anxious when they get notifications and updates all the time. The research indicates that social media algorithms significantly influence these occurrences.

The study says that there should be stronger rules and safer online spaces to keep young people safe.

V. RESEARCH GAP

While most previous research has focused on social media usage and its overall effects on students, few studies have specifically examined the role of algorithm-driven media exposure. While many researchers have looked at academic performance or mental health separately, there is little evidence connecting algorithmic media exposure to both academic self-regulation and psychological well-being. Furthermore, not much research has been done on Navi Mumbai university students. The experiences of local students may not be adequately represented by the majority of current research, which is carried out in other countries or cities. Therefore, there is a conspicuous lack of information about how exposure to algorithm-based content affects students' academic control and mental health in this particular region and age group.

VI. HYPOTHESIS

- **H0 (Null Hypothesis):**
There is no significant relationship between algorithm-driven media consumption and academic self-regulation among university students.
- **H1 (Alternative Hypothesis):**
There is a significant relationship between algorithm-driven media consumption and academic self-regulation among university students.

VII. STATEMENT OF THE PROBLEM

In recent years, more algorithm-driven digital media platforms such as social media, video streaming services, and personalized content feeds have been introduced to university students. Because these platforms use algorithms to continuously recommend content based on users' interests, they often lead to prolonged screen time and recurrent engagement. Although these media provide entertainment and information, excessive exposure can negatively impact students' capacity to focus in class, manage their time, and maintain emotional stability.

Academic success and psychological well-being are vital during a crucial developmental stage for students between the ages of 18 and 25. Prolonged exposure to algorithmic media, on the other hand, can cause procrastination, anxiety, sleep disturbances, distraction, diminished academic self-regulation, and decreased concentration. Despite the growing ubiquity of digital algorithms in students' daily lives, little research has been done on the precise effects of algorithmic media exposure on academic self-regulation and psychological well-being among university students in Navi Mumbai.

Therefore, the aim of this study is to ascertain the extent to which algorithmic media exposure impacts academic self-regulation and psychological well-being among university students in Navi Mumbai (18–25 years old).

VIII. RESEARCH METHODOLOGY

The study examines the impact of algorithmic media exposure on academic self-regulation and psychological well-being among university students in Navi Mumbai between the ages of 18 and 25 using a descriptive research design and quantitative methodology.

A structured Google Forms questionnaire is used to gather primary data, and between 100 and 110 student responses are gathered. Convenience sampling was used in the study, and students who were readily available took part in the survey.

To support the study, secondary data is gathered from research papers, journals, and reports in addition to primary data.

➤ LIMITATION

1. The study is based on roughly 100–110 responses, which might not accurately reflect all Navi Mumbai university students.
2. Because participants were chosen based on their availability and willingness, convenience sampling may lead to sample bias.
3. Because the information gathered via Google Forms is self-reported, respondents might not always give entirely truthful or accurate responses.
4. The study's geographical focus on Navi Mumbai limits the findings' applicability to other areas.
5. The study was unable to incorporate long-term observation or in-depth interviews due to time and academic limitations.
6. Deeper understanding may be limited because the study measures algorithmic media exposure based on students' perceptions rather than technical analysis of algorithms.

➤ DELIMITATION

1. Students should control how much time they spend on screens and limit how much time they spend on social media.
2. Universities can develop awareness campaigns about how algorithm-driven social media affects students' academic performance and mental health.
3. Students should prioritize their academic work and use social media in moderation.
4. For younger users, digital platforms can offer more instructive and educational content.
5. To increase focus and productivity, students should take regular breaks from social media.
6. To gain a clearer understanding of the impact, future researchers can examine a greater number of students and various cities.

IX. DATA ANALYSIS, INTERPRETATION & PRESENTATION

Introduction

This chapter presents the analysis of data collected from university students aged 18–25 in Navi Mumbai. The data was collected through a structured questionnaire using Google Forms. Around 100–110 students participated in the survey. The purpose of the analysis is to understand students' exposure to algorithm-driven social media platforms and its impact on their academic self-regulation and psychological well-being. The responses are presented using charts and graphs for better understanding and interpretation.

