

SOCIAL MEDIA ADDICTION, FATIGUE AND THE EFFECTS ON YOUNG ADULTS' ACADEMIC PERFORMANCE CHINA

HAN, Y.

*Faculty of Communication and Media Studies, Universiti Teknologi MARA, Selangor, Malaysia.
e-mail: hxiaotao666[at]gmail.com*

(Received 19th May 2024; revised 10th August 2024; accepted 20th August 2024)

Abstract. Social media fatigue is the outcome of users voluntarily reducing the amount of time, frequency, or even their withdrawal from social media use due to bad feelings they develop from various circumstances. Gender influences how different people see information when using social media. It is crucial to acknowledge the potential dangers of excessive social media use and take proactive measures to minimize its impact on young adults' academic goals. It is a fact that the harmful impact of social media on academic performance is only exacerbated by the issue of social media fatigue. The study to analyse social media fatigue and its impact on young adults' academic performance. The second research objective is to identify the role of gender in moderating the relationship between social media fatigue and young adults' academic performance. The study employed quantitative methodology, involving young adults aged between 18 and 22 years old in China. A total of 34 young adults participated in the study. The study utilised simple random sampling to obtain the sample using the G*Power 3.1 version, with an effect size of 0.50. The results indicated a positive correlation between young adult use of social media platforms and social media fatigue ($p=.626$) and academic performance ($p=.702$). Pearson's correlation analysis was used to detect the association between the two, and regression analysis was used to determine the weights of the influencing factors. Social media use can influence young adults' academic performance, and different levels of influence exist for males and females. As mentioned earlier, it is a long-term process for users to move from being attracted to being addicted to quitting. It is essential to understand the causes, mechanisms, and consequences of social media fatigue on young adults' academic performance so that they can regulate their social media use behaviour, balance real-life and online virtual social interaction, and avoid anxiety. Society or related organisations can work on the extent of social media use to reduce the burden on students and ensure a balance between learning and life.

Keywords: *social media fatigue, young adults, academic performance, gender, China*

Introduction

China is a leading force in technology, boasting a range of homegrown social media platforms like Weibo, QQ, and Redbook. These platforms have garnered immense popularity among the country's youth, serving as hubs for information, entertainment, education, and social interaction (Zeng et al., 2021). However, like many nations globally, China grapples with the adverse effects of excessive social media use, particularly concerning the mental well-being of its younger populace (Zhou and Ye, 2023). The pervasive usage of these platforms among Chinese youth has led to concerns regarding mental health. While these social media avenues offer multifaceted benefits, constant and sometimes compulsive engagement has raised alarms. Extensive access to these platforms fosters addictive behaviours driven by the constant pursuit of information, validation, and social connection. This addiction disrupts daily routines, encroaching on personal time and negatively impacting mental health. Similar to trends observed worldwide, China contends with the consequences of early and unmitigated exposure to social media, leading to various issues among the younger generation (Crary, 2022). The need for a balanced approach to technology use, promoting digital well-being, and fostering a healthy relationship with social media emerges as a critical

consideration in safeguarding the mental health of Chinese youth amidst the proliferation of these platforms.

The observable trends on leading social media platforms, like Facebook and Twitter, have displayed signs of a deceleration in the growth rate of active users worldwide (Ranger, 2020). Despite these early indicators, predictions within the tech industry continue to forecast an upward trajectory in user numbers. The crux of this burgeoning concern lies in the overwhelming inundation of information, coupled with the constant demand for interaction and engagement characteristic of social media platforms (Auerbach, 2023). Users navigate a virtual landscape inundated with a ceaseless content stream, notifications, and algorithm-driven suggestions. Users are now overwhelmed by the information provided and rely on the platform to obtain information. The pervasive allure of social media has engendered a concerning trend among younger users: addiction. The platforms' design, featuring endless scrolling, notifications, and personalised content, taps into psychological triggers, fostering compulsive behaviours. For many young individuals, the constant need for validation through likes, comments, and shares becomes an addictive cycle, driving them to seek continuous engagement. The dopamine-driven reward system activated by social media interactions causes a desire for more validation and a fear of missing out (FOMO).

