

The Psychology of Scrolling: A Study on Digital Behavior

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Abstract:

Scrolling is a prevalent practice during the digital era, and it has influenced the experience of interaction between individuals and technology. What started as a mere tool of navigation has transformed into a habit that is automatic and is fueled by unlimited content, customized suggestions, and reward systems. Such features activate the dopamine system of the brain, strengthening repetitive scrolling and proving hard to quit. Long scrolling is also associated with a low attention span, cognitive overload, stress, anxiety, loss of sleep, and reduced productivity. The constant use of negative material is called doomscrolling, which adds to emotional burnout. The presented paper focuses on the issue of scrolling as a social phenomenon and the significance of conscious digital practices and mindful platform design in gaining healthier habits of technology use.

Keywords — Scrolling behavior, digital behavior, infinite scrolling, doomscrolling, dopamine reward system, cognitive overload, attention span, mental health, social media usage, digital addiction, emotional well-being, FOMO, user engagement, productivity loss.

I. INTRODUCTION

The interfaces of social media networks, news apps, and video sharing services are largely based on scrolling and provide the content in a continuous and uninterrupted format. The use of infinite scrolling, auto-play videos, and algorithm-based suggestions on Instagram, YouTube, Tik Tok, and Twitter is to ensure that the user is fully engaged and spends as long as possible on the platform. Though scrolling in the beginning was an effective way of browsing through the content, it has over time become an unconscious and habitual thing. There is no purposeful scrolling of users, who usually scroll out of curiosity, novelty-seeking, and the hope of rewarding content. The reward circuitry in the brain is the psychological basis of the scrolling behaviour. Dopamine is released with every single new piece of

content, which reinforces the behavior, and makes the user keep scrolling. The over scrolling of users subjects them to huge volumes of information in a short duration, which results in cognitive overload. The brain of the human being finds it difficult to handle this constant onslaught of stimuli, thus lowering the rate of attention and focus, as well as causing mental exhaustion. Moreover, scrolling is often done at the time when one is expected to rest or be productive, which leads to procrastination and time mismanagement.

Doomscrolling is now a common phenomenon during the times of world crisis and is linked with anxiety, stress, emotional burnout, and decreased self-esteem. Considering such implications, scrolling is no longer an objective digital practice but a behavior that has serious mental health, emotional, and functional implications.

II. LITERATURE REVIEW

An increasing amount of literature has made psychological, cognitive, and emotional impacts of excessive scrolling visible.

Yan et al. proved that too much scrolling through short-form video videos has an adverse effect on attention and executive control both in behavioral measures and EEG evidence. Their results indicate that the long-term scrolling changes the neural activity connected with the focus and the control of cognition. The study conducted by Sho and Morita investigated the study influence of scrolling on memory encoding and discovered that the faster the scrolling speed, the worse the long-term memory retention, which implied that the way people scroll is as critical as the length. Scrolling has also been extensively described with its emotional aftermath. Various rules associate long scrolls with a higher level of stress, anxiety and low level of life satisfaction. Specifically, doomscrolling has been named as an excellent forecast of psychological distress, particularly during times of uncertainty or crisis. Although there are scholars, who claim that the exposure to negative news can be informational or epistemic, the majority of empirical studies show the negative emotional impact of recurrent exposure. Digital well-being intervention studies indicate that some of the tools like screen-time reminders, usage limits might be partially effective, but their effectiveness may frequently be determined by the context and motivation of the user. Although the literature on digital addiction has increased, there is a gap in the literature on scrolling behavior specifically as few studies concentrate on how scrolling behaviors develop, maintain, and influence the mental well-being across time.

