# Research on Social Media Fatigue Under the Development of Computer and Big Data Crawling Technology Based on SPSS26

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Keywords: Computer Technology, Mobile Communication Technology, Social Media Fatigue, Self-Pleasure Consumption, Future Self-Continuity, Future Economic Mobility Perception, Moderated Mediation, SPSS26.

Abstract: The rapid development of computer technology and big data crawler technology has brought convenience to our lives, but also produced many negative effects. Based on the analysis of 355 sample data using SPSS26, this research focuses on the influence of social media fatigue on consumption of self-consciousness, taking social media fatigue, future self-continuity, and perception of future economic mobility as independent variables, and willingness of self-satisfied consumption as the dependent variable. Correlation analysis and variance analysis were carried out; and model analysis was used to verify the moderating role of social media fatigue in the impact of future economic mobility perception on the willingness of self-satisfied consumption. The results show that with the increase of social media fatigue, the willingness of self-satisfied consumption shows a U-shaped curve change. Social media fatigue has a significant moderating role in the impact of future economic mobility perception on self-satisfaction consumption. Finally, a final data analysis report is made for the study, and the possible reasons for this research result are further discussed.

## 1 INTRODUCTION

With the continuous development of computer technology and new media big data crawler technology, people are increasingly enjoying the convenience brought by the achievements of information technology, such as contact with relatives, discussion with colleagues, and emotional interaction with friends, etc. But at the same time, the sheer volume of information creates a negative psychological burden known as social media fatigue (also known as social media burnout). Social media fatigue is a negative emotion derived from social network activities, such as fatigue, boredom, boredom and indifference (Zhang et al., 2016); when conducting social activities through social media, people usually take their own and when others compare in certain aspects, once the results of the comparison with others tend to be negative, it may lead to individuals' disapproval of themselves or cognitive biases towards themselves, and users are prone to negative emotions (Xie et al., 2015); when an individual is inconsistent with his actual self and his ideal self, he or she will have a tendency to eliminate or alleviate this self-difference, so as to help by purchasing certain products or services (compensatory consumption behavior). Oneself reduce this self-difference (Gronmo, 1997).

In addition to changes in the use of social media, the consumption patterns that are closely related to our daily lives are also changing with the changes in society. In the traditional consumption form, people will pay more attention to the practical value of the purchased goods. We often say that the quality and low price, economical benefits, etc., all reflect this traditional consumption concept. With the changes of the times and the continuous change of thinking, the consumption concept of contemporary people is slowly moving towards diluting the "practical value" inherent in commodities, and turning to pay more attention to the additional goods that can bring us inner satisfaction. The development of the "spiritual value" of feeling, that is, the transformation to the mode of "self-satisfied consumption".

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With regard to the emergence and development of the trend of "pleasant consumption", many scholars in the industry are also doing research in various aspects: some scholars put forward the evolution of contemporary consumption patterns from the perspective of social and cultural evolution, and the consumption patterns of traditional agricultural society are reflected in a kind of thrifty-led consumption, the consumption mode of modern industrial society is reflected in a kind of accumulation-led consumption, and the consumption mode of contemporary society shows the development trend of leisure, stylization and aesthetics (Zhu, 2009); some scholars have proposed from the perspective of different social groups that the main body of "self-pleasant consumption" is single or group young people, who lack the company of their partners or parents, and spend money to buy "spiritual sustenance" has become the focus of consumption (Li, 2021); there are also scholars who have explored the causes of the phenomenon of self-pleasant consumption from the perspective of the single group, and proposed that the single group has higher requirements for the quality of life, likes new things, has avant-garde consumption concepts, strong independence, and pursues consumer goods with very individual characteristics (Wu, 2020); some scholars put forward from the perspective of the trend of consumption development that there are four major consumption trends: spending money to buy convenience, spending money to please oneself, spending money to buy sustenance, and spending money to buy the future. Among them, whether spending money to please oneself or spending money to buy sustenance is the main reason for the rise of self-satisfied consumption (Bai, 2021); some scholars have classified the self-satisfied consumption according to different types of goods or services. At present, in our country, "self-satisfied consumption" can be roughly divided into two types: "immediate self-satisfied consumption" and "development-type self-satisfied consumption". "Instant self-satisfied consumption" refers to the purchase of fast-moving consumer goods, broadening horizons, and realizing short-term pleasures (such as massage, beauty, etc.). "Development-oriented self-satisfied consumption" refers to purchasing durable consumer goods, learning new skills, investing in health, and enriching the spiritual world (Zhou, 2019).

