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Original Paper

An Analysis of the Mechanism and Optimization Strategies of the Impact of College Students' Social Media Experience on Subjective Well-being

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Abstract

The current academic research on the correlation between social media and subjective well-being exhibits two notable features: On one hand, a large number of empirical studies focus on the impact of usage frequency and problematic usage behaviors on users' psychology; on the other hand, there is still a significant lack of research on the association mechanism between different usage patterns of social media (such as active sharing and passive browsing) and subjective well-being, and the existing conclusions are highly divergent. Based on this research gap, our research team has constructed a multi-dimensional analysis framework to systematically examine the differentiated impacts of different social media usage behavior patterns on users' subjective well-being and their internal mechanisms.

Keywords

Social media, Subjective well-being, Mechanism of influence, Optimization strategies

1. Introduction

In the contemporary digital society, social media has become a significant factor influencing public mental health, and its association with subjective well-being exhibits multi-dimensional complexity. A large number of empirical studies have shown that the use of social platforms can both build social capital by enhancing emotional connections through instant communication and expanding the boundaries of interpersonal networks, providing users with real-time emotional resonance and information support; it may also induce psychological depletion effects, manifested as anxiety states caused by excessive consumption of attention resources, self-cognitive biases resulting from continuous social comparisons, and decision fatigue caused by information overload. With the

widespread use of social media, more and more studies have shown that the use of social media may have an impact on individuals' subjective well-being. Some research indicates that the use of social media can enhance people's social support and communication, thereby improving their subjective well-being. For example, online self-disclosure can increase people's information support and emotional support, while social media also provides people with a broader social circle and increases opportunities for social interaction. However, some studies have shown that the use of social media may bring negative effects to subjective well-being. For instance, excessive use of social media may lead to time waste, anxiety, depression, and other problems; excessive information on social media may cause people to feel pressure and unease because processing this information requires more time and energy. The time and frequency of social media use may also have an impact on subjective well-being. Moreover, different types of social media usage may have different effects on subjective well-being. For example, the subjective well-being resulting from active use of social media (such as: actively posting information and interacting with others), usually leads to greater improvement compared to passive use of social media (such as: browsing others' updates and watching advertisements). In summary, the impact of social media use on subjective well-being is a complex issue, and it may vary depending on individuals and usage methods. How to better utilize social media to enhance individuals' subjective well-being and better understand this impact requires further research on the usage methods of different types of social media and the influence of different individual characteristics on subjective well-being. Therefore, this article aims to study the impact of different social network usage methods and different individual characteristics on subjective well-being, and explore the specific mechanisms involved.

2. The concept Definition

2.1 The active and Passive Use of Social Media

The study of social media interaction behaviors has become an important topic in the digital age. It specifically refers to the entire process in which users utilize modern internet platforms and tools to establish interpersonal connections, share content, and maintain social relationships. Current academic research has gone through three progressive stages: initially focusing on basic usage indicators (such as frequency of visits, duration, and intensity); mid-term shifting to the binary classification of usage patterns (active participation type and passive reception type); and recently deepening to the micro-analysis of specific interaction behaviors (including core dimensions such as self-disclosure and immediate feedback). Active usage emphasizes the role of users as content creators and initiators of interactions, while passive usage is manifested as information consumption and observing behavior. This classification system provides a key analytical framework for understanding the complexity of digital social interactions.

The act of actively participating in social media interactions is defined as an active usage pattern of social platforms. This behavioral characteristic is mainly manifested in aspects such as users'

spontaneous establishment of social connections, creation and sharing of multimedia content (including text and image status updates and short video releases), participation in topic discussions, and real-time communication exchanges. This two-way interaction process actually constitutes a closed-loop system for content production and consumption: while users create original content, they must also continuously receive and process the information feedback from other users. This cognitive interaction is the fundamental requirement for achieving effective social communication.

