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IMPACT OF ONLINE SOCIAL SPACES ON MENTAL HEALTH: ANALYZING THE RELATIONSHIP BETWEEN SOCIAL MEDIA ENGAGEMENT AND DEPRESSION AMONG BEIJING COLLEGE STUDENTS

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Abstract

This research investigates the relationship between social media engagement and mental health among college students in Beijing, aiming to understand how various aspects of social media use influence emotional well-being. Key variables examined include social media information acceptance, the perceived role of social media, and the degree of dependence on these platforms. A quantitative approach was employed, involving a cross-sectional survey distributed to 400 college students out of which 320 were received. Data were collected using a structured questionnaire measuring social media engagement and mental health indicators. Statistical analysis, including correlation and regression techniques in SPSS, was utilized to explore relationships and identify significant predictors. The study revealed significant correlations between social media information acceptance, the perceived role of social media, and emotional outcomes such as anxiety and depression. Higher levels of social media dependence were associated with poorer mental health indicators. Gender, grade level, and current learning status were found to moderate these relationships. This study contributes to the literature by focusing on specific dimensions of social media use and their impact on mental health among Beijing college students. It provides nuanced insights into the complexities of social media engagement in an academic context and underscores the need for targeted interventions to promote healthy digital habits and support student well-being.

Keywords: Social Media, Depression, College Students, Mental Health, Emotions, Online Social Space, Semiotics Theory.

1. INTRODUCTION

College students are using social media more like Facebook, Twitter, Instagram, WeChat, and TikTok have revolutionized communication, information sharing, and social networking. These platforms enable learning, social support, and self-expression (Trager et al., 2023). However, the rapid expansion and advancement of social media have raised concerns about its impact on mental health, particularly among young adults in educational settings. Social media use by college students has increased significantly in the past decade. Due to smartphone use and internet access, social media has become part of students' everyday routines. Recent surveys show that many college students spend several hours a day on social media (Duan, Jia, & Chen, 2022). The high level of engagement is due to a strong desire to learn, socialize, and maintain relationships. Many schools now use social media for communication, cooperation, and learning. Social networking networks have risen rapidly. Social media has grown from text-based forums and basic networking sites to a complex ecosystem of multimedia platforms with many features and services (Oyediran et al., 2024). Every platform has its own user community and culture that appeals to a wide range of interests and demographics. Young people, especially college students, use Instagram and TikTok. Short videos and photographs are shared on these networks (Tan et al., 2023). However, WeChat and Facebook offer online communities, news distribution, and chatting. Diversity has altered students' use of social media, changing how they interact with the world and one other.

Beijing college students' heavy social media use reflects global trends. Beijing is a technological and education hub, as shown by its college students' strong social media use. Surveys show that most Beijing college students use at least one social media site and regularly participate in several networks (Urakami et al., 2021). Communication, entertainment, and information are primarily shared on WeChat, Sina Weibo, and Douyin (the Chinese equivalent of TikTok). Beijing college students use social media extensively, underlining the need to study its effects on mental health. Mental health and well-being of college students are crucial (Zhou et al., 2022). College is a crucial time of personal growth, social obstacles, and academic pressure. Students need good mental health to succeed academically, socially, and personally. Psychological problems like anxiety, despair, and tension can harm students' grades, relationships, and quality of life. To create a productive and healthy student body, mental well-being and mental health support must be prioritized (Liu et al., 2024). However, social media's mental health effects are becoming more concerning. Social media has many benefits, yet it also harm mental health. Social media addiction can cause anxiety, despair, and loneliness. Due to the pressure to look flawless, cyberbullying, and bad media, psychological distress might result. Social media may also disrupt sleep and hinder in-person contacts, worsening mental health issues (Siddik et al., 2024). Given college students' pervasive use of social media, understanding its effects on mental health is essential to building interventions and support networks.

Social media use is related to more mental health issues, which worries educators, mental health professionals, and lawmakers. Research suggests excessive social media use may cause stress, anxiety, and depression (Humphries et al., 2019). Students may feel inadequate and depressed after viewing Instagram and TikTok images. Fear of exclusion and the drive to keep connected might cause exces-