Thus, the heavy usage of the platform has led to the symptoms of social media fatigue, specifically in the younger generation. Consequently, users feel compelled to check their feeds, sacrificing real-life interactions and sleeping incessantly. This addiction throws daily schedules off, hurts mental health, and fuels feelings of inadequacy and anxiety (Butt, 2022). Given how pervasive social media is in modern life, comprehending and treating this addiction in younger users requires a multifaceted strategy that includes promoting healthy offline activities, educating people about digital well-being, and changing platform design to put users' needs before those of long-term users. This has caused social media fatigue problems, affecting young adults' academic performance. Therefore, the present study aims to resolve three objectives based on the framework in *Figure 1*.

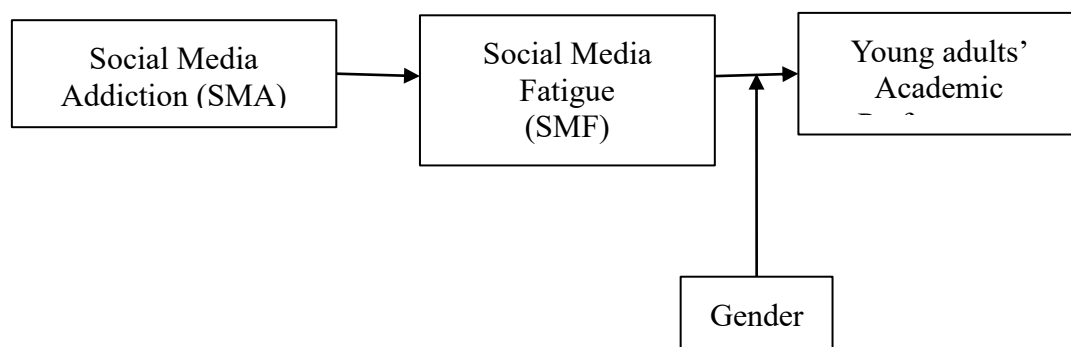


Figure 1. Conceptual framework.

The study objective is as follows: (1) To analyse the impact of social media addiction on social media fatigue among young adults in China (RO1); To analyse social media fatigue and its effects on young adults' academic performance (RO2); and To identify gender roles in moderating the relationship between social media fatigue and young adults' academic performance (RO3).

Literature review

Gender and use of social media

Studies conducted in the Middle East about the young adult generation, in which they actively participate and are involved with social media, show high engagement. However, studies also found that most males use the platform for entertainment, unlike women, who use social media platforms for information and education (Ali et al., 2021). Furthermore, previous studies show that both genders, male and female, agreed that most social media help them to improve their understanding, get educational help, and provide guidance concerning their academic matters (Ali et al., 2021; Alharbi et al., 2020). Social media helps students' concerns about their educational issues. Social media strategies help students confront uncertainties about education. In contrast, in the context of China studies, studies show the use of social media among Chinese young adults mainly for males on online games and entertainment and for women to update their lifestyle and get updated information online (Ge and Gretzel, 2017). Both genders agreed that social media is also used for educational purposes (Shan et al., 2021). This has portrayed the differences in the use of social media between genders as significant, yet there are discrepancies in its usage. Social media is commonly used in China to maintain and build relationships. Both men and women use platforms such as WeChat to build personal and professional social networks. These platforms also play a role in connecting individuals, with some platforms catering specifically to different gender preferences (Yang and Wang, 2021). Content preferences are different between men and women too, with Chinese women typically sharing content related to fashion, beauty, lifestyle, and family, reflecting the general interests of women worldwide. Conversely, men are more likely to engage in discussions related to technology, sports, and current affairs.