There are many factors that affect our consumption habits, including personal income level, social culture, personal preferences, etc. In addition, a very important psychological trait of the self will also have a certain impact on our consumption decisions, that is Future Self Continuity. Self-continuity refers to the continuous self-perception of the past, present and future that an individual can be aware of with the present as the time baseline, that is, the degree of oneness that an individual is aware of in the time dimension (Chandler, 1994). Future self continuity refers to the degree of consistency between the present and future self. Because there are many types of consumption, sometimes our consumption is for our current living needs, and some consumption is a kind of intertemporal consumption planned for our future. The perception of time discount is the most important manifestation of the influence of future self-continuity on intertemporal decision-making. Time discounting refers to the tendency of individuals to give greater weight to current gains and losses and less weight to future gains and losses. In the future, the self strives for more benefits and is more patient in terms of time gains, thus perceiving a lower time discount (Able et al., 2015). Hershfield's research found that individuals with high future self-continuity save more for the future (Hershfield, 2009). Individuals with high future self-continuity show less consumption behaviors that focus only on the present and not the future, and are more able to reduce current spending, while allocating savings to future expenses that may be involved (Van Gelder et al., 2015);

In addition to future self-continuity, there is another psychological trait that is closely related to our future economic expectations-the perception of future economic mobility, which also has a certain impact on our consumption decisions. Perception of economic mobility is a derived concept, derived from the concept of social mobility, which expresses the extent to which individuals believe that they can improve their socioeconomic status in the current social environment (Davidai & Gilovich, 2015); people with high levels of economic mobility believe that as long as they work hard, they can improve their economic strength in the current social environment and achieve the financial achievements they want, while people with low levels of economic mobility will think that it is difficult for them to improve their economic status in the current social environment through their own efforts; research related to consumption shows that individuals with high perception of economic mobility, high level of perception of economic mobility, will Greatly reduces impulsive buying behavior (Yoon & Kim, 2016).

At present, although there are more and more researches on "pleasure consumption" in the industry, there are still few studies on the quantifiable and predictable factors that affect the consumption subjective point of view. Based on this, this study

revolves around the future self-continuity, the perception of future economic mobility, and social media fatigue, the impact on self-consumption, and through a large number of data collection and a series of statistical analysis, correlation analysis, variance analysis of all data Analysis and regression analysis to reveal a predictable relationship between them, so as to provide corresponding suggestions and references for our future more reasonable consumption behavior and healthier lifestyle.

# 2 RESEARCH OBJECTS AND METHODS

## 2.1 Research Objects

From October 29, 2021 to November 24, 2021, a total of 400 sample data from 128 cities across the country were collected through the Credamo platform for a fee, and 35 invalid sample data were deleted according to the answering time and verification questions, and the final valid data totaled 355.

## 2.2 Methods

### 2.2.1 Demographic Variables

Three demographic variables were designed in the questionnaire, namely gender, date of birth, and marital status. The specific sample distribution data are shown in the following table:

Table 1: Description of demographic information

| Demographic variables | Sample classification | Number of samples |
|---|---|---|
| Gender | Male | 165 |
| | Female | 190 |
| Marital status | Married | 184 |
| | Unmarried | 171 |
| Age | 26-30 | 51 |
| | 31-35 | 229 |
| | 36-43 | 75 |

### 2.2.2 Self-satisfied Consumption Questionnaire

The Pleasure Consumption Questionnaire adopt the questionnaire from a dissertation of Beijing Normal University, "The Influence of Future Self Continuity on Pleasure to Consume: The Mediating Role of Self-regulation Fatigue" (Huang, 2020). The questionnaire consists of 9 items, with 5 points The scoring method is used to measure, and the average score of the total score of the questionnaire is used as the willingness of self-satisfied consumption. The Cronbach α coefficient is 0.81, which has good internal consistency reliability.

