CMU Journal of Science
The Official Scientific Journal of Central Mindanao University
ISSN Print: 0116-7847 js.cmu.edu.ph ISSN Online: 2704-3703

Research Article

Unplugging for Wellness: Addressing Social Media Use-Related Stress Among College Students in China

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Citation: Yuan, Y. & Aton P.A. (2025). "Unplugging for Wellness: Addressing Social Media Use-Related Stress among College Students in China." CMU Journal of Science. 29(1), 121

Academic Editor: Peter James B. Abad

Received: March 02, 2025
Revised: May 25, 2025
Accepted: June 10, 2025
Published: July 25, 2025

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ABSTRACT

Social media platforms are central to the lives of Chinese college students, offering avenues for communication, information exchange, and self-expression. However, excessive digital engagement is increasingly linked to psychological strain, particularly perceived stress. This study investigated the relationship between four dimensions of social media engagement—image-based, comparison-based, belief-based, and consumption-based—and perceived stress among vocational college students in China. A cross-sectional survey design was employed, with 375 participants completing the Social Media Use Integration Scale (SMUIS) and the Perceived Stress Scale (PSS-10). Findings revealed that while image-based and consumption-based usage were most prevalent, comparison-based engagement demonstrated the strongest positive correlation with perceived stress, followed by belief-based interactions. These results suggest that upward social comparisons and ideological exposure may have a significant influence on students' psychological well-being. The study highlights the importance of culturally responsive interventions in higher education to mitigate social media-related stress and promote digital wellness among Chinese youth.

Keywords: Social Media Use, Perceived Stress, Digital Wellness, Chinese College Students, Mental Health

1. INTRODUCTION

As of 2022, more than 72% of China's population actively uses social media, making digital platforms an essential part of daily life, particularly among young adults [1]. Among Chinese college students, platforms such as WeChat, Douyin (TikTok), and Xiaohongshu (Little Red Book) are widely used for communication, academic collaboration, entertainment, and personal expression. While these platforms offer convenience and connectedness, growing evidence suggests that excessive engagement may lead to psychological strain, especially in the form of perceived stress [2,3]. This concern has prompted increasing scholarly interest in understanding how specific digital behaviors contribute to student well-being.

Researchers have identified multiple pathways through which social media engagement may cause psychological stress. Exposure to idealized portrayals of others often facilitates upward social comparisons, which can result in diminished self-esteem, envy, and anxiety [4]. Validation-seeking behaviors, such as frequently checking likes and comments, have been linked to emotional dependency and fluctuations in self-worth [5,6]. In addition, the passive consumption of emotionally intense or conflicting content can lead to information overload and emotional fatigue, especially when experienced frequently [7]. These dynamics are particularly relevant for students in transitional life stages, such as college, where academic pressure, identity development, and social integration intersect.

Despite extensive global research, limited attention has been paid to Chinese vocational college students—a group facing distinct academic and socioeconomic pressures. These students often balance rigorous training programs with expectations of employability and digital competence. Within the collectivist cultural setting of China, where academic achievement, social conformity, and online self-presentation are emphasized, these pressures may be amplified [8].

The present study aims to examine the relationship between social media use and perceived stress among vocational college students in China. Specifically, it explores four dimensions of social media engagement: image-based, comparison-based, belief-based, and consumption-based. Through a cross-sectional survey, the study identifies which types of engagement are most strongly associated with stress. Initial results suggest that comparison-based and belief-based engagements exhibit the highest positive correlations with perceived stress. These findings provide valuable insight for developing culturally responsive digital literacy and mental health interventions in higher education.

2. METHODOLOGY

2.1 Research Design

This study utilized a descriptive-correlational, cross-sectional design to investigate the relationship between social media use and perceived stress among Chinese vocational college students. The descriptive component examined students' engagement across four dimensions of social media behavior: image-based, comparison-based, belief-based, and consumption-based. The correlational component assessed the strength and direction of association between these dimensions and perceived stress. The cross-sectional nature of the study allowed for the collection of data at a single point in time, capturing a snapshot of participants' digital behaviors and psychological states. This design is commonly applied in psychological and behavioral health research when identifying potential relationships without inferring causality.

2.2 Study Location and Duration

The research was conducted at a publicly funded vocational college located in Hebei Province, China. This institution offers a wide range of programs in technical, managerial, and service-related fields, attracting students from diverse socioeconomic backgrounds across northern China. Its urban setting and emphasis on digital competence made it an ideal site for examining the interplay between social media usage and student well-being. The data collection phase was carried out over a continuous four-week period from March 1 to March 31, 2024. This timeframe coincided with the middle of the academic semester, ensuring that students were engaged in regular academic activities without major exam disruptions that could confound stress levels. All activities related to survey distribution, monitoring, and response collection were coordinated in collaboration with academic affairs and student services departments to maximize participation and data integrity.