The use of social media among young adults

Social media has emerged as an indispensable tool in the lives of young adults in China, transforming how they connect and collaborate. With a vast population actively engaged on these platforms, their significance goes beyond mere social interaction. From connecting with family, peers, and educators to aiding workflow efficiency in professional settings, social media serves as the primary communication avenue. Its pivotal role escalated during the COVID-19 pandemic as a lifeline that bridged distances and maintained connections. Studies by Chen et al. (2020) as well as Li and Liu (2020) underscore this surge in importance, highlighting how these platforms facilitated continuity amidst global upheaval. Whether for remote learning, professional networking, or sustaining social ties, social media's multifaceted functionality has entrenched its relevance, reflecting a societal shift in communication patterns and reliance on digital connectivity for both personal and professional spheres in China and worldwide (Shapiro, 2022). In China, young adults predominantly use mobile platforms like WeChat, Weibo, and TikTok for social media engagement. WeChat serves as an all-in-one communication and networking app, while Weibo and Douyin cater to real-time updates and short-form videos, respectively (Yang and Wang, 2021). Social media plays a pivotal role in content sharing and influencer marketing, with Key Opinion Leaders (KOLs) shaping trends. E-commerce integration, especially in WeChat, facilitates seamless transactions (Comendulli, 2020). Government regulations and privacy concerns influence online interactions. The preference for domestic platforms

reflects regulatory influences, contributing to a distinctive social media landscape for young adults in China.

Social media addiction and social media fatigue

Social media addiction is a concerning phenomenon where individuals develop compulsive behaviours, spending excessive time on platforms to the detriment of their daily activities, relationships, and mental well-being (Ahmed and Vaghefi, 2021; Chung et al., 2019). This addiction often manifests through a constant need to check updates, seek validation through likes and comments, and have an inability to disengage from social media. Conversely, social media fatigue refers to exhaustion, mental strain, and burnout resulting from prolonged use of these platforms. It stems from information overload, the pressure to maintain an online presence, and exposure to endless content streams. Both addiction and fatigue pose significant challenges (Kurt, 2023; Al Abdullateef, 2022). Addiction can lead to reduced productivity, social withdrawal, and mental health issues like anxiety and depression (Pohl et al., 2021; Health, 2020). On the other hand, fatigue can result in decreased interest, a negative outlook toward social media, and even a desire to disengage from these platforms completely. Since WeChat and Weibo are so widely used, young adults in China frequently struggle with social media addiction and tiredness (Liu and He, 2021). Addiction to social media entails obsessive overuse that interferes with everyday life and mental health. On the other hand, information overload and the obligation to uphold a meticulously manicured online person contribute to social media fatigue (Weiss, 2020). The continual pressure to keep up and the intense struggle for online approval that young people confront can wear them out.

Social media and young adults' academic performance

Excessive social media usage has been linked to poorer grades in studies (Rozgonjuk et al., 2021; Azizi et al., 2019). The explanations given for this association include less study time, disturbed sleep patterns from late-night browsing, and increased stress from social comparisons. Individual variations, moderation in use, and time management are important considerations. If students balance their social media usage and academic obligations, their performance might be good. To prevent screen time from interfering with academic obligations, educational institutions and parents should also play a part in encouraging responsible social media usage and offering advice on screen time management (Fontenelle-Tereshchuk, 2021). To maximise their academic achievement and benefit from digital connectivity, young adults must weigh the advantages and disadvantages of social media. Social media's impact on young adults' academic performance in China reveals a delicate relationship. While social media can lead to distraction, procrastination, and sleep disruption, it also provides opportunities for collaboration and educational resources. Factors such as the type of social media use and individual differences play a role in these dynamics. Collaboration and networking opportunities provided by social media platforms can enhance learning experiences (Campagna, 2021). They allow students to engage in group discussions, share educational resources, and collaborate on projects, which can positively impact their academic endeavours. Some platforms offer educational content and resources that supplement traditional learning methods, contributing positively to academic performance (Abuhassna et al., 2020). Understanding the nature of social media use is

pivotal. Passive consumption of irrelevant content versus active participation in educational groups or discussions can yield vastly different outcomes. Personal differences also come into play (Mishra, 2020). Some individuals may possess better self-regulation skills, allowing them to balance social media use with academic responsibilities more effectively than others.

