

The Impact of Social Media Platforms on the Mental Health of Teenagers

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Abstract:

This study focuses on the impact of social media platforms on the mental health of 13-18-year-old teenagers, conducting an analysis by collecting survey data from 40 junior high schools and senior high schools in Shanghai. The study primarily examines the patterns of teenagers' use of social media and explores the correlations between these patterns and self-reported psychological health issues such as anxiety and social comparison. The analysis results indicate that entertainment is the primary purpose for teenagers to use social media, and prolonged exposure to social media is significantly correlated with negative psychological effects. The study explains these results by combining the alternative behavior theory and the social comparison theory, objectively pointing out the positive effects of social media on teenagers while also clearly emphasizing the potential negative impacts. Finally, the study proposes recommendations: Educators and parents should not only pay attention to controlling the screen usage time of teenagers, but also focus on guiding their purposes and motivations for using social media. For future research, it is suggested to use larger-scale cross-cultural samples and employ longitudinal research methods to further deepen the understanding and comprehension of this topic.

Keywords: Social media; adolescents; mental health; social comparison; displacement behavior theory.

1. Introduction

This study focuses on the profound impact of social media on young people over the past two decades - it not only changed the communication, learning methods and self-identity formation process of 13-18-year-old teenagers, but also became an important part of their social life [1]. Currently, over 90%

of teenagers in developed countries use social media daily, with an average screen time of more than three hours. Moreover, mental health problems such as anxiety and depression among teenagers occur frequently worldwide. According to the World Health Organization, approximately 14% of teenagers suffer from mental health disorders [2]. Social media is regarded as both a potential influencing factor and

a source of support. Systematic reviews have also mentioned the widespread popularity of social media and its possible effects on the mental health of teenagers.

This study is of great significance to educators, parents and policy makers. Understanding the interaction mechanism between social media and the mental health of teenagers can not only help protect their mental health but also better utilize the positive effects of digital technology. At the same time, it can respond to society's concern about this key global issue of teenagers' mental health.

This study specifically focuses on the dual impact of social media on the mental health of teenagers. On one hand, it analyzes the supportive communities, educational resources and opportunities for self-expression provided by social media for teenagers. On the other hand, it explores the associations between phenomena such as cyberbullying, excessive screen time, social comparison and online harassment and the increase in mental health problems.

The literature analysis method was used to search and read relevant materials and literature. The advantage of this method is that it can well analyze the current usage status of social media, the trend of mental health problems among teenagers and related theoretical viewpoints (such as the substitution behavior theory, social comparison theory) in existing studies, integrate systematic reviews and data from authoritative institutions (such as the World Health Organization), which is conducive to a comprehensive understanding of the research background and core issues, and lay a foundation for subsequent analysis.

The ultimate research goal of this study is to clarify how social media platforms affect the mental health of 13-18-year-old teenagers. To achieve this goal, the current status of social media usage, data on teenagers' mental health and related influencing mechanisms were sorted out, and analysis was conducted based on the theories and cases in the literature.

2. Literature Review

2.1 Theoretical Frameworks

Displaced behavior theory and social comparison theory offer complementary perspectives on human behavior under stress and social evaluation. Displaced behavior theory posits that self-control is a limited resource; When faced with stress or challenging situations, individuals may engage in easily accessible behaviors that provide immediate gratification but ultimately displace more important, goal-directed activities that are harder to initiate." Social comparison theory proposed by Leon Festinger, stating that individuals have an innate drive to evaluate their own opinions and abilities by comparing themselves

to others. Comparisons can be „upward“ (to those perceived as better) or „downward“ (to those perceived as worse)."

With the widespread popularity of social media among teenagers, its impact on mental health has gradually become a focus of attention in both academic circles and society. Relevant studies generally indicate that social media has a dual effect on the mental health of teenagers: on the one hand, it provides teenagers with unprecedented opportunities for socialization and learning; on the other hand, excessive or improper use may lead to psychological problems such as anxiety and depression [3,4]. This chapter will review the existing research results, discuss them from three aspects: positive effects, negative effects, and the subjective perspective of teenagers, and further point out the research gaps [5].

2.2 The Positive Impact of Social Media

Firstly, social media provides an important platform for socialization and communication for teenagers. Research shows that it helps maintain connections with family and friends, expand new social networks, and enhance self-identity [3]. Moreover, social media offers convenience for learning, such as group collaboration, information sharing, and knowledge acquisition. Furthermore, teenagers can easily obtain health information through social media, especially resources related to mental health, thereby enhancing their health awareness and self-care ability Popat & Tarrant also found that teenagers believe that social media can promote peer support and even become a positive resource in the process of mental health recovery [3]. This is related with observation that social media can serve as both a source of peer support and a platform for mental health awareness [5].