2.3 Participants and Sampling

A purposive sampling approach was employed to identify participants who aligned with the study's objective of exploring social media engagement and perceived stress. A total of 375 full-time college students from a vocational institution in Hebei Province, China, took part in the study. These students were enrolled across a range of academic programs, including mechanical and electrical engineering, information technology, preschool education, modern service management, and economic and trade management. The selection was guided by their active use of social media platforms, which positioned them to provide relevant insights into the psychological impacts of digital engagement.

Eligible participants were between 18 and 25 years old, currently enrolled as full-time students, and self-identified as regular users of at least one major social media platform such as WeChat, Douyin, or Xiaohongshu. Students who did not use social media at all were excluded from the study. Participation was entirely voluntary, and informed consent was obtained digitally before the survey began. The consent form outlined the purpose of the research, affirmed the anonymity and confidentiality of responses, and clarified that participants could withdraw at any stage without consequence or penalty. No identifying information was collected, and all data were stored securely in encrypted files accessible only to the researcher, in adherence with standard data privacy protocols.

2.4 Instrumentation

This study utilized two standardized self-report instruments to measure social media engagement and perceived stress among students. Social media engagement was assessed using the Social Media Use Integration Scale (SMUIS), which was adapted from a validated framework designed to examine digital behavior among youth populations [3]. The SMUIS measures engagement across four behavioral dimensions: image-based, comparison-based, belief-based, and consumption-based. It includes a total of 20 items, with five items allocated to each subscale. Respondents rated their agreement with each item using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Higher mean scores on each subscale indicate more frequent or intense engagement in that dimension. In the current study, the SMUIS demonstrated strong internal consistency, with a Cronbach's alpha of 0.87.

Perceived stress was measured using the Perceived Stress Scale (PSS-10), a widely used tool for evaluating the degree to which individuals appraise their lives as stressful [11]. The scale consists of 10 items, four of which (Items 4, 5, 7, and 8) are negatively worded and were reverse-coded during analysis. Each item was rated on a five-point scale from 0 (Never) to 4 (Very Often), resulting in total scores ranging from 0 to 40. Higher scores reflect greater perceived stress. The PSS-10 also showed acceptable reliability in this study, with a Cronbach's alpha of 0.83.

Both instruments were translated into Mandarin Chinese and pilot-tested with a group of 30 vocational college students to ensure clarity and contextual relevance. Minor adjustments were made to the wording of several items based on participant feedback while preserving the conceptual integrity of the original scales. The instruments were finalized in consultation with bilingual experts to ensure cultural and linguistic appropriateness for the study population.

2.5 Data Gathering Procedure

The data collection was conducted entirely online to ensure accessibility and reduce logistical barriers for participants. The finalized survey was hosted on Wenjuanxing, a secure and widely used Chinese online survey platform similar to Qualtrics and SurveyMonkey. The survey link was disseminated through the institution's official communication channels, including academic group chats and university-endorsed email lists. These distribution methods were selected to ensure a wide and targeted reach among eligible participants.

Before beginning the survey, all participants were required to read and acknowledge a digital informed consent form. The form outlined the objectives of the study, assured participants of the voluntary nature of their involvement, guaranteed the anonymity and confidentiality of their responses, and described how the data would be stored and used. Only participants who provided explicit consent were allowed to proceed to the questionnaire. To protect respondent privacy, no personal identifiers were collected, and all data were stored in encrypted digital folders accessible only to the primary researcher.

The data collection period lasted for four weeks, from March 1 to March 31, 2024. During this time, weekly reminders were circulated through the same official channels to encourage participation and improve

response rates. A total of 396 responses were received. After screening for completeness and relevance, 375 valid responses were retained for analysis. Submissions that were incomplete or failed to meet the inclusion criteria were excluded. Because only complete surveys were analyzed, no data imputation was necessary.

2.6 Data Analysis

All data were analyzed using IBM SPSS Statistics version 27. The analysis began with descriptive statistics to summarize the participants' demographic characteristics, levels of social media engagement, and perceived stress. Measures of central tendency (mean) and dispersion (standard deviation) were computed for each of the four dimensions of social media use—image-based, comparison-based, belief-based, and consumption-based—as well as for overall perceived stress scores.

To assess the assumptions underlying the choice of statistical methods, tests for normality were conducted using both the Shapiro-Wilk and Kolmogorov-Smirnov tests. The results indicated that the data for the main variables were not normally distributed ($p < 0.05$), which justified the use of non-parametric techniques in the subsequent analysis. Accordingly, Spearman's rank-order correlation coefficient (Spearman's rho) was employed to examine the strength and direction of the relationships between each type of social media engagement and perceived stress. This non-parametric correlation method is appropriate for ordinal-level data and for variables that do not meet the assumption of normal distribution.

All statistical tests were conducted at a 95% confidence level, with significance set at $p < 0.01$ to reduce the likelihood of Type I errors. The results were reported in terms of correlation coefficients and associated p-values, and are presented in tabular form in the Results section.