Disadvantages of social media fatigue

Social media fatigue is associated with various disadvantages, both mentally and physical, impacting individuals (Dhir et al., 2018). Prolonged exposure to a constant influx of information and social interactions can lead to mental exhaustion, reducing cognitive functions and overall well-being (Vella-Brodrick and Gilowska, 2022). This fatigue often translates into decreased productivity as individuals struggle to concentrate on tasks, potentially fostering procrastination in a digitally overwhelming environment (Costa, 2021). The negative consequences extend to mental health, with heightened stress, anxiety, and feelings of being overwhelmed. Sleep patterns may be disrupted due to excessive social media use, contributing to sleep deprivation and related health issues (Ivbijaro et al., 2020). Maintaining a curated online persona can be exhausting, fostering pressure to conform to societal expectations. Moreover, social media fatigue may reduce real-life engagement, impacting personal relationships and social skills (Liu and He, 2021). Privacy concerns and identity theft risks arise as individuals share more personal information online. Social comparison and the fear of missing out (FOMO) contribute to feelings of inadequacy and lower self-esteem (Sheldon et al., 2019). Excessive social media use poses multiple challenges, emphasising the importance of adopting healthy usage habits and setting boundaries.

Research hypothetical framework

Figure 2 is a research hypothesis framework for the present study that acts as the backbone of the study, outlining the study structure and the relationship between variables. The Research Hypothetical Framework is essentially a roadmap that guides the research process. It helps structure the study, organise ideas, and ensure that the research questions are addressed systematically and logically. Additionally, it aids in interpreting the results and drawing meaningful conclusions based on the findings. From this figure, the outlined research hypotheses are as follows:

H1: There is a significant difference between social media addiction and social media fatigue among young Chinese adults' academic performance.

H2: There is a significant difference between social media fatigue and China's young adults' academic performance.

H3: Gender Mediating the Relationship between Social Media Fatigue and Chinese Young Adults' Academic Performance.

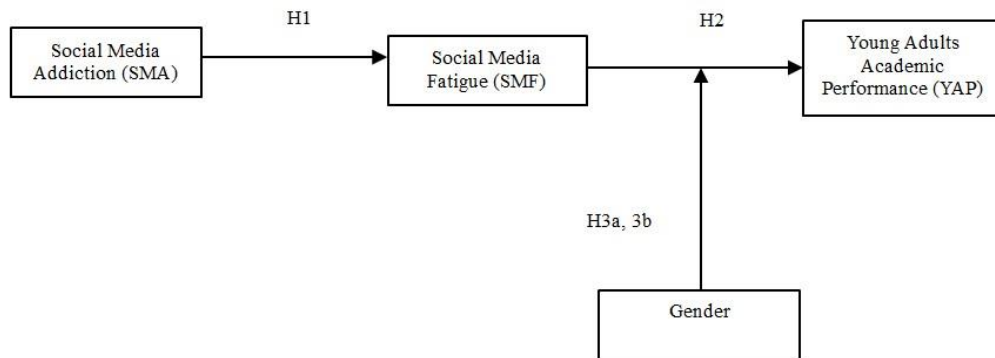


Figure 2. Research hypothetical framework.

Cognitive Load Theory (CLT)

According to Sweller (2020), there are three types of cognitive load: intrinsic, extraneous, and relevant. More research has been done on the extraneous load. In the human-computer interaction (HCI) context, extraneous load refers to the inputs from the environment that the human brain responds to. In contrast, intrinsic cognitive load is the weight associated with processing this information and is influenced by the person's prior knowledge and psychological state of mind (Sweller, 2020). The previous study also examined variables impacting social media users' intrinsic cognitive load (Islam et al., 2021). Fear of missing out (FoMO), privacy worries, anxiety, and depression are the intrinsic cognitive load elements discovered to be significant in this scenario in their research study. Additionally, they found that extrinsic factors associated with cognitive load, such as social overload, technology-related issues, complexity, parental influence, and cyberbullying, were relevant (Kumar, 2022).

