

Quantitative Analysis on the Causes and Results of Indulging in Social Media Short Videos

Pukun Fan^{1, †}, Jianyu Jia^{2, †}, Shaohan Tang^{3, *, †} and Yifan Zhang^{4, †}

¹University of Queensland, Brisbane, Australia

²University of Nebraska-Lincoln, Lincoln, United States

³Cheshire Academy, Connecticut, United States

⁴Nanjing Foreign Language School, Nanjing, China

*Corresponding author: shaohan.tang@cheshireacademy.org

[†]Those authors contributed equally.

Abstract: With the development of Internet technology, social media short video plays a more and more important role in people's daily life. In addition to bringing joy to people, short videos can also bring certain knowledge and skills. In recent years, people pay more and more attention to the negative impact of indulging in short video. This paper mainly discusses the reasons of indulging in short video and its specific impact on people's life through quantitative research in the form of questionnaire survey. Through the cross analysis of 400 samples, this paper finds that the interactivity of social media comments and accurate algorithms enhance people's addiction to short videos. The vast majority of people are addicted to short videos, which is more serious for women than men. At the same time, different genders and occupations also show significant differences in the content of indulging in short videos. This study will be beneficial to provide new research questions and samples for social media research, and will also provide some suggestions and inspiration for short video operation.

Keywords: Short Videos; Social Media; Quantitative Analysis.

1. Introduction

Social media has changed people's lives in this decade. It has brought benefits to people, such as maintaining relationships with others and providing encouragement and support for people whose lives are in chaos [1]. Indeed, there are some cons as well when people get too addicted to it. Most of the short videos pack a large amount of information within a few seconds, it gives instant gratification to people feeling like they have learned great knowledge. Unlike reading a book, you don't get the information as fast, but you have the time to think and apply it to the viewers' world. Within the short seconds of watching the videos, it is hard to form viewers' own ideas, it can lead to a lack of thinking the people. From giving us new ways to come together and stay connected with the world around us, to providing outlets for self-expression, social media has fundamentally changed the way we initiate, build and maintain our relationships [1]. There are a group of people who would pay extra for the higher end of the entertainment industry such as the movies or shows you have to extra for. But the rest don't, then "the remaining widely available options are B-rated movies, reality TV shows, short clips on social media, live streaming, etc. [2]". There was a term that was coined for the first time in 1995 by Z. Brzezinski who was a neo-liberal ideologist. The example above describes the word "tittytainment", it is a form of lowest common denominator entertainment designed to appeal to the masses and refrain people from thinking. The Pro of B-rated entertainment is people now have easy and cheaper access to social media to watch videos that will consume different information and content. On the other hand, cheap social media platforms will shape people's ideas rather critical thinking.

The short videos would impact people's emotions. Although the short video platforms and social media would bring a lot of negative experiences for the young adult, such as online bullying and online trace, they would gain the approval of others through social media engagement contributes to

user satisfaction. A study had shown that the people who had been using the short video platform for a long time could get satisfaction from others, such as young people with low self-esteem can access online social media and communicate with people facing the same challenges through mobile devices. Meanwhile, lonely young people would likely choose online social contact because they want to be recognized by others [3]. The short video platforms such as TikTok with the continuous scrolling function are regarded as the key elements to addiction. Social interaction plays an essential role in contributing to online video viewing and attracts people to keep watching short videos. Why can the number of users of TikTok reach new highs, the length of user use remains high, and the user stickiness remains high? Some scholars analyzed the causes of "TikTok fever" from the perspective of behaviorism, cognitive school and humanism, and further explored the psychological mechanism behind short video addiction [4].

When using social media platforms, people get the opportunity to choose what type of videos they prefer. The short-video platforms will also present certain videos that match viewers' preference. By choosing the videos that people are interested in, they get more familiar with their hobbies and acquire positive information about themselves. Consequently, people tend to feel confident and satisfied. When people feel overwhelmingly good about themselves, they tend to make decisions that are irrational, impulsive, and indulgent. Since conspicuous products are those that display wealth through luxurious spending that satisfies a person's need for prestige, the consumption of these goods represents more of a hedonic and indulgent than a utilitarian and necessity purpose. Therefore, people watching too many short videos would have different viewpoints towards the world and consume more unnecessary conspicuous goods [5].

In addition, in the short video user group, the young group represented by college students is easy to be concerned. Some studies have investigated the use of short videos by contemporary college students through quantitative methods, and explored the relationship between short videos and Internet addiction and personality traits. They surveyed 559 college students using the revised Chinese Internet Addiction Scale (CIAS-R) and Eysenck Personality Questionnaire (EPQ). Their study found that female college students used short videos significantly more than male college students, and there was no significant difference in the use rate of short videos in grades; The higher the frequency of using short videos, the higher the Internet Addiction Tendency of college students with high neuroticism [6].

Previous studies have preliminarily demonstrated the negative impact of short video on people's life. On this basis, this paper will further explore the specific consequences of indulging in short video through empirical investigation.