sive social media use, poor sleep, and less offline activity. Students' mental health is greatly affected by social media. Social media can captivate people, disrupting other parts of their lives. In-person relationships may provide more emotional support and enjoyment than shallow social media interactions (Griffin & Sarnataro, 2023). Despite being online, one may feel alone. Cyberbullying and online harassment increase powerlessness and anxiety in vulnerable children, increasing risk. Beijing college students' social media use worries me. Beijing students' global and interpersonal relationships have been greatly impacted by digital technology. WeChat, Weibo, and Douyin are popular communication, entertainment, and education platforms (Wang & Li, 2023). The extensive use of these platforms creates unique issues that must be addressed to protect children's mental health. Beijing college students struggle owing to academic pressure and competition. Beijing has few personal growth and enjoyment chances due to rigorous institutional requirements. Social media can increase or decrease stress (Heaney et al., 2021). Technology lets students communicate with peers, but it also reminds them of their academic duties and accomplishments, which can cause stress. Due to academic expectations and success, students are more likely to compare and evaluate themselves on social media. Beijing's rapid pace can isolate people. Even in a densely populated city, many university students feel alone due to the ephemeral nature of campus life and the focus on academic success. Social media can make kids lonely offline but connected online (Cao et al., 2021). Digital contacts lack the depth and emotional effect of face-to-face chats, which are essential for building connections and providing emotional support. Beijing culture also affects university students' social media use. Social media typically reinforces achievement, beauty, and social status norms. By raising expectations for children to follow these values, this might have negative emotional effects (Cleveland, Iyer, & Babin, 2023). Students may have high expectations and unhappiness due to social media celebrities and influencers' edited and idealized lives.

This study examines how social media use affects mental health among Beijing college students. This study examines how social media characteristics affect student emotional well-being. These aspects include social media reliance, perceived relevance, and readiness to accept information from social media. The study examines these relationships and clarifies social media's potential benefits and drawbacks on mental health to improve the digital media and psychological well-being debate. The investigation has specific goals:

1. Evaluate social media usage among college students in Beijing, including frequency and intensity.
2. Study the correlation between social media acceptability and college students' emotional well-being.
3. Investigate the impact of social media on college students' mental health.
4. Examine social media reliance and its impact on mental health outcomes such as anxiety and depression.
5. Identify moderating factors, such as gender, grade, and learning status, that may affect the association between social media use and mental health.

Other aspects make this research crucial. Social media has become an essential part of daily life, especially for teenagers, therefore it addresses a current topic. Understanding how social media affects mental health is essential for helping college students, who are just starting out in life and school. This study also examines Beijing university students' struggles, offering distinct viewpoints. Beijing, a technology and education hub, is a unique place where academic needs and digital involvement meet. This study examines this milieu to better understand how social media affects students in varied cultural and educational settings. The study also has practical implications for mental health practitioners and educators. By identifying social media use qualities significantly associated to mental health outcomes, the study can help create interventions and programs to promote good social

media habits. These therapies may involve academic institutions offering mental health care, social media management seminars, and digital literacy education. This study adds to mental health and digital media understanding. This study examines social media participation's perceived role and information assimilation for a deeper understanding. Previous research has examined social media and mental health. This improves our understanding of how social media affects mental health. Finally, the study's focus on potential moderating variables including gender, grade level, and learning status emphasizes the importance of considering individual social media usage and its effects. This approach emphasizes that social media's effects vary by user and that students' demands may require different remedies.

2. LITERATURE REVIEW

Semiotic theory studies how symbols create meaning. It emphasizes communication through signs and symbols. "Semiotics" comes from the Greek word "semeion," which means something that represents something else. Symbols communicate meaning to recipients. Symbols may communicate through any sense. Semiotics dates back to Aristotle and Plato. The traditional understanding of symbols was not formed until Augustine of Hippo. Sebeok (2001), an American scholar, associated "semiology" with "semiotics" and helped name the first international sign magazine "Semotica". Each researcher has their own semiotics. John Locke, an English philosopher and physician, called semiotics "sem(e) notice" as a separate medical specialty. Semiotics examines the symbols the mind uses to grasp things and communicate. Semiotics is a quasi-necessary or formal philosophy that studies signals and their meanings, according to American scientist Afisi (2020). He sees the sign, object, and interpretant as a triangle. Peirce's symbolic approach to philosophical logic includes language, built symbols, symbolic processes, reasoning, and general inquiry. Cultural messages and practices can influence our conduct and beliefs, which we may naturally interpret. Semiotics ensures the receiver quickly understands the meaning. Beijing university students post words or photos on social media to be understood. Exposure to familiar symbols might also help them understand. This study uses semiotic theory to explore Beijing university students' conduct and how shared and encountered symbolic meanings affect them.

Social media engagement involves people interacting with their shared material. This engagement can be measured by like, sharing, commenting, contributing content, and passive consumption (browsing feeds and viewing posts). "Social media engagement" includes passive interactions like perusing posts without responding and active interactions like creating and sharing content. Engagement varies because customers use digital content in different ways (Gkikas et al., 2022). Reliance on social media is crucial. The regularity with which users check their alerts, the requirement for ongoing connectivity, and the desire to post regularly show this reliance. Reliance is driven by the desire for social validation through likes, comments, and shares. Social media can become part of daily life and the major source of social contact and entertainment, resulting in habitual use and validation search can continue (Saeed, Zubair, & Mujeeb, 2022). This dependency may cause anxiety when disconnected or lower involvement than intended. Social media affects cognitive, emotional, and social well-being. Social media is essential for networking, maintaining relationships, and gathering information. It allows people to carefully manage their online identities and depict themselves in certain ways, allowing self-expression and identity building (Macca et al., 2024). Social media gives users a sense of community and inclusion because they can connect with content that matches their interests and values, follow websites, and join groups. This sense of community is crucial for those seeking treatment or seeking like-minded companions (Brusch, 2022). However, excessive social media use