### 2.2.3 Future Self Continuity Scale

The Future Self Continuity Scale used the Future Self Continuity Scale compiled by Hershified et al. (2009). The scale has a total of four dimensions, namely similarity, closeness, concern and liking, with a total of 4 items. In terms of similarity and closeness, subjects need to choose from 7 pictures that overlap with two circles to varying degrees. The higher the degree of overlap, the stronger the continuity of future self. The caring and liking dimensions are evaluated on a 7-point scale. assessment by this scale. The internal consistency coefficient of the scale is 0.79, and it is widely used in the measurement of future self-continuity measurement breadth. Cronbach α coefficient is 0.72, which has good internal consistency reliability.

### 2.2.4 Future Economic Mobility Perception Questionnaire

Using a 2-item bipolar scale (0 = "My future economic status depends on the external environment," and 10 = "My future economic status depends on my own efforts"; 0 = "My future economic status depends mainly on my origin," and 10 = "My future economic status mainly depends on what I do currently") and take the average score as an index for subsequent data analysis (Yoon & Kim, 2016).

### 2.2.5 Social Media Fatigue Questionnaire

The social media fatigue scale adopts the scale jointly compiled by S. Zhang, Y. Shen, T. Xin, H. Sun, Y. Wang, X. Zhang, & S. Ren (2021), The scale contains a total of 15 questions, and is measured by a seven-point scoring method. The average score is used as the social media fatigue score. The McDonald Omega coefficient is 0.83, which has high reliability.

### 2.2.6 Statistical Methods

Based on SPSS26, statistical data were analyzed by correlation analysis, independent sample T test, variance analysis, regression analysis and so on. Moderated mediating effects were tested using the

Process3.4 plug-in written by Andrew F. Hayes, and $p<0.05$ was considered statistically significant.

# 3 RESULTS

## 3.1 Common Method Bias Control and Testing

Based on research data collected using questionnaires, results may be affected by common method bias. The first factor explained 24.289% of the variance, which was less than 40% of the previous recommendation. Therefore, there is no serious common method bias in this study.

## 3.2 Descriptive Statistics and Correlation Analysis of Each Variable

The descriptive statistics as Table 2 shows: the total number of samples is 355, the average value of Self-satisfied Consumption of the total sample is 3.79, the standard deviation is 0.43, the average value of Perception of Future Economic Mobility is 6.92, the standard deviation is 1.9738, the average value of future self continuity is 5.24, the standard deviation is 0.72, the average value of Social Media Fatigue is 3.28, the standard deviation is 1.24.

Table 2: Self-satisfied consumption, perception of future economic mobility, future self-continuity, social media fatigue descriptive statistics

| Descriptive statistics | | | |
|---|---|---|---|
| | N | M | SD |
| Self-satisfied Consumption | 355 | 3.7871 | 0.43486 |
| Perception of future economic mobility | 355 | 6.918 | 1.9738 |
| Future self-continuity | 355 | 5.2429 | 0.71549 |
| Social media fatigue | 355 | 3.2752 | 1.23560 |
| Number of Samples | 355 | | |

The correlation analysis of Self-satisfied Consumption, Perception of Future Economic Mobility, Future Self-continuity, and Social Media Fatigue as Table 3 shows: except Self-satisfied Consumption and Social Media Fatigue, all other variables are significantly correlated with each other.

Table 3: Correlation analysis of self-satisfied consumption, perception of future economic mobility, future self-continuity, and social media fatigue

| Correlation | | | | | |
|---|---|---|---|---|---|
| | | self-satisfied Consumption | erception of future economic mobility | future self-continuity | social media fatigue |
| self-satisfied Consumption | | - | | | |
| Perception of future economic mobility | Pearson correlation Index | .162** | - | | |
| | Sig.（double tail） | 0.002 | | | |
| future self-continuity | Pearson correlation Index | .221** | .296** | - | |
| | Sig.（double tail） | 0.000 | 0.000 | | |
| social media fatigue | Pearson correlation Index | -0.012 | -.182** | -.124* | - |
| | Sig.（double tail） | 0.823 | 0.001 | 0.020 | |

**. The correlation is significant at the 0.01 level (two-tailed)
*. The correlation is significant at the 0.05 level (two-tailed)

## 3.3 Social Media Fatigue Group ANOVA Test

It can be seen from Table 3 that there is no linear correlation between social media fatigue and self-love consumption. According to the social media fatigue score, high, medium and low groups are used to test the difference in the impact of social media fatigue on self-love consumption between groups. The group comparison is shown in Table 4.