3. RESULTS

This section presents the analyzed data in a structured narrative format, summarizing students' levels of social media use across four dimensions, their perceived stress levels, and the statistical relationships between these variables. The findings are organized in alignment with Tables 1 to 6, each followed by a corresponding interpretation. All results are presented descriptively and analytically, with emphasis on clarity and accessibility for researchers across disciplines

3.1. Levels of Social Media Use

Table 1. Level of social media use among college students in Image-based social media

	INDICATORS	MEAN	SD	DESCRIPTION
1	I often post or share photos about positive events or emotions.	3.59	1.13	Agree (High)
2	I frequently check how many likes, comments, or shares my posts get.	3.58	1.11	Agree (High)
3	I look at how many people followed or friended me.	3.37	1.21	Neutral (Average)
4	I spend time editing and enhancing my photos before posting.	2.88	1.27	Neutral (Average)
5	I feel satisfied when my photos receive positive feedback.	3.84	1.08	Agree (High)
	Overall Mean	3.45	0.82	Agree (High)

Note: 1.00-1.80=Strongly Disagree (Very Low), 1.81-2.60=Disagree (Low), 2.61-3.40=Neutral (Average), 3.41-4.20=Agree (High), 4.21-5.00=Strongly Agree (Very High)

Table 1 presents the descriptive statistics related to image-based social media use among college students. The overall mean score of 3.45 (SD = 0.82) falls within the "Agree" range, indicating that students generally engage in image-based activities at a relatively high level. The highest-rated item was "I feel satisfied when my photos receive positive feedback" (M = 3.84, SD = 1.08), suggesting that students value external validation in the form of likes and comments. This is closely followed by behaviors such as sharing photos about positive experiences (M = 3.59, SD = 1.13) and monitoring engagement metrics like likes and shares (M = 3.58, SD = 1.11), both of which received high agreement ratings.

In contrast, students reported lower engagement with behaviors that involve curating or modifying their online appearance. Specifically, the lowest-rated item was

"I spend time editing and enhancing my photos before posting" (M = 2.88, SD = 1.27), which falls within the "Neutral" range. Similarly, tracking the number of followers or friends (M = 3.37, SD = 1.21) received an average level of agreement. These findings suggest that while students are active in sharing images and responding to feedback, fewer are engaged in time-consuming self-presentation strategies such as image enhancement or follower tracking.

Overall, the data reflect a tendency among students to use image-based social media as a tool for expression and affirmation, without consistently engaging in deeper forms of digital self-curation. This balanced pattern of behavior may reflect a pragmatic approach to online image-sharing, where emotional gratification is prioritized over meticulous visual presentation.

Before examining the next dimension of social media use, it is important to note that image-based engagement primarily reflects behaviors rooted in self-expression and feedback-seeking. In contrast, the following section explores comparison-based social media use, which involves evaluating oneself against others—a behavior often linked to emotional responses such as motivation or inferiority. Table 2 summarizes students' engagement levels across this dimension.

3.2. Comparison-Based Social Media Use

Table 2. Level of social media use among college students in Comparison-based social media.

	INDICATORS	MEAN	SD	DESCRIPTION
1	I use social media to compare myself to others.	2.71	1.19	Neutral (Average)
2	I compare my current self to my past self through social media.	3.15	1.14	Neutral (Average)
3	I feel inferior after viewing others' posts on social media.	2.36	1.23	Disagree (Low)
4	I feel motivated to improve myself when I see others' achievements on social media. ◦	3.70	1.08	Agree (High)
5	I often compare my lifestyle to those I see on social media.	2.65	1.11	Neutral (Average)
	Overall Mean	2.92	0.68	Neutral (Average)

Note: 1.00-1.80=Strongly Disagree (Very Low), 1.81-2.60=Disagree (Low), 2.61-3.40=Neutral (Average), 3.41-4.20=Agree (High), 4.21-5.00=Strongly Agree (Very High)

Table 2 presents the descriptive statistics for comparison-based social media use. The overall mean score was 2.92 (SD = 0.68), categorized as "Neutral (Average)," indicating that students moderately engage in behaviors related to social comparison. Among the five indicators, the highest-rated item was "I feel motivated to improve myself when I see others' achievements on social media" (M = 3.70, SD = 1.08), which received a "High" level of agreement. This suggests that, for many students, viewing others' successes online may serve a constructive or inspirational function.

The second-highest score was attributed to "I compare my current self to my past self through social media" (M = 3.15, SD = 1.14), reflecting an internalized form of comparison that may support self-reflection or personal growth. In contrast, the item "I feel inferior after viewing others' posts on social media" received the lowest mean score (M = 2.36, SD = 1.23), falling within the "Low" agreement range. This indicates that although students may engage in social comparisons, such comparisons do not consistently translate into negative self-evaluations.

