

# Exploring the Effects of Overload and Stress Factors on WeChat Moments Users' Discontinuous Usage Intention: an SSO Perspective

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**Abstract.** This study explores the factors that contribute to social media fatigue and how it affects users' intentions to stop regularly using their WeChat Moments. The findings demonstrate that information overload, social overload, system feature overload, and upward social comparison (stressors) impact social media fatigue (Strain) and ultimately impact the decision to discontinue using WeChat Moments. Social media fatigue acts as a buffer between the stressors of social interaction and the outcome. Users who bear the pressure of the opinion leader role and have low clustering coefficients in the ego network are more likely to express the desire to discontinue using WeChat Moments.

## 1 Introduction

WeChat social networking was initially known as "acquaintance social networking", but in the development and application process, more strangers are becoming WeChat contacts, and the overload of information and social pressure erodes people's time and energy.

There is no doubt that the negative impact of social media and users' reactions caused by its negative impact has received the attention of the academic field.

Most negative social media usage investigations have focused on Facebook and Twitter, and there are currently fewer studies on discontinuing WeChat Moments. In addition, the antecedents of current research also focus on

overload and stress factors, and it remains to be explored whether an individual's position and influence in social networks impact the intention to discontinue the use of their Moments.

## 2 Research model and hypotheses

The stressor-coping response-outcome models adopted considering the literature mentioned above analysis. We incorporate these variables in the model as controls as the user's gender, age, and prior usage of social media may have an impact on how they make use of such platforms. This is shown in Figure 1.

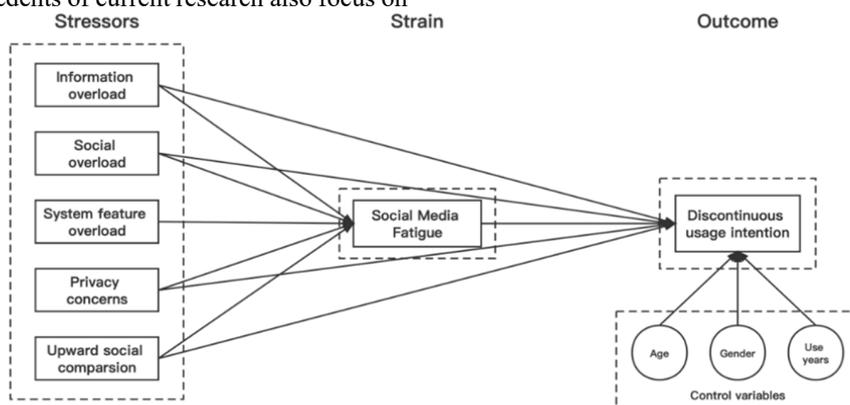


Figure 1 Research model[Owner-draw]

### 2.1 Effects of overload and stress on social media fatigue

Information, social, and system feature overload are the

three latitudes of the overloadability factor. At the same time, Information overload describes invasive information on social media that is more than what a person can handle and comprehend at one time and beyond their cognitive capacity. Users find it more challenging to access crucial

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and relevant information due to the mixed information in their WeChat Moments and the frequent photo, text, and video updates.

McCarthy and Saegert first proposed the social psychology notion of "social overload" It primarily refers to scenarios in which individuals respond to the numerous social support demands imposed by internet relationships.(Karr-Wisniewski & Lu, 2010; Maier et al., 2015)[1][2] The effectiveness of human decision-making is impacted by information overload. Social media may be considered virtual online communities where social overload also exists.(Sun et al., 2018)[3] Users of WeChat Moments may appear to be passively browsing their friends even though they are not actively engaging in interactions. They are more prone to experience loneliness and anxiety, leading to social media fatigue. This is due to the rapid growth of weakly related contacts in the Moments. When leading social network service providers introduce additional features to draw subscribers, this is referred to as "system feature overload." While adding new features has the ability to enhance the distinctiveness and productivity of social media programs, having too many features can exhaust users and cause anxiety.(Thompson et al., 2005)[4] Users' information intake and danger of information overload will increase since they will need to put in more time and effort to learn how to use these new capabilities.