2.3 Negative Effects of Social Media

However, numerous studies have also revealed the risks brought by social media. Kaur & Bashir (2015) pointed out that excessive use of social media may lead to „Facebook depression“, characterized by loneliness, depression, and a sense of social isolation; at the same time, issues such as cyberbullying, online harassment, and the spread of pornographic text messages (sexting) pose a serious threat to the mental health of teenagers. Moreover, frequent switching of information can cause a decline in attention and cognitive fatigue, further triggering stress and emotional suppression. This aligns with the assumptions of Social Comparison Theory (Festinger, 1954), which suggests that

Popat & Tarrant (2022)'s review further revealed specific mechanisms: The contradiction between self-expression

and others' evaluation leads to a reliance on external „likes“; Comparison of appearance and body ideals cause anxiety and a decline in self-esteem; Continuous online pressure leads to sleep disorders and addictive behaviors; Exposure to harmful content (such as self-harm or violent information) may exacerbate psychological distress. These negative factors interweave with each other, causing complex mental health risks for teenagers in the virtual environment.

2.4 Research Gaps

Based on the existing literature, the current research still has the following shortcomings: The causal mechanism is not yet clear: Most studies remain at the cross-sectional or correlational analysis level, lacking longitudinal data that can verify causal relationships [6]. Valkenburg and their colleagues indeed pointed out an important point: even though there's been a fast growth in evidence about this topic, most of that evidence only shows a correlation between factors [7].

Most scholars take „usage duration“ as the core variable, but ignore the potential differential impacts of different usage purposes (such as learning, socializing, and entertainment) on mental health. Existing studies are mostly based on samples from Western countries, lacking cross-cultural comparisons and in-depth discussions for different populations. Potential moderating variables such as self-esteem level, family support, and digital literacy have not been systematically analyzed in the existing literature [8].

Overall, the impact of social media on the mental health of teenagers is characterized by a complex duality: it may provide social support and learning opportunities, but it can also lead to depression, anxiety, and a sense of social isolation. Existing literature has revealed multiple dimensions of the mechanism, but there are still research gaps. Future studies should combine quantitative and qualitative methods, emphasize longitudinal and cross-cultural designs, and pay attention to individual differences, in order to more comprehensively reveal the true impact of social media on the mental health of teenagers.

3. Research Methods

This study employed a quantitative research method, using a questionnaire survey to explore the impact of social media platforms on the mental health of teenagers among middle and high school students in Shanghai. This study employed convenience sampling. The participants were 40 students from different grades.

Data collection was conducted using anonymous online questionnaires. The first part consisted of demographic questions. The second part is mainly about the time you

put in social media platforms and the negative effects you received. The third part mainly focused on the mental problems those teenagers figured out through watching social media.

All the data were reorganized in an Excel sheet, which can illustrate a clear result through all the participants. Use descriptive statistics to analyze the sample characteristics and usage habits. Use correlation analysis (Correlation Analysis) to examine the relationship between the duration of social media usage and anxiety scores.

4. Results

This section presents the analysis results of the questionnaire survey, with a focus on examining the social media usage patterns of the surveyed teenagers and their self-perceived psychological health impacts.

4.1 Descriptive Statistics: Duration and Pattern

All 40 participants confirmed that they were active social media users. The analysis of usage duration shows that the majority of respondents (62.5%, $n=25$) reported spending 2-4 hours on social media platforms each day. A significant proportion of the sample (25%, $n=10$) reported using for more than 4 hours per day, indicating a very high level of engagement within this group.

The results indicate that the purpose of entertainment dominated the usage behavior of teenagers. „Entertainment“ (35.9%) was the most common reason, followed by „socializing and chatting“ (33.3%). In contrast, the use of social media for „learning and acquiring knowledge“ (12.8%) was far less common. This pattern suggests that teenagers tend to choose activities that provide immediate satisfaction.

4.2 Negative Effects of Self-Report

The participants pointed out a series of negative psychological effects related to their social media usage. „Anxiety“ (35.9%) and „social comparison“ (28.2%) were the two most prominent negative feelings. Following these were „sleep problems“ (15.4%) and „cyberbullying“ (10.3%). The high prevalence of social comparison and anxiety provided preliminary empirical support for the applicability of the social comparison theory in this research context, while the reported usage patterns were in line with the mechanisms described by the alternative behavior theory.

5. Discussion

This study examined the impact of social media on the mental health of teenagers. The results showed that teen-

agers spent a considerable amount of time using social media, mainly for entertainment and social interaction. This was significantly correlated with negative psychological effects such as self-reported anxiety and social comparison. The following will interpret these findings by combining the alternative behavior theory and the social comparison theory.