Other items in this dimension—such as comparing lifestyles (M = 2.65, SD = 1.11) and general self-comparison with others (M = 2.71, SD = 1.19)—received average ratings, reinforcing the pattern that comparison-based engagement is present but not dominant among participants. These findings suggest that while social media may provide opportunities for comparison, its effects on students are varied. Some may use comparison as a motivational tool, while others remain unaffected or disengaged from upward social comparison dynamics.

Taken together, the data reflect a balanced use of comparison-based engagement among vocational college students. Rather than producing uniform emotional responses, these behaviors appear to vary in impact depending on the individual's intent—whether it be self-improvement, observation, or passive scrolling. The nuanced results from this section highlight that comparison is not inherently detrimental and may in some cases foster aspirational thinking.

While comparison-based engagement centers on how individuals evaluate themselves relative to others, belief-based social media use involves interactions with content that affirms or challenges one's values. This dimension includes both positive engagement with like-minded content and exposure to ideologically opposing views. Table 3 presents the students' responses across belief-based engagement indicators.

3.3 Belief-Based Social Media Use

Table 3. Level of social media use among college students in Belief-based social media.

	INDICATORS	MEAN	SD	DESCRIPTION
1	I engage with content that I morally or ethically disagree with.	2.33	1.14	Disagree (Low)
2	I post or share about something I feel strongly negative about.	2.42	1.12	Disagree (Low)
3	I seek out content that makes me feel upset or angry.	2.17	1.19	Disagree (Low)
4	I follow social media accounts that align with my beliefs and values.	3.49	1.20	Agree (High)
5	I engage in discussions about controversial topics on social media.	2.59	1.23	Disagree (Low)
	Overall Mean	2.60	0.71	Disagree (Low)

Note: 1.00-1.80=Strongly Disagree (Very Low), 1.81-2.60=Disagree (Low), 2.61-3.40=Neutral (Average), 3.41-4.20=Agree (High), 4.21-5.00=Strongly Agree (Very High)

Table 3 presents the descriptive statistics for belief-based social media use. The overall mean score was 2.60 (SD = 0.71), placing this dimension in the "Low" agreement category. This suggests that students do not frequently engage with content on social media that evokes strong personal values, moral positions, or ideological tension. However, a closer inspection of the individual indicators reveals a more nuanced behavioral pattern.

The highest-rated item was "I follow social media accounts that align with my beliefs and values" (M = 3.49, SD = 1.20), falling within the "High" agreement category. This indicates that students selectively engage with content that affirms their existing worldviews, consistent with the idea of algorithm-driven content curation and digital echo chambers. In contrast, the lowest-rated item was "I seek out content that makes me feel upset or angry" (M = 2.17, SD = 1.19), with a similarly low agreement for "I engage with content that I morally or ethically disagree with" (M = 2.33, SD = 1.14) and "I post or share about something I feel strongly negative about" (M = 2.42, SD = 1.12). These results reflect a clear tendency to avoid ideologically confrontational or emotionally distressing content online.

The item "I engage in discussions about controversial topics on social media" also received a relatively low score (M = 2.59, SD = 1.23), suggesting that open debate or engagement in contentious dialogue is not a prominent feature of students' digital behavior. Overall, belief-based engagement appears to be primarily confirmatory rather than oppositional. That is, students are more inclined to follow content that reinforces their values than to interact with content that challenges them.

It is important to note that belief-based engagement includes both affirming (value-aligned) and oppositional (value-challenging) behaviors, which may exert different psychological effects. Although engagement with distressing content is infrequent, the presence of even passive exposure to conflicting views may contribute to subtle stress or cognitive fatigue—a consideration that is further explored in the correlation analysis. These findings reflect a broader pattern in which students prioritize emotional stability over ideological confrontation in their online experiences.

While belief-based engagement centers on value alignment and selective exposure to ideological content, consumption-based use involves a more passive interaction with social media. This dimension captures behaviors such as browsing without intent, watching videos, and consuming informational content. Table 4 presents students' levels of engagement across various consumption-based indicators.

3.4 Consumption-Based Social Media Use

Table 4. Level of social media use among college students in Consumption-based social media.

	INDICATORS	MEAN	SD	DESCRIPTION
1	I watch videos such as memes, news content, how-tos, or DIY projects.	3.40	1.14	Neutral (Average)
2	I read, watch, or catch up on news or current events.	3.62	1.02	Agree (High)
3	I browse through social media without a specific purpose.	3.35	1.01	Neutral (Average)
4	I spend a significant amount of time on social media each day.	3.21	1.09	Neutral (Average)
5	I often discover new products or services through social media.	3.29	1.10	Neutral (Average)
	Overall Mean	3.38	0.58	Neutral (Average)

Note: 1.00-1.80=Strongly Disagree (Very Low), 1.81-2.60=Disagree (Low), 2.61-3.40=Neutral (Average), 3.41-4.20=Agree (High), 4.21-5.00=Strongly Agree (Very High)

Table 4 presents the descriptive statistics related to students' consumption-based social media use. The overall mean score was 3.38 (SD = 0.58), which falls within the "Neutral (Average)" category, suggesting that students moderately engage in passive forms of social media interaction. These behaviors include viewing videos, browsing news content, and exploring online products or services—activities that require minimal content creation or interpersonal interaction.