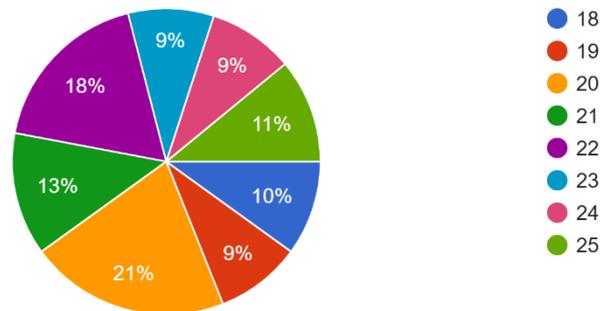
A) Demographic Profile of Respondents

➤ Age Distribution of Respondents

The respondents of this study belong to the age group of 18–25 years. The majority of participants fall within the age range of 20–23 years, while the remaining respondents are between 18–19 and 24–25 years. This shows that the survey mainly represents undergraduate and postgraduate university students who actively use digital media platforms.

AGE

100 responses

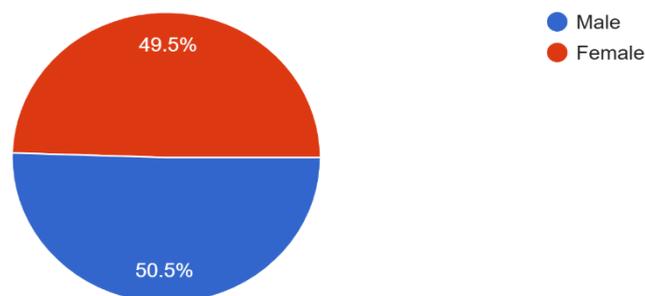


B) Gender Distribution of Respondents

The study includes both male and female respondents. The participation of both genders helps provide a balanced perspective on social media usage and its impact. The representation of different genders helps in understanding whether algorithm-driven media exposure affects students in a similar or different way.

GENDER

101 responses



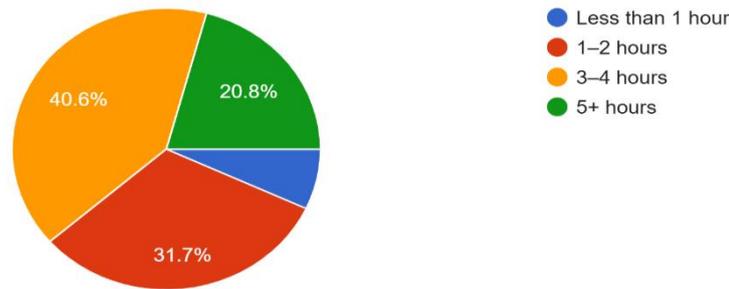
C) Social Media Usage Patterns

➤ Platforms Used Most by Students

The responses show that most students frequently use platforms such as Instagram and YouTube. These platforms rely heavily on algorithm-based recommendation systems that show personalized content to users. Other platforms like Facebook and Twitter are used less frequently compared to these highly visual and video-based platforms.

How many hours per day do you spend on social media?

101 responses



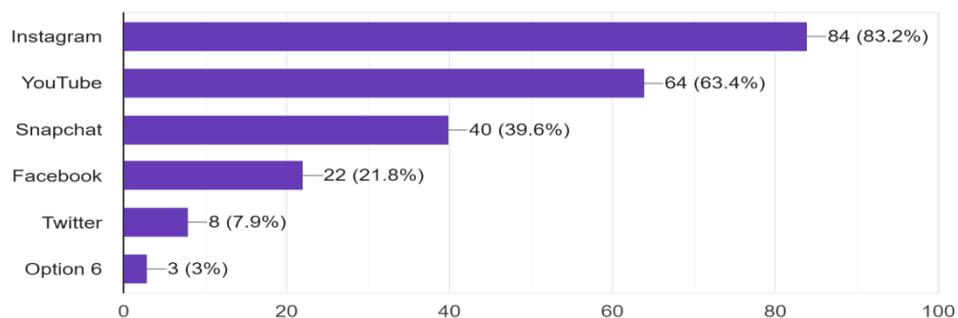
4.4 Average Daily Time Spent on Social Media

The data shows that a large number of students spend between three to five hours daily on social media platforms. Some students reported spending even more than five hours per day. This indicates that social media has become an important part of students’ daily routine and leisure activities.

