Impact of Social Media Dependency on Social Anxiety Among Chinese College Students

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Abstract: In the era of mobile internet, various social functional applications are subtly influencing people's psychological states and emotional patterns. While Chinese college students enjoy the convenience and benefits brought by social media, their excessive reliance on social media and mobile communication devices for online social interactions has impacted their self-identity value standards, created a sense of 'disconnection' from reality, and increased social anxiety in their real-life interactions. This paper reviews and discusses the influencing factors of social media, such as family relationships and personality traits, as well as the impact of social media dependency on social anxiety. Furthermore, it proposes relevant interventions to alleviate social anxiety and enhance the psychological resilience of college students.

1 INTRODUCTION

In the era of mobile internet, various functional applications have emerged, among which social functional software such as Weibo, WeChat, TikTok, and Red Note are subtly influencing people's psychological states and emotional patterns. As an online interactive intermediary, users can share their life, emotions and even personal privacy at any time. It serves as a platform for self-expression, making friends, and alleviating loneliness (Yang et al., 2023). However, the distorted information about others on social media can prevent individuals from objectively and accurately understanding and evaluating themselves, which may lead to psychological issues (Huo et al., 2024). While Chinese college students enjoy the "benefits" brought by the convenience of social media, their excessive reliance on social media and mobile communication devices for online interactions has affected their self-identity value standards, created a sense of "disconnection" from reality, and increased social anxiety in their real-life interactions. The Healthy China Strategy represents the latest achievement in China's theoretical research on health development in the new era, providing the most up-to-date guidance for research and practice in school mental health education (Pang, 2023). Within the framework of the Healthy China Strategy, "health" encompasses not only physical health but also mental health (Pang, 2023). The author explores the relationship between social media dependency and social anxiety, seeking answers as to why social media dependency leads to psychological issues among college students and uncovering the underlying mechanisms. Furthermore, the author proposes strengthening interventions for the psychological issues of college students, guiding them to actively seek psychological treatment and reduce or overcome the degree of social anxiety. This article focuses specifically on college students, providing a detailed discussion on the problem of social anxiety caused by their excessive reliance on social media.

2 INTRODUCTION TO THE KEY CONCEPTS

Social media is a new type of social interaction service platform based on the internet (Sun et al., 2016), a content production and exchange platform built on user relationships. It serves social groups and aims to help people share information, enhance communication, and promote emotional connections within a social network. Social media dependency refers to an individual's excessive enthusiasm for developing online social relationships and overreliance on social media, leading to impairments in their psychological and social functioning (Sun et al., 2014, Zhao, 2021). Existing research on college

students' social media dependency primarily focuses on two aspects: the degree of dependency and the motivations behind it. In terms of the degree of social dependency, Wu Yanan took WeChat as an example to study college students' usage of the platform. The study found that the longer the WeChat usage time, the higher the degree of WeChat dependency. The study also revealed that college students were generally aware of the negative impacts brought about by social media dependency (Wu & Li, 2015). Excessive reliance on social media can lead to issues such as deteriorating vision, declining physical fitness, lack of face-to-face communication skills, and reduced efficiency in learning and work. In terms of dependency motivation, college students' motivations are primarily centered on seeking social satisfaction, alleviating offline social anxiety, and obtaining information and entertainment.

Social anxiety is an emotional experience characterized by discomfort, unease, or even fear during interactions with others. Research on the causes of social anxiety has found that it occurs when individuals wish to make a good impression on others but believe they are unable to perform well enough.

College students' dependency on social media can exacerbate psychological issues in real life, such as emotional anxiety, academic anxiety, and social anxiety. For some college students, the internet has increased and strengthened their daily interactions with peers. However, for others, it has become a means of escapism. These students find it difficult to express themselves, often feel lonely, and become distanced from reality (Zhang & Wang, 2022). They rely on the social environment provided by the internet, enjoying the pleasures of the virtual world and seeking likeminded friends on social media platforms (Zhang & Wang, 2022). Over time, they may gradually lose the ability to engage with the real external world, leading to social anxiety.