The highest-rated item was "I read, watch, or catch up on news or current events" (M = 3.62, SD = 1.02), indicating that social media is frequently used as an informational tool. This was followed by "I watch videos such as memes, news content, how-tos, or DIY projects" (M = 3.40, SD = 1.14), which also fell within the upper end of the neutral range. These results imply that students rely on social media not only for entertainment but also to stay informed about the world around them.

Other indicators, including "I browse through social media without a specific purpose" (M = 3.35, SD = 1.01) and "I often discover new products or services through social media" (M = 3.29, SD = 1.10), received similar neutral ratings, suggesting a pattern of habitual, low-effort engagement. The item "I spend a significant amount of time on social media each day" (M = 3.21, SD = 1.09) received the lowest mean score within this set, though it still reflects a moderate level of agreement. This indicates that while students acknowledge using social media daily, they may not perceive their time spent as excessive or problematic.

Overall, consumption-based engagement appears to be a consistent but measured part of students' digital routines. The data suggest that students are regularly exposed to informational and commercial content but do not exhibit patterns of excessive or unregulated passive use. This moderate level of consumption may reflect a functional approach to social media, where students integrate digital content into their daily lives for convenience, awareness, and occasional entertainment without engaging in deeper emotional or social investment.

While the previous sections have outlined the varying levels of social media engagement across different behavioral dimensions, it is equally important to understand the psychological state of the participants, particularly their experience of stress. The following section summarizes the students' self-reported stress levels based on the Perceived Stress Scale (PSS-10), providing context for interpreting how digital behaviors may relate to emotional well-being. Table 5 presents the descriptive statistics for each stress indicator.

3.5 Perceived Stress Level

Table 5. The Stress level of the respondents.

	INDICATORS	MEAN	SD	DESCRIPTION
	In this month, how often have you:			
1	Have you been upset because of something that happened unexpectedly?	2.01	.22	Sometimes (Average)
2	Did you feel you could not control the crucial things in your life?	1.75	1.14	Sometimes (Average)
3	Did you feel nervous and "stressed"?	1.98	1.07	Sometimes (Average)
4	Have you felt confident about your ability to handle your problems?	2.67	1.06	Fairly Often (High)
5	Did you feel that things were going your way?	2.47	1.08	Fairly Often (High)
6	Found that you could not cope with everything you had to do?	2.00	1.17	Sometimes (Average)
7	Have you been able to control irritations in your life?	2.34	1.05	Sometimes (Average)
8	Did you feel that you were on top of things?	2.28	1.14	Sometimes (Average)
9	Have you been angered because of things that were outside of your control?	1.75	1.14	Sometimes (Average)
10	Have you felt difficulties were piling up so high that you could not overcome them?	1.37	1.04	Almost Never (Low)
	Overall Mean	2.06	0.60	Sometimes (Average)

Note: 0.00-.80=Never (Very Low), 0.81-1.60=Almost Never (Low), 1.61-2.40=Sometimes (Average), 2.41-3.20=Fairly Often (High), 3.21-4.00=Very Often (Very High)

Table 5 summarizes the descriptive statistics for the Perceived Stress Scale (PSS-10) items, capturing how frequently students experienced various stress-related feelings over the past month. The overall mean score was 2.06 (SD = 0.60), corresponding to the "Sometimes (Average)" category, indicating that students generally reported moderate levels of stress.

Among the ten indicators, the highest-rated item was "I felt confident about my ability to handle my problems" (M = 2.67, SD = 1.06), which falls into the "Fairly Often (High)" range and suggests that many students perceive themselves as capable of coping with daily challenges. The second highest endorsement was for "Did you feel that things were going your way?" (M = 2.47, SD = 1.08), also within the "Fairly Often" category, reflecting a generally positive outlook on personal efficacy.

In contrast, the lowest-rated item was "Have you felt difficulties were piling up so high that you could not overcome them?" (M = 1.37, SD = 1.04), in the "Almost Never (Low)" range, indicating that few students experienced overwhelming stress. Other items, such as "Have you been upset because of something that happened unexpectedly?" (M = 2.01, SD = 1.22) and "Found that you could not cope with everything you had to do?" (M = 2.00, SD = 1.17), fell within the "Sometimes (Average)" range, suggesting occasional stressors related to unexpected events or workload.

Taken together, these results portray a student population that encounters moderate, situational stress but generally maintains confidence in their ability to manage it. This profile of perceived stress provides a crucial context for examining how different patterns of social media engagement may relate to students' emotional well-being.

Having described the individual levels of social media engagement and perceived stress, the next step is to examine how these variables relate to one another. To assess whether specific types of social media use are

associated with increased or decreased stress, a Spearman's rho correlation analysis was conducted. Table 6 presents the results, showing the strength and direction of the relationships between each social media dimension and students' perceived stress levels.