Higher screen time also increases the chances of repeated exposure to algorithm-recommended content.

Which platforms do you use most frequently?

101 responses



D) Algorithmic Content Exposure

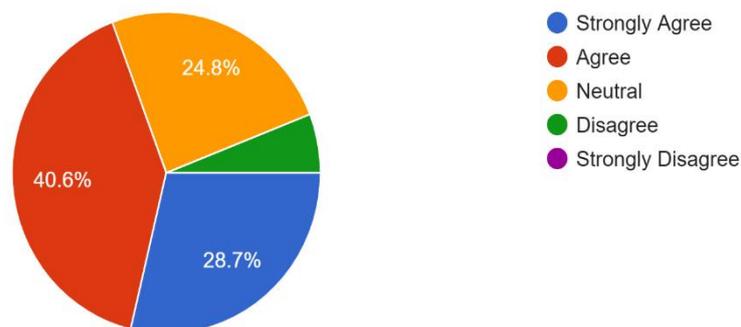
➤ Exposure to Recommended Content

Most respondents reported that the majority of the content they see on their feed is recommended by algorithms rather than content from accounts they directly follow. This indicates that algorithmic systems strongly influence what students watch, read, and engage with online.

Algorithmic recommendations encourage continuous scrolling and longer engagement on the platform.

Social media keeps suggesting content that makes me spend more time online.

101 responses



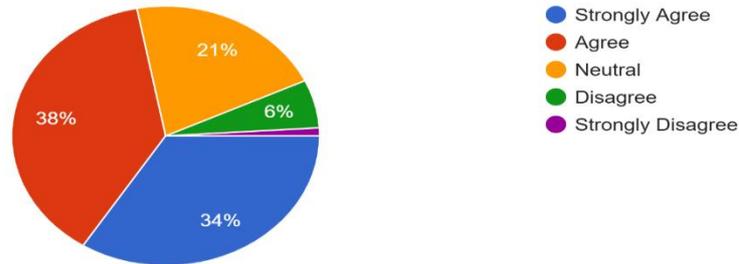
E) Impact on Academic Self-Regulation

➤ **Effect on Concentration and Study Habits**

Many students agreed that social media notifications and recommended content distract them from their studies. Students often check their phones while studying, which affects their concentration and productivity. Algorithmic feeds constantly provide new content, making it difficult for students to stay focused on academic tasks.

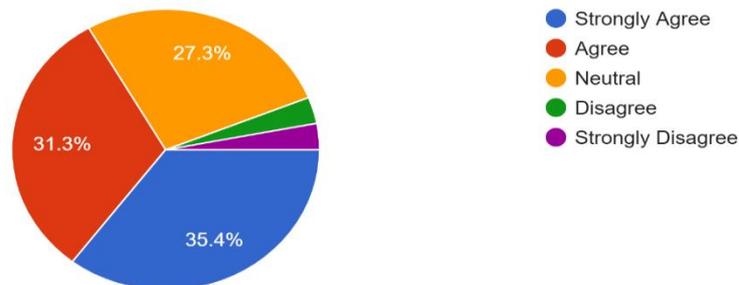
I often lose track of time while scrolling.

100 responses



I get distracted by social media while studying.