Passive social media behavior specifically refers to the behavior pattern where users obtain information in a digital social environment in a one-way manner without participating in interaction. This usage method essentially represents a “spectator state” - users acquire information by browsing dynamic updates, consuming visual content, or tracking news feeds, while remaining in a state of zero interaction. This behavior pattern has three core characteristics: Firstly, it manifests as a purely information input process, where users exist solely as content recipients without generating any output; Secondly, it has a covert feature, as users’ browsing trajectories and behavior data such as duration of stay often cannot be detected by other users; Thirdly, it exhibits a non-linear browsing characteristic, where users typically receive aggregated content pushed by platform algorithms in a fragmented manner, rather than targeted information acquisition for specific objects. This one-way information consumption pattern, although reducing social pressure, may lead to negative effects such as social isolation and information overload for users.

In contemporary research on digital social media, scholars commonly employ the binary analysis method to deconstruct user behavior patterns, systematically dividing them into two dimensions: active participation and passive consumption. Empirical studies on the Facebook platform (Gerson et al., 2017) indicate that active usage can be further subdivided into social-oriented interactive behaviors (such as instant messaging and comment interaction) and non-social-oriented content creation behaviors (such as publishing original content); while passive usage mainly manifests as information browsing behavior, including following social circle updates and consuming media content. With the development of the Chinese social media ecosystem, Chen et al. (2019) based on the uniqueness of WeChat, a super application, modified the original scale and constructed a more targeted measurement framework. This model decomposes WeChat usage behavior into four sub-dimensions: the active social dimension (such as initiating private chats, interaction in the WeChat Moments), the active non-social dimension (such as submitting to public accounts, creating video accounts), the passive social dimension (browsing contact dynamic information), and the passive non-social dimension (reading news push, consulting enterprise account information). This classification not only reflects the diversity of social media functions but also reveals the psychological motivations and behavioral characteristics of users in different usage scenarios, providing a reliable theoretical framework and measurement tool for subsequent media effect research.

2.2 The Subjective Well-being

Subjective Well-Being (SWB) serves as a core indicator for measuring an individual's mental health status. Essentially, it reflects the deep-level cognition and evaluation system of human beings regarding the value of their own existence. From the perspective of psychological measurement dimensions, this complex construct comprises two core elements: the first is a cognitive assessment system based on rational judgment, manifested as an individual's overall judgment of life quality; the second is an emotionally reactive system with significant volatility, represented by the alternation between positive and negative emotions. The emotional dimension, due to its high sensitivity to immediate environmental stimuli, often exhibits significant temporal variation characteristics. This dynamic nature makes this indicator exhibit complex measurement characteristics in cross-cultural research.

3. The Social Media and Subjective Well-being

3.1 The Active Social Media Usage and Subjective Well-being

From the perspective of social psychology, the compensatory function of social media has constructed a unique self-realization domain for individuals with social anxiety. Empirical studies based on the social compensation theory framework show that when individuals strategically disclose themselves in the digital space, this mediated interaction not only effectively compensates for the deficiencies of offline social interactions, but also generates significant psychological benefits by establishing deep emotional connections. According to the social compensation hypothesis of network usage, social networks create a platform that enables individuals lacking social confidence to pursue goals and desires that may be difficult to achieve in real life. On this platform, people present themselves through self-representation, not only without weakening interpersonal relationships in reality, but also helping to deepen friendships with others, enhancing individual happiness, and helping them reduce negative emotions such as loneliness, depression, and anxiety. When people actively use social media, they reduce concern about others' opinions of themselves and strive to continuously increase positive self-representation and have intimate and pleasant communication with others, thereby helping to enhance the happiness of users. A meta-analysis indicates that interactions, self-expressions, and entertainment on social networks are associated with better happiness. The results of a longitudinal study of four waves over two years show that higher levels of active social media use lead to a reduction in depressive symptoms among female adolescents. Experimental research has found that posting status updates on Facebook helps participants feel closer to friends every day, thereby reducing loneliness. Therefore, active social media use positively predicts happiness.

3.2 The passive Social Media use and Subjective Well-being

According to social psychology research, when individuals lack objective evaluation criteria, they will use the social comparison mechanism to assess their own viewpoints and abilities. Such comparisons occur not only at the parallel level but also include upward (compared with more outstanding individuals) and downward (compared with poorer individuals) dimensions. The characteristics of

modern social media particularly tend to trigger upward social comparisons because users usually meticulously shape their online image and selectively showcase the highlights of their lives.