H1a: social media fatigue is strongly correlated with information overload

H1b: information overload is positively associated with WeChat Moments discontinuous usage intention

H2a: social media fatigue is strongly correlated with social overload

H2b: social overload is positively associated with WeChat Moments discontinuous usage intention

H3a: social media fatigue is strongly correlated with system function overload

H3b: system feature overload is positively associated with WeChat Moments discontinuous usage intention

Stress factors were derived from privacy concerns and upward social comparison.(Liu Luchuan et al., 2017)[5] Privacy concerns span a wide range of IS-related topics. For instance, people's attitudes and behaviors in instant messaging and electronic health records may be influenced by privacy concerns.(Angst & Agarwal, 2009; Lowry et al., 2011)[6][7] Note that social comparison is more common in social phenomena. The emergence of social media has broadened the ground of social comparison from offline to online, and more and more social comparisons occur on SNSs. Social comparisons are divided into parallel comparisons, upward comparisons, and downward comparisons. Users of SNSs tend to post more positive posts, so comparisons on social networks mainly involve upward social comparisons(Vogel et al., 2015)[8] and upward social comparisons on social networks can negatively affect individuals' mental health.(Jang et al., 2016)[9]

H4a: privacy concerns are positively related to social medial fatigue

H4b: privacy concerns are positively associated with moment discontinuous usage intention

H5a: upward social comparison is positively related to social medial fatigue

H5b: upward social comparison is positively associated with moment discontinuous usage intention

## **2.2 Effects of social media fatigue on discontinuous usage intention**

Psychological research have shown that psychological fatigue lowers performance and engagement and has a detrimental effect on a person's ability to exert continuous effort. People utilize behavioral or emotional coping methods to lessen or avoid these negative experiences when they are stressed. A user's tendency to use or withdraw from social networks may eventually decline as the degree of social network fatigue increases from a transient or mild experience to a deep one.(Liu & Guo, 2017)[10] Social network fatigue and dissatisfaction are brought on by perceived overload, which leads to plans to discontinue using them.(Vanderhaegen et al., 2020)[11]

H6: Social media fatigue is positively related to WeChat moments discontinuous usage intention

Social media fatigue mediates between social overload and social media discontinuance intention by influencing emotional exhaustion. Privacy concerns influence users' intention to use social media persistently by affecting the emotion of worry, which plays a mediating role. Additionally, Niu Jing et al. confirmed the mediating effects of social overload, privacy concerns, information overload, and upward social comparison, and discovered that all these factors—aside from upward social comparison—positively influenced the intention to avoid using social media regularly.(Niu Jing & Chang Mingzhi, 2018)[12]

H7: Social media fatigue mediates the relationship between information overload and WeChat Moments discontinuous usage intention

H8: Social media fatigue mediates the relationship between social overload and WeChat Moments discontinuous usage intention

H9: Social media fatigue mediates the relationship between system feature overload and WeChat Moments discontinuous usage intention

H10: Social media fatigue mediates the relationship between privacy concerns and WeChat Moments discontinuous usage intention

H11: Social media fatigue mediates the relationship between upward social comparison and WeChat Moments discontinuous usage intention

## **3 Sample and data collection**

WeChat users served as the research subjects for this study, while the Questionnaire Star platform was used to distribute the questionnaire. The online survey could only be completed once per respondent.

508 valid responses—a pass percentage of 88.19% — were left after we eliminated 68 ineffective ones. In the sample, there were 360 females (70.87%) and 148 males (29.13%). Most respondents had a bachelor's degree and were between 18 and 25. A total of 201 participants

(39.57%) said they had been in their WeChat Moments for over 6 years. Approximately three-quarters of participants (n = 445; 87.60%) said they used Moments for no more than two hours each day.

#### 4.1 Measurement model

Structural equation models were utilized to assess the study framework, and SPSS 26.0 was used to conduct reliability studies and confirm factor analyses on the factor loadings in the structural equation models.