99 responses

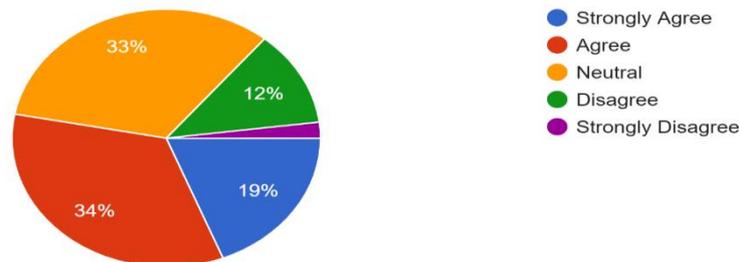


F) Academic Procrastination

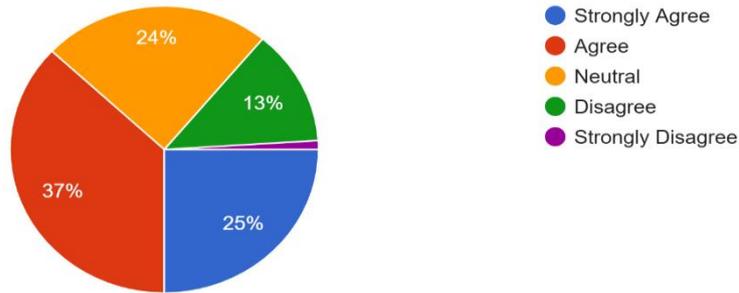
The responses suggest that social media usage sometimes leads to procrastination. Instead of completing assignments or studying, students often spend time scrolling through videos, reels, or posts. This delay in academic tasks can negatively affect study discipline and time management.

I am able to control my social media usage during exams.

100 responses



Social media affects my concentration level
100 responses



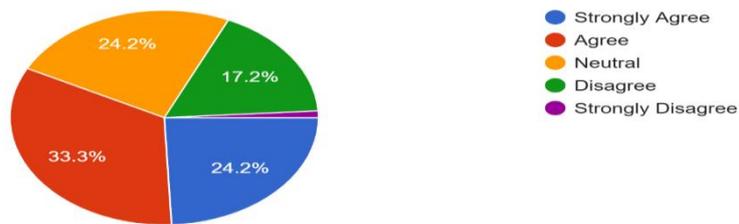
G) Psychological Well-Being

➤ Emotional Impact of Social Media Use

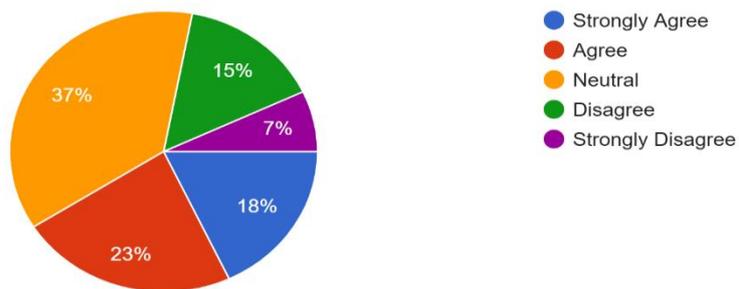
Some respondents reported experiencing stress, anxiety, or mood changes after spending long hours on social media. Seeing curated content about others' achievements, lifestyle, or social life can create feelings of comparison and pressure.

However, a few students also reported positive experiences such as discovering educational content or relaxing entertainment.

Social media sometimes makes me feel anxious or stressed.
99 responses

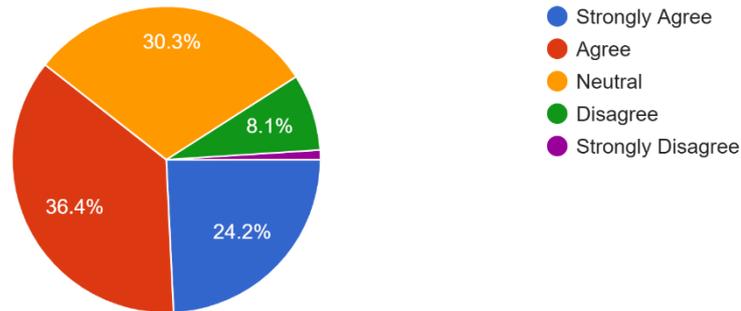


After using social media, I feel mentally refreshed.
100 responses



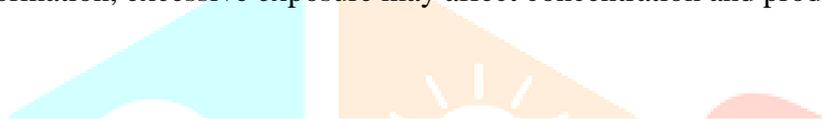
Continuous exposure to algorithmically selected content impacts my emotional state (e.g., mood, self-esteem, stress levels).