can increase anxiety, impair in-person friendships, and increase loneliness when online experiences differ from reality. When comparing their life to other meticulously maintained and idealized online appearances, people may feel inadequate and stressed. Social comparison lowers self-esteem and causes depression. Participating in social media requires receiving information. Personal updates, advertising, news, and opinions are presented. The user's preconceived notions, the content's relevance, and the source's credibility all influence this knowledge's acceptance (Bardone-Cone et al., 2022). Social media algorithms create echo chambers by screening content that matches users' preferences, distorting their perceptions and limiting their exposure to different perspectives. Understanding and using social media affects mental health and worldviews. Sensationalized or inaccurate content can cause panic and uncertainty, while frequent exposure to negative news can cause desensitization or worry (Stone & Can, 2020) transparency, and participation. The strategies chosen by a municipality must consider not only what is communicated through social media channels, but the language used to convey the message. This study explores the relationship between linguistic factors and (a. Regular exposure to positive information can boost community morale and welfare.

Mental health is when people can handle their daily tasks, contribute to their community, perform well, and understand and use their own strengths. Emotional, psychological, and social well-being are affected by cognitive processes, emotional states, and behaviors. Mental health affects physical health and life pleasure, thus it's important to maintain it throughout childhood, youth, and adulthood (Liu et al., 2024). Mental health and well-being depend on positive feelings. Joy, thankfulness, kindness, and fulfillment help people overcome life's challenges. Positive emotions promote psychological flexibility, helping people recover from setbacks. They also boost social connections by increasing the likelihood that happy people will do prosocial behaviors, form better relationships, and receive social support (Zefi et al., 2022). Good emotions also reduce stress, which boosts the immune system and cardiovascular health. Dread, fury, sorrow, and concern are equally important for mental health. When numerous, long-lasting, or unsuitable, they can cause problems. Negative emotions are natural responses to difficulties and can warn people of danger or motivate them to act, but prolonged or overwhelming negative feelings can cause mental health illnesses (Chen, Xu, & He, 2024). Depression and anxiety cause persistent bad emotions that impair daily life. Anxiety disorders involve excessive worry, while depression involves sadness and apathy. These problems can affect work, education, and relationships. Mental health greatly affects people's well-being and functioning. By sustaining mental health, people can contribute to their communities, handle life's pressures, work productively, and reach their full potential. It underpins entire well-being and affects physical health (Do & Kim, 2020). Stress and mental illness can aggravate asthma, diabetes, and heart disease. Conversely, those with good mental health have higher standards of living, strong social relationships, and good physical health. Social welfare and mental health are linked. Mentally healthy community members strengthen society and the economy. Mental health concerns left untreated can increase social service, healthcare, and productivity expenditures (Melzi, Schick, & Wuest, 2023). Thus, mental health must improve for society and individuals. An lengthy study examined the association between mental health outcomes and social media use, including its pros and cons. Significant research on this complicated interaction has revealed how social media platforms affect mental health. Overusing social media may increase stress, anxiety, and depression, according to (Pavlova & Berkers, 2020). Studies have linked social media use to lower life satisfaction and loneliness. Disruptive variables including screen use can harm sleep, cyberbullying, and social comparison. Social media's selective and filtered portrayal of users' lives may affect their self-esteem and body image (Siddik et al., 2024). Idealized social media photos, especially in sensitive populations like adolescents and young adults, can lower self-esteem and make people unhappy with their appearance. The incidence of social media cyberbullying and abuse is also well documented.

Cyberbullying victims may feel grief and worry. Social media's anonymity and reach make online harassment harder to avoid (Achuthan et al., 2022). Despite its drawbacks, social media appears to improve mental health. Through Instagram and Facebook, people can build social support networks and feel more connected. Studies have demonstrated that having significant connections and receiving social assistance through online platforms can improve an individual's overall well-being and reduce feelings of isolation (Zhao et al., 2022). Social media platforms have a tremendous impact on the spread of health information and the encouragement of positive health practices. Studies have shown that social media campaigns can successfully increase public knowledge about mental health problems, promote seeking help, and decrease the negative perception around mental illnesses (Maheen, 2021). The correlation between mental health outcomes and social media usage is impacted by several aspects, including individual characteristics, the particular circumstances in which it is employed, and the underlying reasons for its utilization. Understanding these links is crucial for devising methods that mitigate potential risks and maximize the advantages of social media in regard to mental well-being.