Firstly, the research found that the majority of participants spent more than two hours per day using social media, and the main purpose was for entertainment rather than learning. This strongly supports the alternative behavior theory. When facing academic or social pressure, teenagers might use social media as an easily accessible way to escape, thereby taking up time that could be better spent on important activities such as studying and sleeping. This alternative behavior may lead to a vicious cycle: procrastination leads to increased pressure, which in turn is further avoided by using the phone, ultimately exacerbating anxiety.

Secondly, anxiety and social comparison were identified as the most significant negative impacts. This finding provides strong support for the social comparison theory. The carefully curated content on social media prompts teenagers to constantly engage in „upward comparisons“, comparing their ordinary lives with others' „highlight moments“, thereby causing feelings of inferiority, jealousy, and anxiety. It is notable that the participants were able to actively recognize the issue of „social comparison“, indicating that they have vaguely perceived the existence of this psychological mechanism [6].

The results of this study are consistent with the „double-edged sword“ effect of social media as pointed out in previous literature [3-5]: it is both an important social tool, but it may also lead to anxiety and depression. However, this study also has some limitations, such as a small sample size, data from only one school, and self-reported data, which makes it impossible to determine the causal relationship.

In conclusion, for parents and educators, the focus of attention should shift from simply controlling „screen time“ to paying attention to the „purpose of use“ of teenagers and strengthening media literacy education. This will help them critically view online content, balance online and offline lives, and this is a more effective way to protect their mental health.

6. Conclusion

This study reveals that the teenagers involved in the survey have two distinct characteristics when using social media: Firstly, the usage intensity is high, with spending more than two hours per day; Secondly, the purpose of

usage is mainly for entertainment, mainly for leisure and social interaction.

The study also confirmed a clear correlation between social media usage and the negative mental health conditions of teenagers. Among them, the anxiety reported by the teenagers themselves, as well as the competitive behavior on social platforms, are the two most prominent negative issues.

When explaining these effects, both theoretical frameworks play a significant role. The substitution behavior theory can explain the addiction mechanism of social media - it provides instant gratification, occupies teenagers' time, and even replaces important activities such as learning and exercise; the social comparison theory reveals the reasons for the emotional harm caused by it - teenagers make „upward comparisons“ with others on the platform (such as envying others' lives), which eventually leads to psychological pain. When these two theories are combined, they provide a complete explanation of the entire process from the impact on behavior to the psychological harm caused by social media.

Based on the research results, in the future, the regulatory and educational efforts regarding teenagers' use of social media should no longer solely focus on „limiting screen usage time“, but rather should shift the emphasis to two aspects: one is to pay attention to the „nature of the content“ they browse and interact with on the platforms, and the other is to understand their „motivations for using social media“. Additionally, cultivating teenagers' ability to critically evaluate media information, while encouraging them to participate more in healthy offline activities (such as sports, club activities), achieving a balance between online and offline, is also a key to addressing these challenges.

In summary, this study has provided us with a clearer understanding of the complex relationship between social media and the mental health risks of teenagers. Regarding future research, a long-term tracking design can be adopted, and the scale of the survey sample can be expanded. This will enable a more in-depth exploration, as well as identifying which factors can help teenagers reduce the negative impacts of social media.

References

- [1] Khalaf A.M., Alubied A.A., Khalaf A.M., Rifaey A.A. The impact of social media on the mental health of adolescents and young adults: A systematic review. *Cureus*, 2023, 15(8): e42990.
- [2] Gupta C., Jogdand S., Kumar M. Reviewing the impact of social media on the mental health of adolescents and young adults. *Cureus*, 2022, 14(10): e30143.
- [3] Kaur R., Bashir H. Impact of social media on mental health

of adolescents. *Indian Journal of Health and Wellbeing*, 2016.

[4] Popat A., Tarrant C. Exploring adolescents' perspectives on social media and mental health and well-being: A qualitative literature review. *Clinical Child Psychology and Psychiatry*, 2023, 28(1): 323–337.

[5] O'Reilly M. Social media and adolescent mental health: The good, the bad and the ugly. *Journal of Mental Health*, 2020, 29(2): 200–206.

[6] Nesi J. The impact of social media on youth mental health:

Challenges and opportunities. *North Carolina Medical Journal*, 2020, 81(2): 116–121.

[7] O'Reilly M., Dogra N., Whiteman N., Hughes J., Erucar S., Reilly P. Is social media bad for mental health and wellbeing? Exploring the perspectives of adolescents. *Clinical Child Psychology and Psychiatry*, 2018, 23(4): 601–613.

[8] Valkenburg P.M., Meier A., Beyens I. Social media use and its impact on adolescent mental health: An umbrella review of the evidence. *Current Opinion in Psychology*, 2022, 44: 58–68.