99 responses



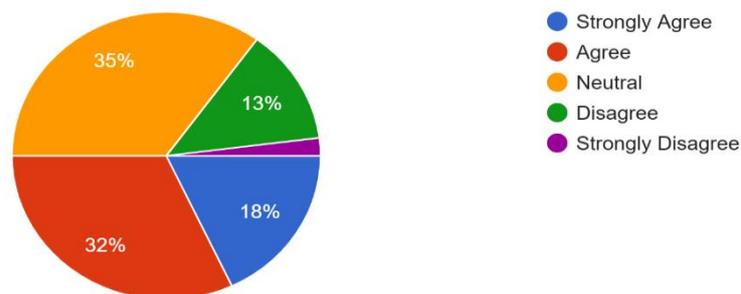
H) Overall Interpretation

The data indicates that algorithm-driven media platforms have a noticeable influence on students' daily routines, study habits, and emotional well-being. Higher social media usage is associated with greater distraction and reduced academic self-regulation. While these platforms offer entertainment and information, excessive exposure may affect concentration and productivity among university students.



Overall, social media positively affects my mental health.

100 responses



X. RESULTS & FINDINGS

According to the study's findings, the majority of college students use algorithm-driven social media sites like YouTube and Instagram for extended periods of time. The results show that students stay interested for longer when they are exposed to personalized content that algorithms recommend. Frequent exposure to suggested videos and posts, according to many respondents, frequently causes them to lose focus and become distracted from their studies. Additionally, the data indicates that students who use social media excessively are more likely to procrastinate and have poorer academic self-regulation. Additionally, after using these platforms for extended periods of time, some students reported experiencing stress, anxiety, and mood swings. Overall, the results indicate that university students' academic discipline and psychological health are significantly impacted by algorithm-driven media exposure.

XI. OVERALL FINDINGS

The study's conclusion underscores the substantial impact of **algorithm-driven media platforms on students'** daily routines, study practices, and emotional well-being. Algorithmic content can provide useful and informative content, but overuse can result in cognitive fatigue and dependency on distraction. The study shows how important it is for students to learn how to control themselves better and not use media too much. It also suggests that awareness programs can help students learn how to use their screens wisely and understand how algorithms work. The study concludes that exposure to

algorithmic media yields both advantageous and adverse effects, with the overall impact fluctuating based on university students' usage patterns and levels. Some students did say that they had positive experiences with informative or educational content, but the main trend is that heavy users are more likely to be distracted and less able to control their own academic behavior.

XII. CONCLUSION:

From the responses gathered, it can be inferred that algorithmic media exposure significantly impacts academic self-regulation and psychological well-being among university students in **Navi Mumbai**. Students who use algorithm-driven platforms more often tend to be more distracted, have trouble managing their study time, and have mood swings. Algorithmic content can be helpful, but too much of it seems to hurt academic focus and mental balance. The study concludes that algorithmic media content significantly influences students' academic conduct and psychological well-being, particularly among those with elevated daily usage.

XIII. SUGGESTIONS

1. Students should manage their screen time and reduce excessive use of social media platforms.
2. Universities can create awareness programs about the effects of algorithm driven social media on students' studies and mental health.
3. Students should use social media in a balanced way and focus more on academic activities.
4. Digital platforms can promote more educational and informative content for young users.
5. Students should take regular breaks from social media to improve concentration and productivity.
6. Future researchers can study a larger group of students and different cities to understand the impact more clearly.

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