### 4 Data analysis and results

**Table 1.** Reliability and convergent validity analysis[Owner-draw]

Factor	Item	Standardized	Cronbach's alpha	CR	AVE
Information overload	IO1	0.985	0.989	0.990	0.960
	IO2	0.979			
	IO3	0.974			
	IO4	0.981			
Social overload	SO1	0.984	0.992	0.992	0.968
	SO2	0.984			
	SO3	0.987			
	SO4	0.981			
System feature overload	SFO1	0.978	0.993	0.993	0.972
	SFO2	0.986			
	SFO3	0.991			
	SFO4	0.988			
Privacy concerns	PC1	0.990	0.995	0.995	0.978
	PC2	0.991			
	PC3	0.988			
	PC4	0.988			
Upward social comparison	USC1	0.988	0.992	0.992	0.975
	USC2	0.989			
	USC3	0.986			
Social media fatigue	SMF1	0.988	0.992	0.992	0.970
	SMF2	0.987			
	SMF3	0.987			
	SMF4	0.977			
Discontinuous usage intention	DUI1	0.984	0.986	0.986	0.947
	DUI2	0.966			
	DUI3	0.968			
	DUI4	0.974			

Reliability analysis: All the factors satisfied the reliability standards, which suggests that the questionnaire reliability indices were more satisfactory.

Validity analysis: To determine if the model has strong convergent validity, the combined reliability (CR) and average variance extracted (AVE) were computed using the Fornell and Larcker technique. Strong convergent validity was demonstrated by Fornell & Bookstein and

Fornell & Larcker, who established standards of 0.7 and 0.5, respectively.(Fornell & Bookstein, 1982; Fornell & Larcker, 1981)[13][14]

The study's measurements are thought to have excellent discriminant validity if the square root of AVE is higher than the correlation coefficient.(Fornell & Larcker, 1981)[14]

**Table 2.** Discriminant validity analysis[Owner-draw]

	IO	SO	SFO	PC	USC	SMF	DUI
IO	0.980						
SO	0.977	0.984					

SFO	0.9 77	0.9 68	0.9 86				
PC	0.9 70	0.9 59	0.9 76	0.9 89			
USC	0.9 66	0.9 54	0.9 64	0.9 60	0.9 88		
SMF	0.9 76	0.9 68	0.9 75	0.9 64	0.9 59	0.9 85	
DUI	0.9 78	0.9 69	0.9 74	0.9 65	0.9 62	0.9 81	0.9 73

The bold numbers on the diagonal line are the square root value of AVE.

Overall, the reliability tests for the questionnaire measures were positive.

### 4.2 Structural model

As Figure 2, social media fatigue was positively impacted by information overload, social media overload, and system feature overload., supporting H1a, H2a, and H3a. The only factor that positively affects the desire to discontinue using Moments is information overload,

which is consistent with the H1b hypothesis. Social overload, system function overload, privacy concerns, and upward social comparisons have little to no impact on this intention. H2b, H3b, H4b, and H5b are all false. Privacy concerns and upward social comparison had no significant effect on social media fatigue, supporting H4a, H5a, and social media fatigue was positively associated with discontinuous usage intention, supporting H6.

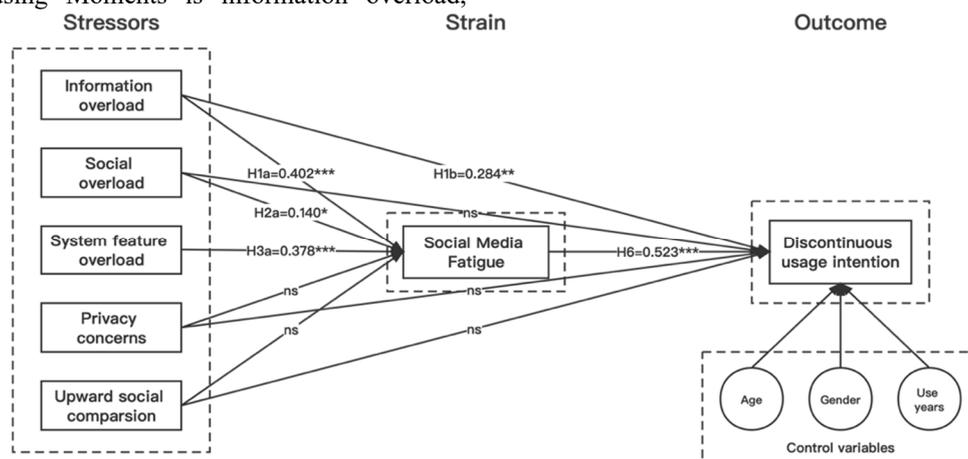


Figure 2 Research model results[Owner-draw]

ns: not statistically significant; \*:  $p < 0.05$ ; \*\*:  $p < 0.01$ ; \*\*\*:  $p < 0.001$ .