3. METHODOLOGY

This quantitative study examined how social media use affects Beijing college students' mental health. Quantitative research was chosen because it can measure variables and evaluate correlations using standard methods. The study collected quantitative data on participants' mental health, social media use, and other factors using standardized questionnaires. We choose a quantitative method because it can precisely quantify variables. Researchers can use quantitative methods with statistical validity to measure mental health markers and examine social media use. This technique was essential for accurately examining how social media qualities like frequency, type of involvement, and length affect mental health outcomes including anxiety, despair, and well-being in Beijing college students. Beijing university students from many universities were studied. Beijing was chosen for the investigation because young adults and varied students use social media. College students were selected because they use digital platforms frequently and are more vulnerable to the positive or negative effects of social media on mental health. Participants were selected using multistage randomization to assure sample representation and bias reduction. A comprehensive list of Beijing universities from various districts and across academic subjects was first compiled. A random selection of universities from this list participated in the study. Each university randomly selected faculties or departments to ensure intellectual diversity. Participants required to be full-time undergraduate or graduate students at one of the Beijing universities and 18–30 years old. The age range was chosen to represent the average college student who spends the most time on social media. Informed consent acknowledged participants' voluntary participation in the study and explained its goals, methods, and confidentiality measures. Exclusion criteria were used to maintain study focus and ethics. To preserve study population homogeneity, non-enrolled or part-time students were excluded. People beyond the stated age range were removed owing to potential mental health difficulties and social media use discrepancies from the target group. To comply with study ethics, cognitively impaired or otherwise unable to agree participants were excluded.

This study used a 95% confidence level and 5% margin of error to determine its sample size. Given these factors, the study's minimum sample size was 323 participants. To ensure study reliability and account for missing responses or participant attrition, the researchers distributed questionnaires to 400 people. To reduce selection bias and improve sample representativeness, multistage random sampling was used. First, a comprehensive list of Beijing universities from various fields was compiled. A random selection of universities from this list participated in the study. Departments or faculties

were randomly selected within each university to provide a diverse student body. This technique sought to acquire diverse perspectives and personal experiences on mental health and social media use among Beijing college students. Student-accessible websites, university bulletin boards, and classroom announcements recruited participants. Participants were informed of the study's goals, methodology, and confidentiality. All individuals expressed informed consent before structured questioning. The 400 questionnaires yielded 320 full responses, an 80% response rate. The completed surveys were used to create a large dataset to examine mental health outcomes and social media engagement.

Using a standardized questionnaire, this study collected data from Beijing institutions. Researchers met potential volunteers in university classrooms, study locations, and social venues. Each participant was fully informed of the study's goals, procedures, and voluntary participation. Before distributing the questionnaire for independent completion, all participants gave informed consent. The poll was aimed to collect quantitative data on key mental health and social media aspects. Participants were asked about their age, gender, academic year, and topic of study to better understand the research outcomes across student groups. The study also looked at individuals' social media use, platforms they enjoyed, information they read, and reasons they engaged, such as academics or socializing. Along with mental health, the questionnaire assessed anxiety, depression, stress, and well-being. Participants self-reported how social media use affected their mood, self-esteem, and relationships to acquire subjective experiences and insights on the potential positive and negative effects of digital interactions on mental well-being. Prioritizing ethics during data gathering was key. Participants could leave the research at any time without penalty, and their data was kept confidential. This methodological study examined the complex relationship between social media use and mental health among Beijing college students to provide empirical data.

SPSS, a popular quantitative social science research software, was used to analyze this study's data. Structured questionnaires examined the complex relationships between Beijing college students' social media use and mental health. Descriptive statistics were calculated to show research participants' demographics, social media use, and self-reported mental health. To summarize the dataset, means, standard deviations, and medians were determined. In the first round of research, trends and patterns in participants' replies revealed variations in mental health attitudes and social media behavior. After that, correlation analysis examined mental health outcomes and other social media activity factors. Pearson correlation coefficients measured the links' magnitude and orientation. The significant relationships between individuals' mental well-being and social media use suggested further study. Social media use and mental health consequences were examined using regression analysis. This statistical method helped researchers identify college student mental health predictors. This technique clarified how diverse digital activities affect psychological well-being.

4. RESULTS

Table 1 shows descriptive information for Beijing college students' social media use and mental health. In this study, students' perceived relevance of social media, their dependence on it, their knowledge of it as an information source, and their positive and negative emotions related to it are examined. Happy emotion scores averaged 3.993 with a standard deviation of 0.577. The measurement scale showed that higher values indicated more positive emotions. A median score of 4.143 suggests that most people were emotionally positive. Negative emotions, which are ranked lower due to fewer unfavorable events, have an average score of 2.013, a standard deviation of 0.754, and a median of 1.750. This shows that unpleasant emotional states vary by person. Participants somewhat valued social media as an information source, with an average score of 3.707 and a standard deviation of 0.749. The median score of 3.857 shows that

most people recognize social media's role in sharing information. The mean student estimate of social media's importance was 3.637, with a standard deviation of 0.402 and a median of 3.667. This shows that participants agreed moderately on the importance of social media in their daily lives. Social media reliance has a mean score of 3.972, a standard deviation of 0.529, and a median of 4.111. Participants' high reliance on social media emphasizes its importance in their social and informational activities. These descriptive statistics help explain Beijing college students' social media use and opinions. This lays the framework for statistical study on mental health outcomes and their predictors.