Materials and Methods

Research design

Figure 3 shows the structure of the research design used to achieve the study's objectives. The present study employed quantitative research by developing an instrument for a survey or questionnaire that would later be distributed to the respondents. By using robust quantitative methods, instrumental development, and a systematic sampling approach, this research seeks to contribute to understanding the complex dynamics between social media usage and academic performance among young adults in Shandong province. The study of social media's impact on the academic performance of young adults aged 18 to 22 in Shandong province requires a systematic approach, beginning with quantitative survey methodologies and instrumental development. The research will utilise quantitative surveys to gather data on social media usage patterns, academic habits, and performance indicators among the target demographic. This approach allows for structured data collection, enabling the analysis of correlations between social media engagement and educational outcomes. To ensure the accuracy and reliability of the survey instrument, rigorous instrumental development is essential. This involves designing well-crafted questionnaires or interview protocols tailored to capture specific aspects of social media usage, academic behaviours, and

performance metrics relevant to the study objectives. Validating the instrument through pilot testing and expert reviews helps enhance its reliability and validity.

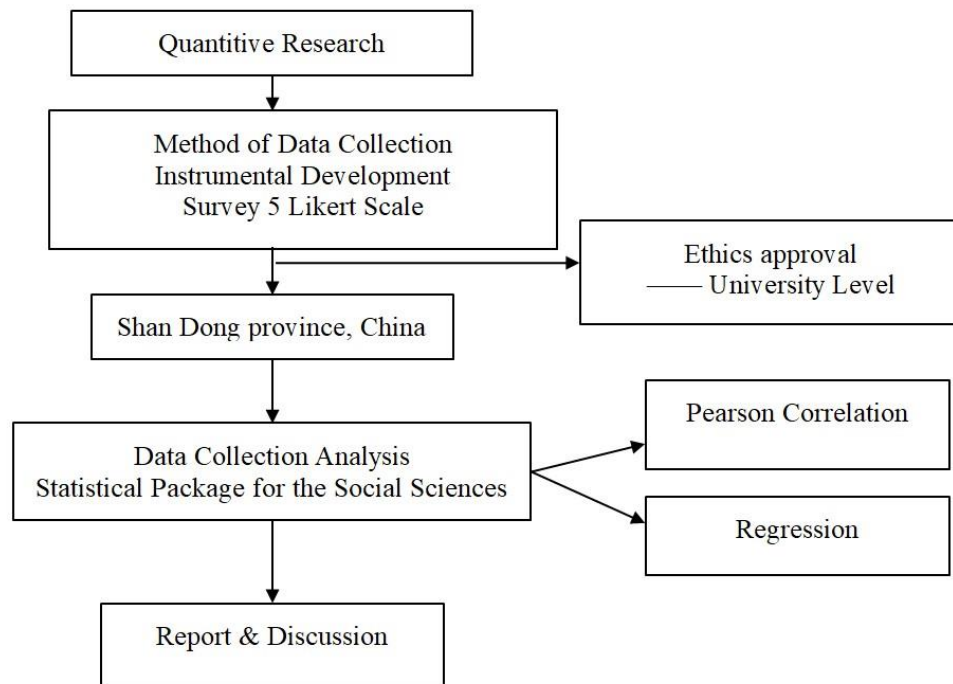


Figure 3. Research design.

Population and sampling

In conducting a simple random sample, the study will leverage G*Power, a statistical software, to determine the necessary sample size from the population of young adults aged 18 to 22 residing in Shandong province. This software considers the population size, desired level of confidence, and anticipated effect size to calculate the appropriate sample size needed for statistical significance. With its diverse population of young adults, Shandong Province offers a valuable sample frame for this study. Focusing on this demographic, the research provides insights into the relationship between social media usage and academic performance within a localised context. This study's significance lies in its potential to shed light on the nuances of how social media impacts the academic lives of young adults in Shandong province. It can inform educators, policymakers, and parents about the challenges posed by excessive social media use and aid in formulating strategies to promote a healthier balance between online engagement and academic success among this demographic.