3.6 Correlation Between Social Media Use and Perceived Stress

Table 6. Correlation between social media use and students' perceived stress level

		Image-based	Comparison-based	Belief-based	Consumption-based
Stress Level	Spearman's rho	.139**	.233**	.177**	.138**
	p-value	0.007	0.000	0.001	0.007

***. Correlation is significant at the 0.01 level (2-tailed).*

Table 6 displays the results of Spearman's rho correlation analysis, examining the association between each type of social media engagement and students' perceived stress levels. All four engagement dimensions—image-based, comparison-based, belief-based, and consumption-based—showed statistically significant positive correlations with stress at the 0.01 level (2-tailed).

Among the four, comparison-based social media use had the strongest correlation with perceived stress ($r = 0.233$, $p < 0.01$), indicating a modest but statistically significant relationship. This suggests that students who more frequently engaged in comparing themselves to others online tended to report slightly higher levels of perceived stress. Belief-based engagement followed ($r = 0.177$, $p < 0.01$), reflecting a similar trend where increased interaction with value-oriented or ideological content was associated with elevated stress. Image-based ($r = 0.139$, $p < 0.01$) and consumption-based ($r = 0.138$, $p < 0.01$) use also demonstrated weak but statistically significant correlations with stress levels.

Although all correlations were positive, their effect sizes fall within the weak range, suggesting that while social media behavior and stress are related, these behaviors are only one of several possible factors influencing students' psychological well-being. The strength of the relationships implies that social media engagement may contribute to stress in some individuals but is unlikely to be the sole or dominant predictor. These findings provide a statistical foundation for further discussion on how specific digital behaviors may interact with students' coping mechanisms, emotional resilience, and academic pressures. [21]

In summary, the results demonstrate varied patterns of social media engagement among vocational college students, with image-based and consumption-based use being the most frequently practiced, and belief-based use the least. Students generally reported moderate levels of perceived stress, with most indicating confidence in managing daily challenges. Although all four dimensions of social media use were found to be significantly correlated with perceived stress, the strength of these associations was relatively weak. Comparison-based and belief-based engagements showed the strongest correlations, suggesting that evaluative and ideological aspects of digital behavior may have a more noticeable psychological impact than passive content consumption. These findings provide a data-driven basis for exploring the nuanced ways in which social media use relates to emotional well-being in the student population, as discussed in the following section.

4. DISCUSSION

The present study examined the relationship between four types of social media use and perceived stress among vocational college students in China. The findings revealed that while students showed moderate to high engagement in image-based and consumption-based behaviors, they exhibited lower levels of belief-based interaction. Stress levels were generally moderate, with most students reporting confidence in managing daily stressors. Among the four engagement types, comparison-based use had the strongest positive correlation with perceived stress, followed by belief-based use. These results support previous literature suggesting that online social comparison and ideological exposure may be more psychologically taxing than other forms of digital behavior [6, 9, 14]. However, all correlations were relatively weak, indicating that social media is only one of multiple factors influencing stress. These findings reinforce the need to explore how individual differences,

contextual stressors, and platform design may shape the emotional consequences of social media use.

4.1 Social Media Engagement and Psychological Impact

The findings revealed that image-based social media use was common among students, with high levels of agreement reported for posting positive content and feeling satisfied with online feedback. These results suggest that such platforms function as a means of emotional expression and social affirmation. This aligns with earlier studies indicating that engagement metrics like likes and comments can momentarily boost self-perception and mood [11]. However, relatively lower ratings for behaviors such as editing or enhancing photos before posting imply that not all students engage in meticulous self-presentation or aesthetic curation, contrasting with research linking image-focused use to appearance-related anxiety [8], [14].

Despite image-based use showing a statistically significant correlation with perceived stress, the association was weak ($r = 0.139$, $p < 0.01$). This suggests that while students actively engage in visual sharing, this behavior does not constitute a major contributor to stress. Instead, it may represent a normalized aspect of digital interaction that carries limited psychological risk for most users.

Comparison-based social media use yielded the strongest correlation with perceived stress ($r = 0.233$, $p < 0.01$), though the relationship remained modest. Students reported average levels of engagement in this category, with the most endorsed behavior being the use of others' achievements as motivation. This finding is consistent with interpretations that upward social comparisons can promote goal-setting and aspirational thinking under certain conditions [7]. However, even moderate engagement in comparative behaviors has been linked to feelings of inadequacy and elevated stress in prior research, particularly when students are exposed to idealized representations of success [6].

These results indicate that the psychological impact of social media engagement is shaped not only by frequency but also by intention and context. Image-based use may provide temporary gratification without causing significant distress, while comparison-based behaviors may have dual effects—encouraging improvement in some cases while exacerbating emotional strain in others. Understanding this complexity is essential for designing interventions that help students develop healthier relationships with social media.