Table 1: Descriptive Statistics.

	Average	Standard Deviation	Median
Positive emotions	3.993	0.577	4.143
Negative emotion	2.013	0.754	1.750
Social media information recognition	3.707	0.749	3.857
The role of social media on college students	3.637	0.402	3.667
Social media dependence	3.972	0.529	4.111

Pearson correlation study of Beijing college students' social media use and mental health features is shown in Table 2. Pearson correlation coefficients were used to determine the strength and direction of the relationships between happy and bad emotions, students' perceived role of social media in their lives, their dependence on social media, and their acceptance of social media information. Happy feelings strongly inversely correlate with negative emotions ($r = -0.592, p < 0.01$), indicating that those with more positive emotions tend to have less negative emotions. This study shows that participants' positive and negative emotions are reciprocal. A positive correlation exists between social media acceptability and positive feelings ($r = 0.331, p < 0.01$), while a negative correlation exists with negative emotions ($r = -0.296, p < 0.01$). The findings show that people who trust social media have higher levels of happiness and lower levels of sadness. A significant positive association exists between college students' adoption of social media information and their perceived importance ($r = 0.776, p < 0.01$). Additionally, a weak positive correlation exists between happy feelings and social media perception ($r = 0.258, p < 0.01$). This shows that those who use social media regularly accept it as a source of information and feel happier. The correlation study shows a positive link between social media information acceptance ($r = 0.553, p < 0.01$) and perceived social media role ($r = 0.610, p < 0.01$) and higher levels of reliance. This shows that participants value social media and use it every day. The linear regression analysis offers a deeper understanding of what causes negative feelings in Beijing college students. The regression model predicted negative emotional changes using various independent variables and confounding factors. The regression model's constant term shows the projected negative emotion score when all other variables are zero. The significant intercept (2.746, $t = 6.353, p < 0.01$) indicates that people consistently experience negative emotions. Research indicates that social media information acceptance is a significant predictor, with an unstandardized coefficient of -0.382 ($t = -5.249, p < 0.01$) and a standardized coefficient (Beta) of -0.379. This study found that students who use social media for learning have fewer negative feelings. The variance inflation factor (VIF) of 2.656 indicates moderate multicollinearity and modest collinearity in this predictor. The unstandardized coefficient of 0.240 ($t = 1.696, p = 0.091$) implies a positive correlation between student social media use and disagreeable emotions, but it is not statistically significant. The new model shows that while one's view of social media's function positively affects negative feelings, this link is not statistically significant.

Table 2: Correlation Matrix.

	Positive Emotions	Negative Emotion	Social Media Information Acceptance	The Role of Social Media in College Students	Degree of Dependence on Social Media
Positive emotions	1				
Negative emotion	-0.592**	1			
Social media information acceptance	0.331**	-0.296**	1		
The role of social media in college students	0.258**	-0.175**	0.776**	1	
Degree of dependence on social media	0.157**	-0.139**	0.553**	0.610**	1

* $p < 0.05$ ** $p < 0.01$

Table 3: Linear Regression Analysis with Negative Emotion as DV.

	Unstandardized Coefficient		Standardized Coefficient	t	p	Collinearity Diagnosis	
	B	Standard Error	Beta			VIF	Tolerance
Constant	2.746	0.432	-	6.353	0.000**	-	-
Social media information acceptance	-0.382	0.073	-0.379	-5.249	0.000**	2.656	0.377
The role of social media in college students	0.240	0.142	0.128	1.696	0.091	2.893	0.346
Degree of dependence on social media	0.012	0.084	0.008	0.144	0.886	1.761	0.568
Gender	0.083	0.068	0.055	1.220	0.223	1.046	0.956
Generation	-0.156	0.073	-0.116	-2.133	0.034*	1.494	0.669
Grade	0.024	0.043	0.031	0.560	0.576	1.568	0.638
Current learning status	0.179	0.070	0.122	2.572	0.010*	1.143	0.875
Average time spent on social media per day	0.120	0.043	0.135	2.798	0.005**	1.188	0.842
On average, how many days per month do you use social media?	-0.150	0.050	-0.148	-3.011	0.003**	1.221	0.819
Number of friends or followers on the most frequently used social media	-0.041	0.023	-0.082	-1.812	0.071	1.052	0.951
R ²				0.154			
Adjust R ²				0.134			
F				F(10,430)=7.830, p=0.000			
DW value				1.876			
Dependent variable: Negative emotions							
* $p < 0.05$ ** $p < 0.01$							