Results and Discussion

Table 1 summarises the respondent profile of young adults in Shandong, China, who participated in the present study. The total participation is 34 samples, including both males and females; all respondents are between 18 and 22 years old and reside in China. Respondent profiles are divided into 5 categories: (1) gender, (2) Year of Study, (3) Working Status, (4) Number of social media software frequently used, and (5) Time spent using social media per day. There are 25 males and 9 females who participated in the present study, and most of them are in their sophomore year. The majority of them

spent 1-3 hours on social media for more than 3-5 hours per day. Young adults who participate are from Shandong Province in China. The results measuring each of the study's objectives are summarised in *Table 2*. Regression analysis and Pearson correlation analysis were used to indicate the weighted influence of each variable. Research has shown that every variable matters and influences the others. The study found that social media addiction significantly contributed to social media fatigue ($p=.307$). Interestingly, while both addiction and fatigue influenced young adults' academic performance, fatigue had a slightly higher direct impact (coefficients: addiction=.307, fatigue=.374). This indicates that the fatigue experienced from social media use might have a more pronounced effect on academic performance than the addiction itself. Furthermore, when examining the relationship between social media fatigue and academic performance based on gender, the study revealed notable differences. Females exhibited a higher impact, showing a 58.1% influence on academic performance, compared to males, who demonstrated a 36.7% impact. Despite all hypotheses being supported and accepted, the overall impact observed across these factors remained relatively weak within the range of .307 to .374.

Table 1. Summary of respondent profile.

Group	Demographic background	Frequency (N)
Gender	Male	25
	Female	9
Year of study	Freshman Student	2
	Sophomore Student	26
	Junior Student	6
Working status	Never worked	21
	0-1 year	10
	1-2 year	1
	More than 2 years	2
Number of social media software frequently used	1 to 3	23
	4 to 6	10
	More than 10	1
Time spent using social media per day	Within an hour	7
	1 to 3 hours	9
	3 to 5 hours	12
	5 to 7 hours	4
	More than 7 hours	2

Table 2. Summary of hypothesis results.

Hypothesis	Relationship	Pearson correlation	Regression	Status
H1	SMA-SMF	.307	.307/30.7%	Accepted
H2	SMF -YAP	.374	.069/6.9%	Accepted
H3a	MALE (SMF-YAP)	.367	.367/36.7%	Accepted
H3b	FEMALE (SMF-YAP)	.317	.581/58.1%	Accepted

Conclusion

The study delves into the intricate relationship between social media usage, fatigue, and its impact on academic performance among young adults in China. It acknowledges that both social media addiction and fatigue contribute to academic outcomes, with fatigue having a slightly stronger influence. This distinction highlights the need to explore consumption patterns, frequency, and psychological effects of addiction on individuals. Notably, the research identifies a connection between higher levels of social media fatigue and obsessive usage among young individuals in China. This suggests a need to analyse consumption patterns, duration, and the emotional toll of addiction. However, the study also suggests a potential negative correlation between social media

weariness and academic performance. Exploring academic metrics, time management, attention span, and motivation levels about fatigue becomes crucial to understanding this impact. Furthermore, the gender-specific influence on social media fatigue and academic performance is highlighted. Females seem to be more significantly affected than males, emphasising the need for a nuanced understanding of gender roles in moderating this connection. However, the study acknowledges the limitations of the sample size and suggests expanding research to encompass a more diverse participant pool from multiple provinces in China. This expansion could provide a broader perspective and potentially reveal variations in how social media fatigue impacts academic performance across different regions and demographics. In future studies, it is recommended that researchers conduct a more extensive investigation across varied provinces in China with a larger sample size. This approach could offer deeper insights into the multifaceted dynamics between social media fatigue, academic performance, and gender-specific impacts. Understanding these relationships comprehensively is essential in devising strategies to mitigate the negative effects of social media fatigue and promote better academic outcomes among young adults in China.

Acknowledgement

This research is self-funded.

Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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