### 4.3 Mediation analysis

Regression analysis could be used to assess the mediating effect. Table 3 displays the bootstrap technique mediating effect analysis in SPSSAU, illustrating the mediating influence of SMF on stressors and results.

Information overload and the discontinuous usage intention are both mediated by social media fatigue, supporting research hypothesis H7.

Social overload and the discontinuous usage intention are both mediated by social media fatigue, supporting research hypothesis H8.

System feature overload and the discontinuous usage intention are both mediated by social media fatigue, supporting research hypothesis H9.

Upward social comparison and the discontinuous usage intention are both mediated by social media fatigue, supporting research hypothesis H11.

The study hypothesis H10 was incorrect because social media fatigue did not mediate the association between privacy concern and intention to discontinue usage.

Table 3. Results of the mediation analysis[Owner-draw]

Independent variables	Relationship	Direct Effect	Specific indirect effect	Boot St. error	95% Bias-corrected bootstrap CI	Mediation Effect
IO	IO→SMF→DUI	0.223**	0.353**	0.036	[0.070, 0.213]	Partial mediation
SO	SO→SMF→DUI	0.082*	0.152**	0.025	[0.024, 0.123]	Partial mediation

SFO	SFO→SMF→DUI	0.115**	0.248**	0.035	[0.080, 0.221]	Partial mediation
PC	PC→SMF→DUI	0.035	0.057	0.023	[-0.020, 0.067]	None
USC	USC→SMF→DUI	0.089**	0.127**	0.021	[0.003, 0.085]	Partial mediation

\*: P < 0.05, \*\*: P < 0.01

#### 4.4 Discontinuous usage intention prediction

We further investigate if a person's standing in a social network influences their intention to discontinue and make forecasts from the viewpoint of opinion leaders.

The author chose one random participant from the researchers' WeChat Moments for a thorough investigation to ensure the study's objectivity and rigor. The user's ego network was developed through one-on-one interviews by asking the user's five closest friends and noting how each buddy was socially involved with the user. The three Scales of Connectivity, Persuasiveness, and Maven are suggested by to identify the effect on the user. 14 items in all were generated and measured on a 5-point Likert scale (1- strongly disagree, 2-disagree, 3 - average, 4 - agree, and 5 - strongly agree).

According to the findings, this user's ego network is shown in Figure 3. The clustering coefficient value is 0.2, indicating that only 20% of each person's friends they have spoken to will typically also speak to one another, and triadic closure is not very high. With a mean value of 4 on the scale, this user has a more excellent perception of their opinion leader. This user is more likely to stop using Moments.

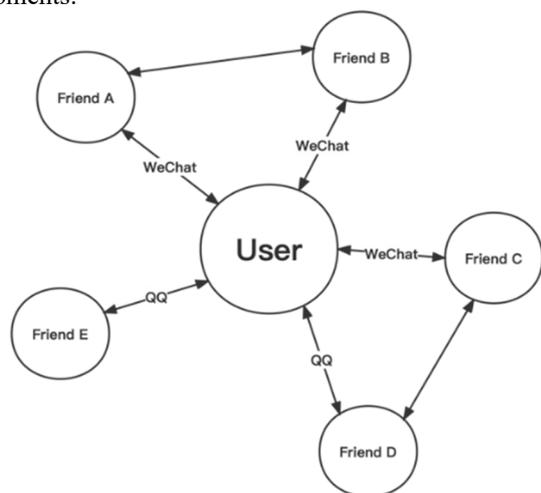


Figure 3 Ego network[Owner-draw]

#### 5 Conclusions

In this study, we found that information overload, social overload, and system function overload all had a favorable impact on social media fatigue. Social media fatigue mediated these overloads and upward social comparisons. Social media fatigue is neither positively influenced by privacy concerns nor does it play a mediating role in privacy concerns and discontinuous usage intentions. Additionally, users' intentions to utilize their WeChat Moments sparingly were influenced to some extent by users' positions in social networks and their perceptions of opinion leaders. Future studies can increase the sample

size for further exploration and validation to uncover more influencing factors.

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