3 INFLUENCING FACTORS OF SOCIAL MEDIA DEPENDENCY

3.1 The Impact of Family Relationships on Social Media Dependency

This section will discuss the typical family relationship—between parents and adolescents—which is closely associated with adolescent development.

Bilgin et al. conducted a survey on adolescent social media addiction and parent-child relationships,

collecting a sample of 583 adolescents, including 218 males and 365 females. The study utilized the Social Media Disorder Scale (SMDS) and the Parent-Adolescent Relationship Questionnaire (PARQ) for data collection. The Social Media Disorder Scale, developed by Van Den Eijnden et al. In 2016, was created based on the diagnostic criteria for internet gaming addiction outlined in the unrecognized and exploratory diagnostic section of DSM5 (Bligin et al., 2020). The reliability of the scale was confirmed by the researchers using Cronbach's alpha (0.82), indicating good internal consistency. Based on the Behavioral Family Systems Approach, Robin, Moye, and Koepke (1990) developed the Parent-Adolescent Relationship Questionnaire (PARQ) (Bligin et al., 2020). This questionnaire primarily consists of three dimensions: the structure and function of the family system, problem-solving communication skills, and cognitive/internalized beliefs. It includes both adolescent and parent versions as parallel forms. Since the study focused on social media addiction from the adolescent's perspective, only the adolescent version was used. The adolescent version contains 284 items across 24 subscales. With a Cronbach's Alpha internal consistency coefficient of 0.93, it can be concluded that the questionnaire demonstrates good reliability.

During the research phase, Bilgin conducted a standard multiple linear regression analysis, using parametric statistical methods to analyze the data and examine correlations between variables to determine whether the parent-adolescent relationship contributes to social media addiction. The researchers assessed whether the study data led to multicollinearity issues by examining the correlations between variables, as well as the VIF (Variance Inflation Factor) and tolerance values. The study found that adolescent social media addiction had the lowest correlation with perfectionism and the highest correlation with global distress and perceived unfairness. In the standard regression analysis, the data results were valid and convincing. Among the variables, the most significant and influential factor for social media addiction was the overall distress within the family.

This research findings indicate that, in Turkey, mothers take on more responsibility for educating their children compared to fathers. Mothers are more concerned about adolescents' academic performance and daily lives. To mitigate the negative influences of school and society on adolescents, mothers tend to exercise stricter control over them. This increases conflicts between adolescents and their mothers, which may lead to a sense of avoidance in

adolescents. They may seek comfort or relief from negative emotions through other means, with the use and dependence on social media becoming one of the primary outlets for emotional expression. Adolescents aspire to lead independent and autonomous lives, but parents often view key aspects such as life, learning, choice of friends, dating, and the significant matter of marriage as too significant to be left entirely to the adolescents' discretion. Parents tend to want these aspects to remain within their control, leading to more conflicts with adolescents who seek full autonomy over their studies and personal lives.

The findings obtained in the study and the revealed relationship between parent-child relationships and social media addiction were based solely on the adolescent version of the questionnaire, with data collected exclusively from adolescents. The parent version of the questionnaire was not used, resulting in incomplete data collection.

3.2 Impact of Different Personality Traits on The Degree of Dependency on Social Media

Dumlupınar University conducted a survey study to investigate how user personality factors and social media interact. To enhance the accuracy and scientific rigor of the results, the researchers utilized three major questionnaires: the Five-Factor Personality Model (McCrae & Costa, 1987), the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), and the Social Media Marketing Activities Scale (Kim & Ko, 2011). The Five-Factor Personality Traits include openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Using a random sampling method, the survey was distributed to 503 students from one of the university's faculties, with participants aged between 18 and 25 years. Out of the 580 questionnaires distributed, a total of 503 qualified survey responses were received, supporting the subsequent statistical research and data analysis. In the survey study, the researchers used a 5point Likert scale for rating (1 = strongly disagree, 5 = strongly agree) (Nihan & Burcu, 2013). The Cronbach's α value was 0.759 for the personality traits scale, 0.830 for the social media scale, and 0.760 for the life satisfaction scale. Based on these alpha values, the researchers determined that the scales demonstrated good reliability.