2. Methodology

The method used in this study was the quantitative analysis of questionnaire survey. Using the app Wenjuanxing, 400 pieces of data were offered by people from various gender and age groups. An information sheet describing the survey was provided to the respondents to ensure that informed consent was provided to participants. They were told that their answers and personal information would be kept confidential. More importantly, respondents would ensure that participation and withdrawal from the study are voluntary. Participants could choose to withdraw at any time without any penalty. The following table shows the basic information of the respondents.

The survey went in-depth about the short video platform usage, such as how much time people spend on the video platforms, or what platforms are the most popular. From many survey questions about interest and addictive types of questions have asked, we made a crosstab and found out the people who are addicted and the people who are not, between males and females.

Based on the hypothesis, which people's addiction to short videos can affect their personal social life, we compared the behaviors of addicted people with those of people who were not addicted. Specifically, we set numbers for each type of behavior, which meant every answer was converted into certain numbers. For example, we set the number one to represent males and the number two to

represent females. To identify whether the sample was addicted to short videos, we asked about nine different phenomena of addiction, and for each question, we asked for their agreement, 1 meant strongly disagree, 2 meant disagree, 3 meant neutral, 4 meant agree and 5 meant strongly agree. After receiving the answers, we used Excel to calculate the sum of the numbers of all nine questions. Theoretically, the highest sum was 45, and the lowest sum was 9. There were various ratings and we set the number 27 as a dividing line of whether people were addicted. So for those rating less than or equal to 27, they were not addicted to watching short videos, and for those rating higher than 27, they were addicted. We used the number 0 to represent non addiction and 1 to represent addiction to make our later study clearer. With the information on addiction, we could see the difference in their behaviors while watching. We also divided the behaviors into two different types, using the number 0 to represent the minor subjects, and 1 to represent the major subjects. To answer the question on consequences of short video clips social media addiction, we analyzed the answers to our questionnaire using SPSS.

Table 1. Basic information of respondents

Item	Group	N=400	%
Gender	Female	218	54.5
	Male	182	45.5
Age	≤15	9	3
	16-25	140	35
	26-40	89	22.3
	41-60	141	35.25
	≥60	21	5.25
Education level	Primary school	1	0.25
	Junior high school	14	3.5
	Senior high school	86	21.5
	Junior college	65	16.25
	Undergraduate college	181	45.25
	Master candidate	50	12.5
	Doctoral candidate	3	0.75

3. Results and Discussion

The analysis of the data revealed that almost all respondents used social media. The research found that 68.98% of the people liked TikTok more than other platforms in China and 61.07% of people who took our survey, would stay on video type of social media for way too long, without realizing it. TikTok was the most well-designed platform right now that would keep attracting users, they were delighted by the unique content they found, and they felt safe expressing themselves with their own content. These platforms were obviously addictive to a lot of people, and the survey showed that 11.96% of people could not stop scrolling to the videos when they started, and only 38.04% of people could fully resist. Most of the population were people from age 16 to 25.

There are many reasons for indulging in short videos. The comment was an essential factor in it. Almost every short video platform had set a comment area, which allowed each user to express their opinion, and in this area, they could find comments that share or contradict their opinion, allowing different users to interact with each other. At the same time, the comments section satisfied people's desire to express themselves, on one hand, thus creating a sticky relationship between the video and the user and making the user addicted to it. According to our survey, many people thought that they could not control their time watching these short videos in daily life, perhaps it related to the platform giving a like and comments which might be the essential factors to make people spend much time on these platforms. As for the give a like for a short video, which showed that the user might be interested

in it. The more likes the system had, the more it understood the user's preferences and the more accurate the recommended videos were, making the user more and more addicted to them [7].

Another factor was the Recommendation algorithms. Because the platform used your personal information, as well as thousands of data points related to your browsing history, to help you match the content you are most likely to click on or watch. In addition, the algorithm was constantly being modified and each click, each view, each interaction you had becomes a new model so that the user would enter the model and keep improving the accuracy. This would result in the player spending more time on the platform. The essence of a recommendation algorithm was to enhance one's opinion of an object. If a person liked something, he or she would subconsciously like it more, which was driven by the platform based [8].

It turned out that the significant results showed certain results of the short-video clips addiction. According to the results of question 6, people addicted to watching short videos tended to spend more time watching short video clips every day and they tended to receive more videos that matched their watching preference. Also, addicted people were more likely to open the app before going to sleep or just after waking and when having new ideas or wanting to record happy moments. Watching short videos had actually become a significant part of their life and are influencing their lifestyle in various ways. Because of short-video watching addiction, people might open the apps whenever and wherever they are, which leads to a daily routine that may harm their health. Also, while being asked about the feelings after watching short videos for a long time, 60.2% of the addicted people tended to have negative feelings like regret and meaningless, while only 50.7% of the people that were not addicted have similar feelings. In addition, being addicted to watching short video clips would generally lead to longer video watching time, unscientific daily routine and negative emotions. Based on factor analysis results, their motivations for doing so were entertainment, information seeking, personal utility, and convenience. And the results of the survey could support this statement quite well, more people were interested in cooking videos than reality shows because it was personal utility. More watch informational and knowledgeable short videos than people watching celebrity trendy videos.