III. MATERIALS AND METHODS

Research Design

Research Design The current study will adopt a mixed-methods research design, which combines both quantitative and qualitative research designs to have a holistic view of the scrolling behavior. The quantitative aspect involves value variables that can be measured like the frequency of scrolling, duration of scrolling, emotional moods and perceived productivity. The qualitative aspect discusses

personal experience, emotion and the behavior pattern related to scrolling. The study design is correlational and analytical and descriptive

Target Population and Sampling

The research aims at undergraduate students in colleges that are at the age group of 18-25 years, a group of students who are considered as the most active in terms of the use of digital platforms. The participants are attractable through various academic fields to guarantee diversity in their worldview and media consumption patterns. The stratified random sampling is used with a view of obtaining balanced representation in terms of gender, academic program, and the intensity of social media use. The sample will consist of 100 survey respondents and 10 interview respondents.

Data Collection Methods

The descriptive statistics are applied to quantitative data and measures are frequencies, percentages, and the mean. The correlation analysis is performed in order to analyze the correlation between the time taken to scroll and the variables, e.g. the stress, the focus, and the productivity. Thematic data analysis of the qualitative data is performed to identify repetitive psychological and behavioural tendencies like FOMO, instant gratification, and loss of control.

Ethical Considerations

The study is ethical in terms of research. The participation is voluntary, all the participants have been informed, anonymity and confidentiality is maintained and the data collected is only going to be utilized academically.

IV. FIGURES AND TABLES

This paper contains figures and tables to depict graphically the patterns of scrolling behavior, psychological effects, and study results. The results are presented in the form of graphs that depict mean daily scrolling time, stress and loss of attention, and the rate of doomscrolling among the participants. Demographic information, questionnaire answers and important observations made during the survey and interviews are summarized in tables. These

visual aids can contribute to enhancing the clarity, data interpretation, and the general perception of the research findings.

Table 1

Category Description Number of Participants		
Category	Description	Number of Participants
A. Age Group	18–20 years	42
	21–23 years	38
C.	24–25 years	20
D. Gender	Male	46
	Female	54
F. Daily Scrolling Time	Less than 2 hours	18
G.	2–4 hours	47
H.	More than 4 hours	35

V. ACKNOWLEDGMENT

The authors are grateful to note that the members of the faculty of the Department of Computer Applications assisted them and provided help during the entire period of this research. We also appreciate the participants who voluntarily participated in the survey and interviews and gave their precious time and information. Without them, this study could not have been accomplished successfully.

CONCLUSION

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Scrolling has gone beyond being a mere act of navigation, it has become a habit that is psychologically supported by the influence of

convincing digital design. High levels of scrolling are harmful to attention, cognitive control, productivity, and emotional well-being and doomscrolling also increases anxiety and stress. As entertaining as scrolling may be, as well as providing social connectivity and access to information, the uncontrolled use of the latter is a serious threat to mental health.

These are digital well-being applications, adaptive features, and deliberate interface design, which allows the user to control their scrolling habits. To gain a better understanding of scrolling behavior and create a successful intervention to help individuals engage in digital life healthily, future studies are needed to examine psychological outcomes in the long run, differences between age groups, and populations with different cultures.

REFERENCES

[1] W. Yan et al., “Mobile phone short video use negatively impacts attention functions: An EEG study,” *Frontiers in Psychology*, 2023.
 [2] Y. Sho and H. Morita, “The effects of viewing by scrolling on a small screen on the encoding of objects into visual long-term memory,” *Frontiers in Psychology*, 2023.
 [3] M. Neijzen, “The epistemic value of doombehaviour,” *Synthese*, 2024.
 [4] S. K. Lora et al., “Infinite scrolling, finite satisfaction,” arXiv preprint, 2024.
 [5] L.-M. Meinhardt et al., “Scrolling in the deep,” arXiv preprint, 2025.
 [6] K. Y. Y. Tam and M. Inzlicht, “Fast-forward to boredom,” *Journal of Experimental Psychology: General*, 2024.
 [7] A. Alter, *Irresistible: The Rise of Addictive Technology*, Penguin Press, 2017.
 [8] C. Montag and P. Walla, “Impact of mobile internet use on behavior,” *Frontiers in Psychology*, 2016.
 [9] A. K. Przybylski et al., “Fear of Missing Out (FOMO),” *Computers in Human Behavior*, 2013.