According to the social comparison theory, whether it is opinions or abilities, as long as there is no objective physical basis for evaluation, the subjective judgment of the correctness of opinions and the subjective accurate evaluation of one's own abilities depend on how a person compares with others, that is, in the absence of objective, non-social means, people make evaluations of their viewpoints and abilities by comparing their abilities with others, that is, through social comparison, people evaluate themselves. The direction of social comparison is not limited to parallel social comparison but also includes downward social comparison and upward social comparison. Among them, upward social comparison refers to when an individual compares themselves with better people in certain aspects. Because others on social media spend a lot of time optimizing their online self-presentation, disclosing positive emotional experiences, and presenting a better impression of emotional health, when people use social media passively, they constantly pay attention to others' states and tend to compare themselves with others, and most of it is upward social comparison. The cross-lagged structural equation model indicates that passive Facebook use can significantly predict an increase in social comparison levels after 6 months, and is inclined to upward social comparison. Experimental studies have shown that participants who watched others' exciting and thrilling experiences (experimental condition) reported more upward social comparison than those who watched natural landscape documentaries (control condition). Thus, passive social media use is positively correlated with upward social comparison. And upward social comparison also has a negative impact on happiness. Research shows that when one is in an upward social comparison with others, one will experience an unpleasant feeling of being inferior to others. According to the self-enhancement envy spiral model (when users face others' positive self-presentations, they will feel envy, which may lead users to imitate others' more positive self-presentation on social media, creating an additional basis for others to feel envy, forming a vicious cycle, strengthening the positive and false atmosphere on social media, and causing greater risks to the user's happiness over time. When users use social media passively, people do not contact others but only consume the content posted by others, reading status updates, watching pictures, and browsing news sources. Content consumption on social networks is the main way of passive social media use. Analysis shows that consuming social network content is related to poorer well-being; compared with downward comparison and control, upward social comparison has a general negative impact on the self-evaluation, emotions, and subjective well-being of social media users. A longitudinal study found that Facebook use predicts upward social comparison, and over time, it will damage personal self-efficacy and happiness after 4 months. Experimental research found that over time, passive use of Facebook leads to a decrease in emotional well-being; upward social comparison and envy emotions are the causes of loneliness, having a negative impact on subjective well-being.

4. The Research Design

4.1 The Research Method

As a leading online research service platform in China, Questionnaire Star holds a significant market position in the field of data collection. Academic research indicates that questionnaire surveys based on the internet possess notable methodological advantages. They not only can overcome geographical limitations to obtain large sample data, but also can ensure the reliability and validity indicators of the research through standardized questionnaire design processes. According to the discussion in the classic management literature "Methodology of Management Research", the convenient sampling method (Convenience Sampling) is a typical non-probability sampling technique. Its core feature lies in that researchers select individuals who are accessible as the research subjects. Although this method has limitations in statistical inference, it has significant characteristics of being operationally convenient and cost-effective, especially suitable for exploratory research and the initial data collection stage.

A total of 504 valid questionnaires were collected this time. Among them, 259 were from females (51.4%) and 245 were from males (48.9%). In terms of age, the largest number was among those aged 20-23 (41.5%). Regarding educational background, the largest number was among those with a bachelor's degree (55.8%) (see Table 1).

Table 1. The Demographic Characteristics

Variable	Option	Percentage
Age	16 to19 years old	31.0%
	20 to 23 years old	41.5%
	24 to 27 years old	18.8%
	Above 27 years old	8.7%
Gender	Male	48.9%
	Female	51.4%
Education	Junior college	20.4%
	Bachelor	55.8%
	Master	22.0%
	Doctor	1.8%

4.2 The Research Tool

4.2.1 The WeChat Usage Intention Scale

The measurement of active social media usage adopts the WeChat Active Usage Scale developed by Gerson et al. (2017) and revised by Chen and Zhi (2019). It consists of a total of 6 items and 6 dimensions. The dimensions include: active social usage (social interaction) and active non-social

usage (content creation). Active social usage includes 3 measurement items: “Chatting with WeChat friends”, ""Participating in group chat on WeChat”, “Giving likes or comments on friends’ status photos or videos”, etc.; the latter includes 3 measurement items: “Posting status on the WeChat Moments”, “Posting photos on the WeChat Moments”, “Posting videos on the WeChat Moments”. The scale uses a Likert-5-point scoring system, where 1 = never (0% of the time), 2 = rarely (25% of the time), 3 = sometimes (50% of the time), 4 = somewhat frequently (75% of the time), 5 = very frequently (100% of the time). The higher the score, the greater the degree of active social media usage. This scale does not have reverse-scored items. The Cronbach’s α value of the active social media usage measurement in this study is 0.860.