The study reached important conclusions through correlation analysis. Different personality traits can influence social media usage patterns, and individuals with different personality traits exhibit varying levels of dependency on social media. When an individual has high levels of neuroticism, their emotions tend to be more unstable, higher psychological stress, and elevated anxiety levels. To escape negative emotions, they are more likely to rely on the virtual world provided by social media as a means of seeking emotional solace. Conscientious individuals, those with a positive attitude toward experiences, and people satisfied with their current lives tend to use social media to support their learning and daily lives. This also highlights the positive impact of social media on individuals.

The limitations are quite evident: the participants in the study were university students from a single faculty at Dumlupınar University within the same age group. The survey sample size is relatively narrow, and the findings may only represent this specific university or the situation in Turkey.

Roos used Swedish internet users as the survey sample, consisting of a representative study of the Swedish population aged 16 to 85. The researchers explored and analyzed social media usage among Swedes based on the Five-Factor Personality Model.

The researchers conducted a hierarchical regression analysis on the Five-Factor Personality Traits and social media usage (Roos, 2023). The study revealed that frequent social media usage was predicted by high openness to experience and extraversion, as well as a lower level of conscientiousness, with no significant correlation with age or gender. The researchers speculated that the more pronounced the traits of high openness to experience, extraversion, and low conscientiousness, the stronger the individual's need for social media, which may lead to a greater dependency on it.

4 THE IMPACT OF SOCIAL MEDIA DEPENDENCY ON COLLEGE STUDENTS' SOCIAL ANXIETY

Zhan Yating conducted a survey on college students, focusing on the usage and dependency on social media, real-life social interactions, and the impact of social media usage and dependency on college students' real-life social interactions (Zhang, 2020). The study targeted college students (including master's students) from various universities, academic years, and genders in Shanghai, with stratified sampling to enhance the representativeness and diversity of the survey sample. The College

Students' Interpersonal Communication Barrier Scale comprises three dimensions: social anxiety, social loneliness, and social incompetence. This scale demonstrates high reliability and validity, providing valuable support for the researchers' subsequent studies.

The researchers primarily used a questionnaire survey method, employing the College Students' Mobile Social Media Dependency Scale and the College Students' Interpersonal Communication Barrier Scale for the study. The College Students' Mobile Social Media Dependency Scale was developed by Wu Zuhong in 2014, originally consisting of 33 items (later revised to include 22 items in the adapted version). The scale includes five dimensions: salience (7 items), social enhancement (7 items), compulsivity (6 items), conflict (6 items), and withdrawal (7 items). Each question is a single-choice item. The overall questionnaire had a Cronbach's alpha coefficient of 0.937 and a split-half reliability coefficient of 0.925. The result indicated that the questionnaire has good reliability.

To measure college students' interpersonal communication barriers, the study used the Interpersonal Communication Barrier Scale developed by Liu Xin and Xu Guangxing. The scale also demonstrated high reliability (0.80) and validity. It consists of three dimensions: social loneliness, social anxiety, and social incompetence, along with a total score for interpersonal communication barriers.

A series of studies yielded the following results:

1. Social media dependency has a significant positive impact on loneliness. Therefore, it can be concluded that the heavier the dependency on social media among college students, the greater their social loneliness.

2. Social media dependency has a significant positive impact on social anxiety. Thus, it can be inferred that the more severe the social media dependency, the more intense the real-life social anxiety experienced by college students.

3. Regression analysis was conducted on social media dependency and interpersonal communication skills. The p-value for interpersonal communication skills was 0.002, less than 0.05, and the beta value was 1.893, indicating that social media dependency has a significant negative impact on interpersonal communication skills. Consequently, it can be concluded that the more severe the social media dependency in this group, the weaker their real-life social skills.