Meanwhile, users of different genders preferred different types of short videos. According to our survey results, people were more likely to spend more time on videos to enrich their knowledge, including news videos, commentary on recent events, cooking instruction videos, and so on. According to our findings, where 1 represented least satisfied and 5 represented most satisfied, then the average rating for men watching knowledge and information videos was 2.97, while the average rating for women watching knowledge and information videos was 3.91. For fashion and trend videos, the average rating for men was 1.90 and for women was 3.92. According to our raw data, male users preferred to watch videos about knowledge and information, and they tended to stay with these videos for longer. But for female users, watching videos on fashion trends was also a good choice, if not a better one. If short video platforms wanted to continue to attract people to watch their videos, they must show users more videos that they were interested in, in this case, for male users, videos that were about actual information. These videos should be equipped with effective messages about attitudes to life or events. For female users, on the other hand, the platform could offer them the same number of fashion trend videos and knowledge informative videos. In short, in order to attract a larger audience, the platform always find out what types of videos users like and then offer them as many as possible.

Another survey result was that people who were addicted to watching short videos would lead to inattention when studying or working. Short-form video platforms had attracted a large number of internet users and most would use them on their smartphones, but research had shown that long-term use of short-form video platforms could have a negative impact on learning, with many students viewing them during class time or for homework [9]. While the correct use of social media could have many benefits, such as searching for the latest news, building relationships, and learning practical skills, most students used social media for their own entertainment rather than for learning purposes. Furthermore, because today's social media had a strong appeal to people, perhaps students were more likely to spend too much time on social media rather than studying, and some students

even skip classes, choosing social media instead, which could reduce their learning effectiveness and lead to lower academic performance. In addition, excessive social media browsing could negatively affect a student's GPA. On the one hand, social media provided too much stimulation and could distract the student's attention. On the other hand, students spent a lot of time on socially allocated study time. Therefore, excessive use of short video platforms could lead to inefficient learning and poor performance [10]. In other words, when students used short video platforms, mostly for non-academic purposes, then it would affect their learning efficiency and academic performance. In conclusion, most people usually used short video platforms and it had even become an essential part of their daily life.

4. Conclusion

Whether based on practical observation or through literature review, this paper has found that social media has had a certain negative impact on people's lives at the beginning of the research, but the specific aspects and extent of this impact need to be further studied. Through the quantitative research method of questionnaire survey, this paper analyzes the direct and indirect consequences of indulging in short video. As we put forward in our hypothesis, indulging in short videos will affect people's daily life arrangement, personal emotion and physical and mental health. The main conclusion of this study is that indulging in watching short videos will lead to negative emotions, and long-time online viewing will lead to people's further alienation from normal social life and have bad emotions about existing social relationships. Of course, the existing research in this paper still has some limitations, and the theoretical analysis is not deep enough. We will further supplement and improve it in the future. This paper will be beneficial to provide some cases for the sociological research of social media. At the same time, it will also help the short video platform to adjust its operation strategy and better serve people's life.

References

- [1] C. Freitag, Social Media's Impact on Society: The Impact of Social Media on Society, The Ad Council, 2019.
- [2] J. Kong, Society vs. Tittytainment in China: How games contribute to controlling the masses, Gamedeveloper, 2017.
- [3] [3] Alchemy Interactive Ltd., The Social Media Explosion, Alchemy Interactive, 2021.
- [4] H. Zeng, Analysis on the psychological mechanism of short video addiction: Taking Tiktok as an example, new media research, 2019, 5 (20), pp.16-17. DOI: 10.16604/j.cnki.issn2096-0360.2019.20.004.
- [5] A. Thourmrungraje, The influence of social media intensity and EWOM on conspicuous consumption, Procedia-Social and Behavioral Sciences, 2014, 148, pp.7-15.
- [6] Y. Zhang, Y. Wang, W. Qu, N. Li, Z. Chang, M. Dong, The relationship between short video and college students' Internet addiction and personality traits, Chinese Journal of health psychology, 2020, 28(09), pp.1418-1422. DOI: 10.13342/j.cnki. cjhp. 2020.09.031.
- [7] M.A. Hossain, M. Kim, & N. Jahan, can "liking" behavior lead to usage intention on Facebook? Uses and gratification theory perspective, Sustainability (Basel, Switzerland), 2019, 11 (4), pp.1166.
- [8] X. Zhang, Y. Wu, & S. Liu, Exploring short-form video application addiction: Socio-technical and attachment perspectives, Telematics and Informatics, 2019, 42, pp.101243.1-101243.15. <https://doi.org/10.1016/j.tele.2019.101243>.
- [9] J. Walsh, R. Fielder, K. Carey, M. Carey, Female college students' media use and academic outcomes, Emerging Adulthood, 2013, 1(3), pp.219-232.
- [10] H. Afendi, E. M. Amin, H. H. Abu, The use of social networking sites among malaysian university students, International Education Studies, 2012, 5(3), pp.56-66.