4.2.2 The Overall Subjective Well-being Scale

The measurement of subjective well-being adopts the overall subjective well-being scale developed by Diener (2000) and revised by Yan Shibin (2006). The overall subjective well-being consists of 5 items such as “Please evaluate the degree of happiness/unhappiness you experienced yesterday”. It is scored on a 9-point scale, with the options ranging from ""1 = extremely unhappy” to “9 = extremely happy”. The second question is a reverse-scored question, with higher scores indicating higher levels of well-being. The Cronbach’s α value of this measurement is 0.84.

4.2.3 The WeChat Passive Usage Scale

The measurement of passive social media usage adopts the WeChat Passive Usage Scale developed by Gerson et al. (2017) and revised by Chen and Zhi (2019), consisting of 5 items, divided into two dimensions: passive social usage and passive non-social usage. Passive non-social usage includes two measurement items: “simply viewing the articles of public accounts (excluding likes, comments, and sharing)” and “logging into WeChat to view the updates of public account content”; passive social usage includes three measurement items: “viewing the status of friends’ posts”, “photos or videos (excluding likes, comments)” “logging into WeChat to observe what friends are doing”, and “viewing the friends’ posts (the homepage page of friends)”. This article retains the Likert-5 point scoring system, with 1 = never (0% of the time), 2 = rarely (25% of the time), 3 = sometimes (50% of the time), 4 = somewhat frequently (75% of the time), 5 = very frequently (100% of the time). There are no reverse scoring questions. The Cronbach’s α is 0.89, and the reliability and validity are good.

4.2 The Research Results

This article uses SPSS software to analyze the relationship between social media and subjective well-being.

4.3.1 The Active Social Media Usage and Subjective Well-being

The research on the relationship between active social media usage and subjective well-being is presented in Table 2. As can be seen from Table 2, the coefficient of active social media usage and subjective well-being is 0.54, and it is significant at the 1% level, indicating that active social media usage can positively predict subjective well-being.

Table 2. The Relationship between Active Social Media Usage and Subjective Well-being

Variable	The subjective well-being		
	b	*SE*	*t*
Active social media usage	0.54	0.04	14.46***
Age	0.04	0.05	1.17
Gender	0.05	0.06	1.56
Education	-0.03	0.05	-0.48
R^2		0.30	
F		47.17***	

The college student group can significantly enhance their subjective sense of happiness by actively using social media platforms. This conclusion not only validates the social compensation theory assumption in digital media usage, but also reveals the positive correlation mechanism between online interaction and psychological well-being through empirical data. In-depth analysis shows that when individuals actively participate in social media interactions, they can effectively build a better social relationship network and obtain social recognition through positive self-display strategies, thus forming a positive psychological benefit process. Based on this research, it is suggested that the education authorities should collaborate with family and school forces to carry out systematic measures such as digital literacy education and optimizing campus network culture construction, guiding students to establish a healthy social media usage pattern, and ultimately achieving the educational goal of promoting the mental health development of young people.

The government can introduce relevant policies and regulations, on the basis of protecting users' privacy rights, which can encourage social media platforms to provide more ways and opportunities for users to promote self-expression and social interaction; impose more restrictions and regulations on users, while also giving users more space for free expression.

To effectively strengthen the education management of college students, educational institutions should adopt diversified management strategies, focusing on improving students' digital literacy. They can conduct regular security lectures on network safety, offer elective courses on media literacy, etc., to systematically cultivate students' ability to use social media correctly, enabling them to master key skills such as privacy protection and information discrimination while fully leveraging the positive role of social media in knowledge acquisition and academic communication. Educators should also encourage students to actively share their learning achievements and disseminate positive content in appropriate scenarios, such as professional communities and academic platforms. This guidance can not only enhance students' expression ability but also promote the internalization and practical application of knowledge. Through building a positive interaction mechanism, students can gradually

improve their information processing ability, critical thinking level, and digital collaboration awareness, ultimately achieving a comprehensive improvement in their overall quality.