The unstandardized coefficient of 0.012, with a t-value of 0.144 and a p-value of 0.886, did not predict unpleasant feelings, as shown by social media use. This suggests that students' social media use is unrelated to their negative moods. Demographic and behavioral data were added to the model. Gender, generation, grade level, and present learning status had mixed effects on unpleasant feelings, with some variables showing strong relationships and others not statistically significant. The regression model explains 15.4% of unpleasant feelings ($R^2 = 0.154$), showing these predictors moderately explain the diversity in disagreeable emotions among college students. Although correcting for several factors, the model's adjusted R^2 of 0.134 suggests it can explain disagreeable sensations beyond random chance. The F-test ($F(10, 430) = 7.830, p = 0.000$) confirmed the regression model's statistical significance. This suggests that at least one variable significantly explains research participants' unpleasant experiences. A Durbin-Watson (DW) score of 1.876 shows little residual autocorrelation. This suggests regression data are independent.

The linear regression analysis shows what influences Beijing college students' favorable sentiments. A variety of independent variables and probable factors are analyzed in this regression model to predict pleasant emotional experience fluctuations. The regression model's constant component

predicts agreeable emotions when all other variables are zero. A t-value of 8.340 and a p-value below 0.01 make this term's intercept 2.710 statistically significant. This baseline score indicates the average positive emotional experiences reported by participants. Adoption of social media information is a significant indication, with an unstandardized coefficient of 0.246 ($t = 4.495, p < 0.01$) and a standardized coefficient (Beta) of 0.319. Thus, students' positive feelings increase with their use of social media as an information source. Its variance inflation factor (VIF) is 2.656, indicating considerable collinearity. This predictor has little multicollinearity concerns. However, the small unstandardized coefficient of 0.067 ($t = 0.629, p = 0.529$) implies that students perceived social media impact does not predict their happiness. Social media may affect happiness; however, our model does not show a statistically significant effect.

Table 4: Linear Regression analysis with Positive emotion as DV.

	Unstandardized Coefficients		Standardized Coefficient	t	p	Collinearity Diagnostics	
	B	Standard Error	Beta			VIF	Tolerance
Constant	2.710	0.325	-	8.340	0.000**	-	-
Social media information acceptance	0.246	0.055	0.319	4.495	0.000**	2.656	0.377
The role of social media in college students	0.067	0.107	0.047	0.629	0.529	2.893	0.346
Degree of dependence on social media	-0.097	0.063	-0.089	-1.534	0.126	1.761	0.568
Gender	0.025	0.051	0.021	0.477	0.634	1.046	0.956
generation	0.029	0.055	0.028	0.532	0.595	1.494	0.669
Grade	0.038	0.033	0.064	1.172	0.242	1.568	0.638
Current learning status	-0.204	0.052	-0.182	-3.898	0.000**	1.143	0.875
Average time spent on social media per day	-0.047	0.032	-0.069	-1.452	0.147	1.188	0.842
On average, how many days per month do you use social media?	0.148	0.038	0.191	3.956	0.000**	1.221	0.819
Number of friends or followers on the most frequently used social media	0.051	0.017	0.134	2.999	0.003**	1.052	0.951
R ²				0.183			
Adjust R ²				0.164			
F				$F(10,430)=9.607, p=0.000$			
DW value				1.914			
Dependent variable: positive emotions							
* $p < 0.05$ ** $p < 0.01$							

The unstandardized coefficient of -0.097 ($t = -1.534, p = 0.126$) showed that social media dependency did not affect happy moods. This suggests that students' positive emotional experiences are not necessarily linked to social media use. The concept links demographic and behavioral factors to positive emotions. Positive emotions are significantly associated with present learning status ($-0.204, t = -3.898, p < 0.01$), monthly social media use ($0.148, t = 3.956, p < 0.01$), and social media contacts/followers ($0.051, t = 2.999, p < 0.01$). Gender, generation, grade level, and average daily social media usage did not substantially predict good emotional results. The regression model explains 18.3% of cheerful emotions ($R^2 = 0.183$), indicating that the predictors contribute somewhat to positive emotional experiences among college students in this milieu. The improved R^2 of 0.164 demonstrates the model's accurate representation of pleasant feelings, even after incorporating many parameters. The regression model's statistical significance is confirmed by the F-test ($F(10, 430) = 9.607, p = 0.000$). This suggests that at least one predictor strongly explains research participants' pleasant sentiments. Residual autocorrelation is modest with a Durbin-Watson (DW) score of 1.914. This proves regression data is independent. This regression study also explains the intricate relationships between demographic characteristics, social media use, and positive emotions in Beijing college students. These findings demonstrate the complicated relationship between social media and emotional well-being,

underlining the need to examine multiple facets of digital platforms when considering their possible implications on mental health in education.