Table 4: The score statistics of the self-satisfied consumption questionnaire grouped by social media fatigue

| Self-satisfied Consumption Questionnaire | Grouped by Social Media Fatigue | |
|---|---|---|
| (5-point scale, 1-5 points) | Group | M（SD） |
| When consuming, I try to please myself as much as I can. | Low | 4.1（0.866） |
| | Middle | 4.2（0.794） |
| | High | 4.17（0.696） |
| It doesn't matter to me to improve my quality of life by purchasing a certain product/service. | Low | 2.46（1.221） |
| | Middle | 2.15（1.057） |
| | High | 2.33（1.201） |
| If a product/service makes me feel positive physically or mentally, I'm willing to buy it, even if it's slightly more expensive. | Low | 4.15（0.82） |
| | Middle | 4.26（0.803） |
| | High | 4.25（0.76） |
| I buy a product/service simply because it improves my well-being. | Low | 3.73（1.029） |
| | Middle | 3.81（1.063） |
| | High | 3.85（0.815） |

| | | |
|---|---|---|
| If a product/service makes me feel comfortable and satisfied, I'm willing to buy it, even if it's slightly more expensive. | Low | 4.23（0.801） |
| | Middle | 4.25（0.745） |
| | High | 4.3（0.672） |
| In everyday consumption, the value of a product/service I buy is up to me to judge. | Low | 4.5（0.564） |
| | Middle | 4.5（0.728） |
| | High | 4.48（0.594） |
| If a product/service can improve and develop for me, I'm willing to buy it even if it's slightly more expensive. | Low | 4.39（0.732） |
| | Middle | 4.32（0.68） |
| | High | 4.38（0.635） |
| When consuming, "other people's suggestions or social evaluation criteria" are more important to me than "I like it". | Low | 2.51（1.093） |
| | Middle | 2.48（1.19） |
| | High | 2.51（1.164） |
| I will buy a certain product/service just because it is a pleasurable experience for me. | Low | 3.7（1.034） |
| | Middle | 3.74（1.072） |
| | High | 3.81（0.938） |

Grouped by social media fatigue (there are 112 samples in the low group, and the average score of social media is 1.96; there are 116 samples in the middle group, and the average score of social media fatigue is 3.17; there are 117 samples in the high group, and the average score of social media fatigue is 4.75). The average score value is on the abscissa, and the corresponding average consumption value is on the ordinate. Figure 1 is drawn, as shown below. It can be seen that the social media fatigue low group and high group have higher consumption levels than the social media fatigue medium group. The influence of media fatigue on the willingness of self-satisfied consumption presents a U-shaped curve.

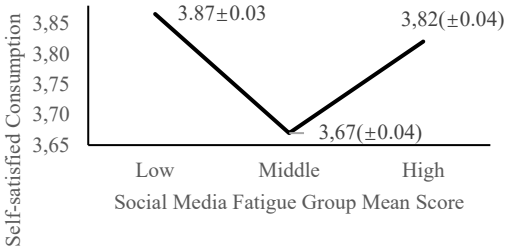


Figure 1: The U-shaped curve relationship between social media fatigue and self-satisfied consumption

## 3.4 Mediating Effect of Perceived Future Economic Mobility Verification

On the basis of the above-mentioned correlation analysis on future self-continuity, future economic mobility perception, self-satisfied consumption and social media fatigue, adopt SPSS-process3.4 written by Hayes, select model 14, take future self-continuity as Variables, self-satisfied consumption as the dependent variable, future economic mobility perception as the mediator variable, and social media fatigue as the moderator variable, the relationships of the variables is shown as Figure 2, the Bootstrap method (Preacher & Hayes, 2008) (repetitive sampling 5000 times) was used to test the moderating effect of the mediator.

The results are as follows:

The future self-continuity has a significant positive predictive effect on the willingness of self-satisfied consumption (B=0.13, SE=0.03, t=3.84, p<0.001),

Future self-continuity has a significant positive predictive effect on future economic liquidity perception (B=0.82, SE=0.14, t=5.83, p<0.001),

The perception of future economic mobility has a significant positive predictive effect on the willingness of self-satisfied consumption (B=0.02, SE=0.01, t=1.98, p<0.05),

The mediating effect of the perception of future economic mobility in the effect of future self-continuity on the willingness of self-satisfied consumption is 0.016, and the 95% confidence interval [0.0026, 0.0381] does not include 0, indicating that perception of future economic mobility plays a role in the future self-continuity and self-satisfied consumption. There is a significant partial mediation effect between them.