It is beneficial for families to provide corresponding guidance to their children on using social media. Parents can strengthen communication and interaction with their children, guide them to use social media correctly, understand what they think, do, and say on social media, encourage them to share their thoughts. And they should focus on teaching children how to correctly use the internet for purposeful communication and interaction.

4.3.2 The Passive Social Media Use and Subjective Well-being

The relationship between passive social media usage and subjective well-being is shown in Table 3. From Table 3, it can be seen that the coefficient of passive social media usage and subjective well-being is -0.46, and it is significant at the 1% level, indicating that passive social media usage can negatively predict subjective well-being.

Table 3. The Relationship between Passive Social Media Usage and Subjective Well-being

Variable	The subjective well-being		
	b	*SE*	*t*
Passive social media usage	-0.46	0.07	-11.89***
Age	0.04	0.07	1.15
Gender	0.08	0.03	1.49
Education	-0.02	0.07	-0.19
R^2		0.32	
F		37.68***	

In the contemporary higher education environment, social media has become an integral part of students' daily lives. Research shows that when students passively browse social media content, they are prone to fall into the cognitive trap of "upward social comparison", that is, they tend to compare themselves with those who seem more successful among their peers. Such comparisons are often based on unrealistic reference standards because the personal displays on social platforms are usually carefully curated and deliberately beautified. Long-term negative social comparisons not only undermine an individual's self-identity but also significantly reduce their subjective happiness index, and even trigger mental health problems such as anxiety and depression. To alleviate this phenomenon, it suggests a two-pronged intervention strategy: at the individual level, it should cultivate students' active participation in social media usage habits, and establish more meaningful social connections through real online interactions; at the social level, educators and psychological counseling institutions need to carry out targeted media literacy education to help students develop critical thinking and

rationally view the idealized content display on social media, thereby building a healthier online social ecosystem.

To ensure the orderly operation of the market economy and the healthy development of social psychology, government departments should start from the two dimensions of system construction and cultural guidance: on the one hand, they should improve the market competition supervision system and introduce forward-looking anti-unfair competition regulations, focusing on regulating new scenarios of social comparison such as social media algorithm recommendations, and by setting negative lists for comparison behaviors, improving data compliance audits, etc., to curb vicious social comparisons at the source; on the other hand, they need to build a multi-level social cognition education project, collaborate with academic institutions to develop social comparison psychological assessment tools, embed comparison cognitive courses in the basic education stage, and continuously output the value concept of "differentiated growth" through mainstream media, guiding the public to establish a scientific self-evaluation coordinate system. This comprehensive governance requires the establishment of a social mentality monitoring and early warning mechanism. When a specific group shows abnormal anxiety index for comparison, it should timely start psychological intervention and employment counseling and other precise services.

Schools should also expand the educational management approaches for students, by conducting ideological education and psychological counseling activities, helping students establish healthy self-awareness and self-values, and avoiding blind pursuit of certain aspects of comparison; for students' different characteristics and needs, it should implement personalized education plans, provide diversified courses and activities, reduce single-standard comparison and competition, and at the same time encourage students to develop their own strengths and interests, and enhance self-confidence and self-worth.

Family members should establish close relationships and a trusting family atmosphere, reduce excessive comparison with other individuals for children; parents should pay more attention to their children's inner qualities and abilities, guide children to use comparison goals as a driving force for progress, enhance the assimilation effect of upward social comparison, and weaken the contrast effect.

5. The Conclusion

This study is based on theories such as transpersonal communication theory, self-determination theory, social capital theory, interpersonal interaction model, social comparison theory, and optimistic explanatory style theory. It combines cross-sectional research to explore the mechanism of the effect of social media usage on subjective well-being. The main conclusions are as follows: Active social media usage positively predicts subjective well-being. The higher the frequency of users' active social media usage, the higher the corresponding level of subjective well-being. Passive usage negatively predicts well-being. The higher the frequency of users' passive usage, the lower the corresponding level of well-being

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