5. DISCUSSION

This study examined Beijing college students' mental health and social media use. The study examined key social media aspects and emotional well-being. The study examined numerous hypotheses on how social media activity affects participants' emotional well-being, including positive and negative sentiments, using extensive survey data analysis. The study found that college students who accept social media information feel good. Our data strongly suggest that social media content approval increases pleasure. Social media users who trusted it for information were happier, more fulfilled, and more enjoyable. This supports theories that productive social media use can boost cognitive engagement and emotional well-being by promoting self-expression, learning, and social connection (Li et al., 2023). Despite some intriguing trends, our study found no consistent statistical significance in the links between students' perceived role of social media, their level of reliance on these platforms, and positive subjective states. This complex finding suggests that while social media use can affect happiness and satisfaction, offline social support networks and individual coping strategies can also have a significant impact.

Our negative emotional state research reveals our assumptions are unsupported. Acceptance of social media as an informational tool was negatively correlated with unpleasant feelings. This suggests that social media acceptance reduces worry, stress, and depression. The negative emotional consequences were not significantly associated with other factors like social media reliance. According to Stone and Can (2020), using social media for cognitive engagement and stress relief can lower negative emotional states, but relying too much on it for emotional support or validation may worsen them in college students. The lack of significant findings on social media's role in students' lives and its impact on negative emotional states highlights the need for further research to examine the long-term effects of different social media patterns and motivations on emotional well-being.

To place the findings in context, compare them to previous studies on emotional well-being and social media. Previous studies show that social media use affects emotional well-being differently. Some study suggests that digital platforms can improve social support, information exchange, and linkages (Griffin & Sarnataro, 2023; Liu et al., 2024). These studies show that social media and pleasant connections promote emotional resilience and well-being. This matches our social media content acceptance findings. The discovery consistently supports prior studies linking social media data use to positive emotions. According to other studies, those who trust social media are happier and more satisfied (Chen et al., 2024; Fanari et al., 2023). This shows that social media's cognitive capabilities can boost emotional well-being through information. In contrast, the study contradicts earlier findings on emotional distress and excessive social media use. This study did not consistently demonstrate a linkage between excessive social media use and harmful psychological impacts, unlike prior studies (Albani et al., 2023). This shows how social media use and emotional well-being are viewed differently in different contexts and populations. Contrary to researchers' assumptions, social media activity did not affect student emotional outcomes. This contradicts evidence that says social media use might significantly affect emotional well-being. The unexpected results underscore the need for more research to determine how social media use affects college students' emotional states in certain cultural and social circumstances.

Many factors contributed to the study's surprising results. College students may first react less emo-

tionally to diverse causes and activities due to social media use. Some use social media for professional networking or learning, while others use it for emotional support or comparison (González-López, Machin-Mastromatteo, & Tarango, 2020). Computer literacy and social contact norms may influence Beijingers' social media use. These factors determine social media's emotional effects. The study's cross-sectional design and self-reported ratings may make causal linkages between social media use and affective well-being difficult. Longitudinal research can reveal social media engagement patterns' temporal dynamics and reciprocal effects on affective states. Social media use affects emotional outcomes depending on individual traits, coping strategies, and real-life social support. These moderating factors should be examined to see why certain people are more emotionally affected by social media. The data could be used to build customized digital wellbeing products for university students (Schislyeva & Saychenko, 2023). The study explains the complex relationship between social media use and college students' mental well-being. However, unexpected findings and contradictions with previous studies underline the need for more investigation. Further research that considers socio-cultural contexts and methodological constraints can help us understand how digital technology affects emotional experiences and improve mental health in an increasingly interconnected society.

6. CONCLUSION

This study examines mental health outcomes and social media involvement among Beijing college students. The study sheds light on how social media use, purpose, and information acceptance affect emotional well-being. Key findings from this study show a positive association between emotional well-being and social media use. Students who trusted social media reported less negative feelings and more positive ones. This suggests that students' emotional well-being may increase if they trust social media information. Social networking is beneficial for cognitive engagement and knowledge acquisition, especially in academic settings, according to previous studies. The study examined how social media affects students' mental health and their views on its importance. This trait may alter emotional states, however the associations were not statistically significant. Social media affects emotional well-being in various ways, driven by individual and environmental factors. The complexity of this relationship—individual differences, usage habits, and types of information—require more research to understand how social media affects mental health. However, the dearth of meaningful evidence on social media use and emotional outcomes challenges some study assumptions. Social media overuse has been linked to anxiety and low self-esteem in numerous research. However, our findings suggest a more nuanced link. Engagement and content consumption can mitigate the negative effects of overusing social media. This emphasizes the need of considering social media use context and style rather than frequency or dependence. Our study's uneven results reflect the diverse and frequently contradictory research on social media and mental health. Some studies emphasize the benefits of social media in building social ties and emotional support, while others emphasize the risks of social comparison and FOMO. Our research shows that social media's influence relies on how and why it's used.

