


# Mobile HCI in Social Media and Youth Mental Health Intervention Practices

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## ABSTRACT

From the mobile human-computer interaction (Mobile HCI) perspective, this study examines social media's impact on youth mental health and its intervention practices. A stratified survey of 2,250 young people (14–28 years) was conducted, along with a 3-month intervention experiment on 480 high-risk subjects and platform ecological assessment. SEM and repeated measures ANOVA reveal that active social media HCI modes (creative/interactive behaviors) benefit youth self-identity, while passive modes (consumptive/dependent behaviors) trigger psychological risks via social comparison and algorithmic interaction. The proposed stepwise intervention pathway demonstrated significant effectiveness, achieving a 30.7% reduction in anxiety scores among the intervention group. This study provides practical references for Mobile HCI research and youth mental health protection.

## KEYWORDS

Social Media, Mental Health of Youth, Social Work Intervention, Usage Mode, Social Comparison

## INTRODUCTION

In recent years, social media has been deeply embedded in the daily lives of young people (Khalaf et al., 2023). According to the latest *Investigation Report on Internet Behavior of Teenagers in China* released by China Internet Network Information Center (CNNIC), the coverage rate of social media users among young people aged 14–35 is 98.7%, and the average daily usage time of more than 3 hours has climbed to 62.3%, among which 21.5% have the habit of “checking social software at any time.” Beyond serving as a primary tool for interpersonal connection, social media functions as a vital channel for information seeking, self-expression, and identity formation—spanning from classroom interactions and professional workplace groups to interest-based discussions and personal content sharing (Wilska et al., 2023).

However, behind this high-frequency interaction, young people's mental health is facing complex challenges. Short video creation, interest community and other functions provide young people with multiple outlets for self-expression (Chen, 2023). In the vertical communities such as animation and literature, more than 70% of the young people said that “they have gained emotional resonance through communication with friends,” and some depressed groups can even get targeted psychological

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support in online mutual help groups (Jin et al., 2023). However, behind this kind of positive value, the negative effects cannot be ignored: social anxiety caused by “exquisite life in friends circle”, psychological trauma caused by online language violence in anonymous environment, and degradation of real social ability caused by excessive addiction to virtual interaction are increasingly prominent (Oksanen et al., 2024).

Although existing research has accumulated in this field, two critical gaps remain: insufficient integration of high-impact journal studies and a lack of cross-regional evidence covering central, western, and northeastern China.

Building on this foundation, the present study aims to systematically sort out the dual effects of social media on young people's mental health, deeply analyze its mechanism, and combine the behavioral characteristics and psychological needs of young people to build a theoretical framework and practical path for social work intervention. While expanding the service paradigm of social work in the digital age, it provides professional and operational action plans for social workers, school counselors, and families, helping young people to establish a healthy social media use model and enhance their ability to cope with related psychological risks.

## **LITERATURE REVIEW**

Abas et al. (2023) pointed out that social media use has a complex impact on youth mental health. On one hand, it provides a space for self-expression and peer support, which can enhance self-efficacy and reduce loneliness. On the other hand, excessive use and negative online interactions such as cyberbullying can lead to anxiety, depression, and other mental health problems. They emphasized the need for intervention-focused research to explore effective ways to mitigate the negative effects of social media on youth mental health.

Costello et al. (2023) conducted an interdisciplinary study on the impact of social media algorithms and addiction on adolescent mental health. They found that the algorithms of social media platforms tend to push content that attracts more user attention and time, which may lead to excessive use and even addiction among adolescents. This, in turn, can have a negative impact on their mental health, such as increased anxiety and decreased self-control. The study suggests that there is a need for state-level policy actions to regulate social media platforms and protect youth from the potential dangers of excessive social media use.

Elvira-Zorzo and Bayona Gómez (2025) focused on the negative effects of social media on the social identity of adolescents from a social work perspective. The study found that social media can lead to social comparison and unrealistic expectations among adolescents, which may damage their self-esteem and social identity. For example, adolescents may feel inferior when comparing their own lives with the “perfect” lives presented by others on social media. This can lead to social anxiety and even social withdrawal. The research highlights the importance of social work intervention to help adolescents build a healthy social identity in the context of social media use.

Ruan et al. (2023) explored the relationship between social comparison and mental health. They found that upward social comparison, which is common on social media, can lead to negative emotions such as envy and dissatisfaction. This is because individuals tend to compare themselves with those who seem to be better off, which can result in a sense of inadequacy. The study also pointed out that social comparison can affect mental health through multiple pathways, including influencing self-efficacy and emotional regulation. Understanding these mechanisms can help develop targeted interventions to reduce the negative impact of social comparison on youth mental health.

To strengthen the theoretical foundation, this study supplements several classic theoretical perspectives. Social support theory emphasizes that social support includes emotional, instrumental, and informational dimensions. In the context of social media, digital platforms expand the scope and accessibility of support networks; however, the quality of online support—such as its authenticity and timeliness—directly influences its protective effect on mental health. Social presence theory

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