4.2 Belief-Based Engagement and Cognitive Load

The results showed that belief-based social media use was the least engaged dimension among participants, with an overall mean of 2.60, categorized as "Low." The most frequently endorsed behavior in this dimension was following accounts that align with personal values, suggesting that students prefer to reinforce existing beliefs rather than challenge them. In contrast, indicators involving engagement with disagreeable, upsetting, or controversial content were rated lower, implying that students actively avoid emotionally charged or ideologically confrontational online spaces.

Although the overall engagement in belief-based behaviors was low, a significant positive correlation was observed with perceived stress ($r = 0.177$, $p < 0.01$). This indicates that even infrequent exposure to belief-related content—particularly content that triggers disagreement or moral discomfort—may be linked to increased cognitive strain. Prior studies have suggested that such interactions, even when passive or incidental, can lead to emotional fatigue or mental overload when users encounter views that clash with their values [9].

Importantly, belief-based engagement in this study encompassed both affirming and oppositional behaviors. Some items reflected alignment with the user's values, while others involved engagement with content that contradicted those values. This bidirectional structure introduces nuance in interpreting the results. While affirming content may reinforce identity and provide emotional comfort, opposing content may provoke distress, particularly in sociocultural environments where conformity and group harmony are highly valued [17].

These findings suggest that students may experience belief-based engagement as a source of internal tension, especially when online discourse challenges their worldview. The low frequency of direct engagement with controversial topics, paired with its correlation to stress, supports the idea that students prefer value-affirming digital spaces but may still be psychologically affected by oppositional content when exposed to it.

4.3 Consumption-Based Engagement and Information Overload

Students reported moderate levels of consumption-based social media use, with an overall mean score of 3.38. The most frequently endorsed behavior in this dimension was using social media to read or watch news and current events. This suggests that students view social platforms as practical tools for staying informed, which is consistent with broader trends in digital media use among youth populations [4]. Other common behaviors included watching general video content, browsing without a specific purpose, and discovering new products or services, all of which fall within passive or habitual patterns of engagement.

Despite being a relatively neutral form of interaction, consumption-based use showed a statistically significant but weak correlation with perceived stress ($r = 0.138$, $p < 0.01$). This implies that while these behaviors are not overtly emotional or comparative, they may still contribute to students' cognitive and psychological load. One possible explanation is information overload—the accumulation of excessive and unfiltered content—which has been associated with diminished concentration, decision fatigue, and mental exhaustion [2], [8].

Unlike image-based or comparison-based behaviors, consumption-based use does not inherently demand social validation or emotional investment. However, the constant influx of news, opinions, advertisements, and algorithm-driven content may overwhelm users over time, particularly when consumed without critical filtering. Previous research has shown that passive scrolling and media multitasking can impair focus and elevate stress responses due to the sheer volume of input and lack of cognitive boundaries [12].

These findings suggest that even non-interactive digital behaviors have the potential to affect students' well-being. While students may not perceive content consumption as emotionally demanding, cumulative exposure to information—especially when unmoderated or sensational—can contribute to background stress. Addressing this form of digital engagement may require helping students develop intentional browsing habits and media literacy skills to better manage their cognitive load.

4.4 Perceived Stress and Social Media Engagement

Students in this study reported moderate levels of perceived stress, with an overall mean score of 2.06. The most endorsed indicators reflected confidence in managing problems and a general sense that things were going their way, while the least endorsed item was the perception of being overwhelmed by difficulties. These results suggest that most students experience manageable stress levels and possess functional coping strategies.

Despite this, all four social media engagement dimensions demonstrated statistically significant positive correlations with perceived stress, though the strength of these correlations remained weak. The strongest association was found with comparison-based social media use ($r = 0.233$, $p < 0.01$), followed by belief-based ($r = 0.177$), image-based ($r = 0.139$), and consumption-based use ($r = 0.138$). These findings imply that while social media engagement may influence psychological well-being, it is unlikely to serve as the sole or primary cause of stress.

The elevated correlation with comparison-based behaviors suggests that upward comparisons to curated online portrayals may subtly reinforce feelings of inadequacy or pressure to measure up, particularly in academic and social domains where performance is emphasized. This aligns with earlier findings that exposure to idealized content can contribute to negative self-evaluation and emotional fatigue [6], [12]. Similarly, belief-based use, though practiced less frequently, may contribute to stress through exposure to conflicting views or emotionally provocative content, even when not directly engaged with [9].

Image-based and consumption-based use showed weaker correlations but suggest that even emotionally neutral or passive digital habits may carry cumulative psychological effects. Continuous exposure to content—whether through posting, viewing, or browsing—may increase mental load over time, especially in the absence of digital boundaries or mindful consumption strategies [2], [8].

Overall, the pattern of associations supports the idea that different types of social media use relate to stress in distinct ways. While no single behavior emerged as a dominant predictor of stress, the results indicate that digital engagement can act as a contributing factor within a broader set of academic, personal, and social pressures faced by students.