Social media has become an integral part of college students' daily work, study, and life, providing convenient services and abundant information to this demographic. On one hand, social media provides convenience for their daily activities: it facilitates information exchange for work, serves as a source of knowledge for learning, and offers opportunities for leisure and entertainment in everyday life. On the other hand, due to its convenience and efficiency, social media has made people overly reliant on it, reducing their interaction with the real world. This overreliance significantly weakens people's ability to observe and understand the world, creating a sense of "isolation" from reality. This detachment is not aligned with the normal processes of social production and development and increases individuals' anxiety in real-life situations.

The study also has certain limitations. Firstly, due to time and cost constraints, the researchers used online surveys to collect data, making the research methodology overly simplistic. The study collected 232 valid questionnaires, which represents a relatively small sample size. Secondly, the research is limited in terms of its subjects, as the respondents were primarily concentrated within seven universities located in the Songjiang District of Shanghai. In addition, there are shortcomings in the questionnaire design. Many respondents reported that, although the questionnaire was detailed and featured diverse question types, the excessive number of questions made it easy for participants to lose patience while completing it.

Zhang Yuhan conducted a study on social anxiety in the context of new media, using WeChat and Weibo as examples, focusing on the relationship between the degree of social anxiety and social media usage. The researcher selected college students as the study subjects and employed a combination of questionnaire surveys and in-depth interviews. A total of 390 valid questionnaires were collected, and 12 students were selected for ind-epth interviews.

The researcher selected typical social media platforms, Weibo and WeChat, as the subjects of the study. For the measurement of each indicator, a five-point Likert scale was used. The questionnaire structure consisted of four parts: the title, instructions, the main body, and the closing statement. The main body of the questionnaire: The first section focused on demographic information and basic social media usage. The second section included four scales: Social Media Dependency (SMD), Social Anxiety (SA), Social Media Self-Presentation, and Online Interaction Anxiety (SASMU), which comprised four subscales: Sharing Content Anxiety (SCA), Privacy Concern Anxiety (PCA), Interaction Anxiety (IA), and Self-Evaluation Anxiety (SEA) (Zhang, 2019). Regarding the measurement tools for college

students' social anxiety in online social interactions, the researchers introduced the Social Anxiety Scale for Social Media Users (SASSMU) developed by scholar Yunus. SPSS 22.0 software was used to calculate the Cronbach's alpha coefficient to examine the internal consistency of the scales used in the study. All Cronbach's alpha values for the variables were above 0.8, indicating that the scales demonstrated strong reliability (Zhang, 2019).

The analysis results showed that social media dependency, social anxiety, and online social anxiety, along with specific factors, have a significant positive correlation ($P < 0.01$) (Zhang, 2019). The research results confirm that, firstly, in the era of the internet, college students with lower levels of social anxiety tend to make more friends online compared to those with higher levels of social anxiety. Secondly, uncertainty generates anxiety. The uncertainty in online interactions, such as the ambiguity in text expression and emoticons, can cause confusion and increase social anxiety. Thirdly, the alienation of online communication. Social media platforms like WeChat and Weibo, which are intended to assist communication, have penetrated various aspects of users' lives. They gradually shift from being a tool to becoming dominant, leading to excessive use of social media. This results in information overload and confusion, with users gradually losing the rationality of their social interactions.

The content analysis of the interviews revealed that: First, although social media breaks the limitations of time and space, offering convenience to users, the emotional exchange and information transmission established in virtual spaces are unable to fulfill the sense of identity between the individuals involved. The interpersonal relationships in virtual environments are weak connections and struggle to form stable, meaningful relationships. Second, the expectations for one's role have increased. In online social media, people are influenced by various ideologies and set higher standards for their own persona. The degree of self-idealization has increased, and this behavior significantly impacts the anxiety of the individual in the real world, with notable negative effects. Third, the contradiction and ambiguity of communication effects are enhanced. In a "vacuum environment," individuals have different self-perceptions, which leads to varying levels of message reception and understanding, as well as differences in the way information is transmitted and expressed. Under the influence of multiple uncertain factors, the uncertainty during communication increases, leading to a rise in anxious emotions.