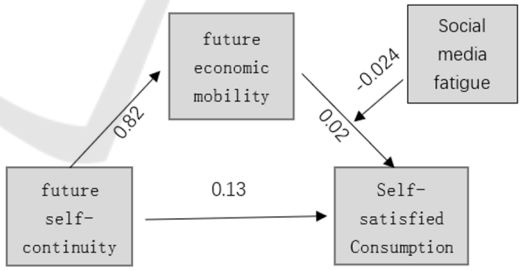


Figure 2: Mediating model of future economic mobility moderated by social media fatigue

Taking social media fatigue as a moderating variable, the moderating effect test was carried out on the impact of future economic mobility perception on self-satisfied consumption. The results showed that the interaction between future economic mobility perception and social media fatigue was significant (B=0.027, p<0.01), It shows that social media fatigue has a moderating effect on the perceived self-gratification consumption of future economic mobility. The moderating coefficient is B=-0.024, and

the 95% confidence interval is [-0.0448, -0.0070], and the interval does not include 0.

According to the slope test (Figure 3), for the high social media fatigue group (M+1SD), the impact of future economic mobility perception on self-gratification consumption is not significant (B=-0.12, 95%CI=[-0.0462,0.0238]) , for people with low social media fatigue (M-1SD), the perception of future economic mobility has a significant positive impact on self-satisfied consumption (B=0.06, 95%CI=[0.0226,0.0814]).

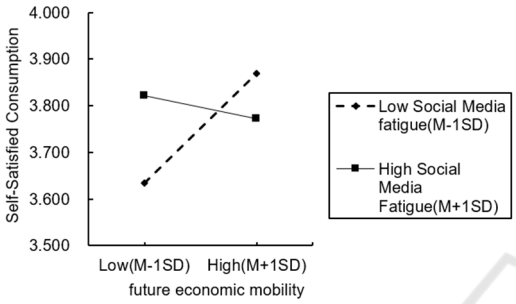


Figure 3: Social media fatigue adjustment renderings

## 4 CONCLUSIONS

The results of this study show that future self-continuity and future economic mobility perception can significantly and positively predict the willingness of self-satisfied consumption. The continuity of the future self reflects the closeness of the relationship between the present self and the future self. Therefore, people with strong self-continuity in the future will reduce the time discount effect, so as to invest their own economic resources more reasonably for the present and the future. In this way, people will be more willing to invest in themselves to expect better future development, so this leads to an increase in the willingness of self-satisfied consumption. The mobility of the future economy often represents an attribute of people's control over their future economic status in society. The higher the future economic mobility, the stronger the sense of control over the future self-economic capacity, and the more optimistic expectations for the future economic capacity. People with higher economic mobility in the future are more inclined to reduce their savings and increase their investment propensity. Therefore, the perception of future economic mobility positively predicts their willingness of self-satisfied consumption.

The perception of future economic mobility plays a partial mediating role in the impact of future self-continuity on self-satisfied consumption. It can be seen that the subjective understanding of the close relationship between the current self and the future self can positively predict the future self's control over one's own economic status, thereby affecting the willingness of self-satisfied consumption.

There is no linear correlation between social media fatigue and self-satisfaction consumption, but with the increase of social media fatigue, self-satisfaction consumption shows a U-shaped curve change trend. Compared with the low social media fatigue group and the high social media fatigue group, people with moderate social media fatigue showed higher willingness of self-satisfied consumption. To understand the reasons for this phenomenon, it may be necessary to further distinguish the social status of the two groups in their respective living areas, as well as the specific types of self-satisfied consumption, people with low social media fatigue, or because of their education level or strong self-control and self-discipline, who have stronger control over all aspects of their own life, so they are better at investing in their future development, their own health, etc.; people with high social media fatigue, or because they have insufficient control over their lives, often use instant enjoyment consumption to alleviate the corresponding negative emotions. Being able to figure out the reasons for this phenomenon may be able to help and guide people to reasonably alleviate the negative emotions caused by social media, and to a certain extent, guide everyone to consume more rationally and scientifically. At the same time, the results also show that in the low social media fatigue group, social media fatigue has a significant moderating effect on the impact of future economic mobility perception on self-satisfaction consumption, while in the high social media fatigue group, this relationship does not apply.

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