4.5 Implications for Mental Health Support and Digital Well-Being

The findings of this study carry meaningful implications for mental health support and the promotion of digital well-being among college students. Although

the correlations between social media engagement and perceived stress were weak, their consistent statistical significance across all four dimensions suggests that digital behaviors—especially those involving comparison and ideological content—are relevant contributors to students' emotional experience. As such, even low-level but habitual engagement may produce cumulative stress effects when left unaddressed.

Given that comparison-based use demonstrated the strongest correlation with perceived stress, interventions should include strategies that raise awareness about the effects of upward social comparison and idealized portrayals. Structured workshops or counseling modules that focus on reframing comparisons, building self-compassion, and cultivating realistic self-assessments may help students reduce the psychological toll of social media exposure. These approaches may be especially beneficial in educational contexts where achievement pressures are already high.

For belief-based use, educators and mental health professionals should consider incorporating media literacy programs that help students critically evaluate emotionally charged or value-conflicting content. Teaching students how to manage digital exposure without disengaging entirely can empower them to maintain emotional balance while remaining informed. Digital environments that favor value-affirming interactions while minimizing algorithm-driven confrontation could also reduce unintended stress triggers.

Although image-based and consumption-based engagements showed the weakest associations with stress, they should not be overlooked. These behaviors are often perceived as harmless or routine, yet they may still contribute to background stress through subtle mechanisms such as information overload or attention fatigue. Promoting time-limited platform use, encouraging digital detox practices, and fostering purposeful social media habits may support cognitive health and overall emotional regulation [2], [4], [8].

Institutional support systems can also benefit from integrating digital wellness education into broader student development programs. Counseling services, student affairs offices, and faculty members may collaborate to create safe spaces for dialogue about online pressures, especially within a cultural context where face-saving and self-presentation play significant roles. By framing digital well-being as part of holistic student success, universities can create more supportive environments that recognize the complex interplay between technology use and mental health.

5. CONCLUSION AND RECOMMENDATIONS

This study explored the relationship between four dimensions of social media engagement—image-based, comparison-based, belief-based, and consumption-based—and perceived stress among vocational college students in China. The results indicated that while students reported moderate stress levels and regular engagement with social media, the strength of the correlations between digital behaviors and stress was consistently weak. However, all associations were statistically significant, with comparison-based and belief-based engagement showing the strongest links to perceived stress.

These findings suggest that specific types of social media use, particularly those involving self-evaluation and exposure to ideologically charged content, may contribute to emotional fatigue and psychological tension in subtle but meaningful ways. Image-based and consumption-based use, although more common, appeared less impactful in terms of stress but may still influence mental load over time.

Based on these results, the study recommends the integration of digital wellness strategies into student support services. Mental health interventions should include education on managing comparison-based behaviors and critical engagement with belief-oriented content. Media literacy programs, digital detox strategies, and the promotion of mindful social media use may help reduce stress and support emotional resilience. Institutional efforts to foster awareness about the psychological impacts of social media—framed within culturally relevant contexts—will further contribute to holistic student well-being. [21]

Finally, future research should consider longitudinal or experimental designs to assess causality and changes in digital behavior over time. Expanding the scope to include qualitative insights or the role of individual coping styles may also offer a deeper understanding of how students navigate the digital landscape and its psychological demands.

6.. IMPLICATIONS

The findings of this study offer several implications for educators, mental health practitioners, and institutional policymakers working with college students in digitally connected environments. Although the correlations between social media use and perceived stress were weak, their consistent statistical significance highlights the relevance of digital behavior as a contributing factor to students' emotional well-being.

For educators, these results underscore the importance of integrating digital literacy and wellness content into general education or student development courses. Instruction that promotes critical awareness of online behaviors—such as comparison, emotional reactivity, and passive scrolling—can equip students with tools to recognize stress-inducing patterns and respond constructively.

Mental health practitioners may benefit from using students' social media habits as discussion points in individual or group counseling. Interventions that help students reframe online comparisons, limit exposure to emotionally draining content, and develop healthier digital routines can complement traditional coping strategies.

At the institutional level, the results suggest a need for campus-wide initiatives that promote a balance between digital engagement and mental health. Programs that encourage intentional media use, such as digital detox campaigns or peer-led wellness workshops, can foster a supportive culture around mindful connectivity.

Finally, researchers and policy planners should recognize that the psychological effects of social media are not uniform and may depend on the user's intent, context, and platform-specific features. The modest but consistent links found in this study support a nuanced approach to digital wellness—one that balances access and innovation with the mental health needs of today's students.

Author Contributions: Conceptualization, Y.Y.; Methodology, Y.Y. and P.A.A.; Writing—Original Draft, Y.Y.; Writing—Review & Editing, P.A.A. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: Data is available upon reasonable request from the corresponding authors.

Acknowledgments: Thanks to the student participants and academic mentors who supported this research.

Conflicts of Interest: The authors declare no conflict of interest.

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