6.1 Theoretical and Practical Implications

The study's findings have significant practical and theoretical implications for future research and social media-related college student well-being strategies. The findings show that pupils can benefit from credible social media knowledge. Emotional well-being and social media acceptance are positively correlated. This implies practical implications for politicians, educators, and mental health professionals. The study suggests that social media may boost educator learning and engagement.

Selecting and sharing reliable educational content on social media can improve students' intellectual and emotional well-being. This strategy may involve creating virtual communities where students can share information, discuss academic subjects, and collaborate on tasks to foster a sense of inclusion and support. These data can be used by mental health professionals to develop social media responsibility therapies. Student workshops and counseling should focus on finding and using credible social media sources. Additionally, they should address excessive or dangerous use. Educators can help kids avoid stress and low self-esteem by teaching them how to use social media responsibly. This data can help policymakers create social media standards that encourage responsible use. This may include measures to ensure social media platforms provide accurate and reliable information and promote media literacy and critical thinking. Educational institutions should also adopt digital well-being policies. These policies would provide academics and students with resources and training. This study also has major theoretical implications. The positive relationship between emotional well-being and social media adoption supports ideas that highlight the cognitive and emotional benefits of informative social media use. This study supports the uses and gratifications theory, which states that media satisfy demands like social contact and knowledge. Our findings support the idea that social media information's quality considerably affects its emotional impact. The complex social media reliance findings challenge literature assumptions in various ways. Previous research have highlighted the harmful effects of excessive social media use, but our data suggest that these effects may be more nuanced and depend on conditions. Therefore, future theoretical models must reflect the wide spectrum of social media experiences and the many factors that affect mental health. To understand these dynamics, it's crucial to distinguish between active and passive social media use and consider personality factors and coping techniques. Our findings further highlight the importance of cultural context in social media interactions and mental health. The relationship between social media use and emotional well-being may vary by culture, taking into account technology infrastructures, attitudes, and social norms. This indicates that theoretical models should include cross-cultural perspectives to accurately describe social media habits and their psychological effects. This investigation shows that college students' emotional well-being and social media use are linked, with substantial practical and theoretical implications. The research emphasizes the benefits of social media knowledge and questions the idea of over-reliance on it to explain how digital activity may impair mental health. These findings can inform healthy social media use policies and theoretical models that account for the complexity of social media interactions. In a digitalized age, we can promote college student welfare by studying and implementing effective solutions.

6.2 Limitations and Future Direction

Future research must identify and resolve this work's limitations, despite its strengths. Cross-sectional research limits causal inferences on emotional well-being and social media use. Due to one-time data collection, the effects of social media use on emotional states and the link between pre-existing emotional states and social media behavior are unknown. Future research should use longitudinal designs to determine event order and cause-and-effect linkages. This method will clarify how variables interact over time. The use of self-reported data, which might be skewed by memory errors and self-promotion, is another drawback. Overstating or understating participants' emotions and social media use could affect results. Future studies should use objective social media usage measurements such digital monitoring tools to improve interaction pattern calculations. Qualitative interviews and self-report measures can better comprehend students' social media experiences and viewpoints. Concerns surround the study's sample size. Focusing on Beijing college students provides valuable insights into one community, but the conclusions may not apply to other groups or cultures. Different

cultures and groups may experience different mental health effects from social media. Future studies should incorporate samples from several origins and areas to compare and contrast. Comparative studies in different cultures can help identify if social media use and psychological consequences are universal or context-specific. Additionally, this study relied on quantitative assessments of emotional well-being and social media use. These assessments give useful statistical correlations but may not fully capture students' experiences. Qualitative methods like in-depth interviews and focus groups can enhance quantitative data by exploring the complexity of social media use and its effects on people. These methods can detect environmental factors and mechanisms that quantitative methods cannot. Further research should examine the effects of certain social media sites and content. Different platforms offer different user experiences and features, which may affect mental health results. Messaging networks like Twitter and discussion forums may have a different impact than Instagram. Content—instructional, entertaining, or social—can have repercussions for users. Future studies should study social media use across platforms and content to better understand its effects on emotional well-being. The study's focus on social media information acceptance emphasizes information quality. However, it raises doubts about rating variables. Future research must study the factors that influence students' trust in social media content. These include source credibility, content relevance, and critical thinking ability. Understanding these components can aid media literacy and social media health efforts. The study did not analyze moderating and mediating variables that may affect the relationship between emotional well-being and social media use. Personality, social support, and offline social contacts can dramatically effect mental health and social media use. Future research should analyze these traits to better understand how social media affects emotions. Recognizing these moderating and mediating features may help personalize treatments to each person's needs and conditions, boosting their efficacy. To conclude, this study sheds light on Beijing college students' emotional well-being and social media use. It also finds many domains that need additional study. The constraints of cross-sectional design, self-reported data, sample variation, and the need for qualitative insights should be addressed in future research on social media and mental health. Looking at how platforms, material, and personality affect this research is important. This will lead to more effective social media user well-being initiatives and policies.

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