There are also limitations in the study. First, the research only focused on the social anxiety of users on two major social media platforms, Weibo and WeChat. However, there are many other social media platforms that influence college students' social anxiety, each with different effects. Secondly, the survey sample had a higher proportion of female participants, accounting for 65.9% of the total sample. Due to a certain gender imbalance in the sample size, it may not fully reflect the differences in social anxiety within the college student population to some extent.

Cao Guanghai and others studied the impact of social media dependency on college students' online social anxiety. The results revealed that rumination and fear of missing out (FoMO) act as mediating variables, influencing the relationship between social media dependency and online social anxiety (Cao et al., 2023). The findings showed that the higher the degree of social media dependency among college students, the stronger their rumination tendencies, leading to higher levels of online social anxiety. Similarly, the greater the dependency on social media, the higher the level of fear of missing out, which also contributes to increased online social anxiety. This study highlights the complex and diverse mechanisms underlying the relationship between social media dependency and online social anxiety in college students (Cao et al., 2023).

5 DISCUSSION AND SUGGESTION

Social media dependency has a significant positive predictive effect on college students' social anxiety: the higher the level of social media dependency, the higher the level of social anxiety among college students; conversely, the lower the level of social media dependency, the lower the level of social anxiety. At the same time, factors such as individual family relationships, personality traits, and technology dependency also influence the degree of social anxiety exhibited by college students due to their social media dependency.

Excessive reliance on social media can exacerbate college students' social anxiety both in the virtual world and in real life. As students become more dependent on social media, this overdependence increases their social anxiety in real-life interactions, leading them to avoid reality and even fear or be anxious about communicating and interacting with others in the real world, causing them to immerse

themselves in the virtual world. However, the uncertainty of information and the ambiguity of text expressions in the virtual world can increase college students' online social anxiety, creating a vicious cycle. The author believes that reducing college students' dependence on social media and alleviating their social anxiety requires joint efforts from various parties.

The author offers the following suggestions:

1. College students should practice self-discipline and self-reflection, balancing online communication with offline interactions. They should establish "digital boundaries" and manage their time effectively (Zhang, 2020).

2. College students should be proactive in recognizing their own psychological changes and seek help from peers, teachers, parents, or doctors when needed.

3. Universities should pay close attention to college students' mental health issues and strengthen guidance on psychological problems.

4. Universities should actively organize offline activities with unique features to increase students' exposure to the real world.

5. Universities should update their teaching philosophies and integrate holistic education (Zhang, 2020).

This study only employed a literature review method to investigate the impact of social media dependency on college students' social anxiety. Due to the large number of available studies, the author was unable to conduct indepth analysis of every individual article, which limits the findings of the research. In the future, the author will further explore how social media dependency affects college students' social anxiety, potentially involving the roles of various mediating variables such as psychological factors, family factors, personality traits, and technological dependency. By examining the impacts of different social media platforms, age groups, genders, and purposes on social anxiety, as well as the associations between social media dependency and other mental health issues (e.g., depression, low self-esteem), the research findings can be applied to college students' mental health education and practices. The author aims to develop targeted mental health education programs, provide psychological counseling, and offer support services to help college students establish healthy social media usage habits, alleviate symptoms of social anxiety, and improve their mental health and quality of life. Future studies will also need to further evaluate the effectiveness of mental health education programs, psychological counseling, and support services in promoting college students' mental health and practical outcomes.

6 CONCLUSION

In the digital era, online social media has provided college students with new ways of living and learning, offering them more opportunities and avenues for development. However, the complexity of information in the age of big data has also presented new challenges for the college student population. While social media provides college students with abundant information and convenient online communication, excessive and frequent reliance on social media can lead to various psychological issues, such as academic anxiety, emotional anxiety, social anxiety, and more. Excessive focus on others' updates, evaluations, and feedback, as well as holding negative self-assessments about one's own performance on social media, can easily lead to the development of social anxiety among college students. The college student group should actively accept external interventions and treatment, while also cultivating healthy social media usage habits.

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