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The Asian Conference on Psychology & the Behavioral Sciences 2024 Official Conference Proceedings

Abstract

The emergence of various social media platforms with complex features and diverse devices has led to the fear of missing out (FoMO) on using these facilities, ultimately resulting in exhaustion. The fear, anxiety, or worry of missing out on various opportunities and information often drives excessive social media usage. Building on previous research, FoMO is frequently associated with social media fatigue, yet there has been no research to date that considers envy as a moderator. This study aims to examine the relationship between FoMO and social media fatigue moderated by envy among social media users. A survey was conducted using a quantitative methodology with participants aged 18 and above who have a minimum of two accounts. This is based on the fact that social media users in Indonesia are predominantly aged 18 and above, and the wide variety of social media platforms leads individuals to have more than one account. This analysis aims to investigate the impact of the moderation variable using Hayes' PROCESS Model 1 in SPSS 27. The results of this study indicate that malicious envy significantly serves as a moderator between FoMO and social media fatigue, especially in the group where malicious tendencies are at a low level. This is in contrast to benign, which shows not significant. This research is expected to contribute to understanding the dynamics of the emergence of fatigue feelings in using social media and the emotions that exacerbate these feelings of fatigue.

Keywords: Social Media Fatigue, FoMO, Benign Envy, Malicious Envy, Moderator



Introduction

The multitude of various social media platforms has influenced the way users interact. Interactions that were originally done face-to-face can now be represented and facilitated through various features on different social media platforms. The utilization of social media allows users to create profiles, build relationships, and form groups or communities to connect with each other, leading to a widespread adoption of social media (Boyd & Ellison, 2007; Kietzmann et al., 2011). Communication spaces and roles have been digitized, enabling individuals to choose spaces for desired activities. Social media platforms provide spaces for sharing, exchanging information about identity, knowing the presence of other users, engaging in conversations, building reputations, forming relationships, and even conducting various business activities (Kietzmann et al., 2011; Okonkwo & Awad, 2023). The shift towards digitalized communication spaces has resulted in some individuals making social media their primary space, leading to issues such as dependence on social media and ultimately resulting in social media fatigue.

In Indonesia, with a population of 276.4 million in January 2023, there are 167 million social media users, equivalent to 60.4% of the population (Kemp, 2023). As of early 2023, popular social media platforms in Indonesia include Facebook with 119.9 million users, YouTube with 139 million users, Instagram with 89.15 million users, TikTok with 109.9 million users, Facebook Messenger with 27.30 million users, LinkedIn with 23 million users, Snapchat with 3.55 million users, and Twitter with 24 million users. The multitude of platforms, combined with the intensity of usage among the Indonesian population averaging 3.2 hours per day (Dihni, 2022), increases the likelihood of experiencing fatigue. This can have physical and mental health implications, including decreased self-esteem, increased anxiety, the development of unhealthy behaviors, and a connection with elevated depression (Beyens et al., 2016; Dhir et al., 2018; Elhai et al., 2020; Wolniewicz et al., 2018).

Social Media Fatigue (SMF) is defined as the phenomenon of exhaustion caused by social media use, leading users to withdraw from it (Zhang et al., 2021). In addition to fatigue, SMF is characterized by other negative emotions such as stress and subjective feelings of tiredness, boredom, or burnout in individuals using social media (Hattingh et al., 2022; Ravindran et al., 2014; Zhu & Bao, 2018). According to Sweller, Cognitive Load Theory (CLT) can explain how social media fatigue occurs (Ashiru et al., 2023). CLT describes how human memory has limited capacity and can become overloaded with excessive information, leading to social media fatigue due to cognitive load during social media use.

One of the factors that exacerbates SMF is the fear of missing out on opportunities to engage in enjoyable activities together. Commonly referred to as FoMO (Przybylski et al., 2013). In other literature, FoMO refers to the need to interact with others and stay connected to what they are doing (Sette et al., 2020). FoMO is characterized by the concern that friends or family are enjoying valuable experiences when they are not present (Ashiru et al., 2023). This fear drives individuals to stay constantly connected on social media to ease the process of obtaining information about others' experiences and activities. The fear of missing out, as observed in various studies, leads to increased participation in social media, ultimately resulting in fatigue (Dhir et al., 2018; Hattingh et al., 2022; Świątek et al., 2021). This is because FoMO can create excessive and compulsive demands in social media use, contributing to feelings of fatigue (Wiesner, 2017). On the other hand, in addition to FoMO-induced social media fatigue, the sense of closeness among social media users can facilitate judgments about each other. One form of judgment is the emergence of envy towards others (Lange & Crusius, 2015). Envy is defined as a feeling of low self-worth, hostility, and hatred that arises when others possess what one desires (Smith & Kim, 2007). Unlike jealousy, which is associated with the desire to protect what one already has, envy is related to the desire for what one does not yet possess (Smith & Kim, 2007; Tandon et al., 2021). Envy can be a cause and worsen social media fatigue through anxiety and feelings of loneliness (Yan et al., 2023). Envy can induce anxiety by pushing individuals to focus on their shortcomings, thus worsening social media fatigue (Yan et al., 2023).

This research focuses on examining the relationship between FoMO and social media fatigue moderated by envy, whether benign or malicious. As of now, there has been no research directly treating envy as a moderating variable. The researcher hypothesizes that higher levels of envy (both benign and malicious) strengthen the impact of FoMO on social media fatigue. This is based on compulsive behavior when experiencing FoMO and the influence of envy, which drives individuals to focus on their shortcomings, potentially worsening the feeling of social media fatigue. Based on the existing literature, the researcher develops the following hypotheses:

- H 1. Benign envy can significantly moderate the relationship between FoMO and social media fatigue.
- H 2. Malicious envy can significantly moderate the relationship between FoMO and social media fatigue.

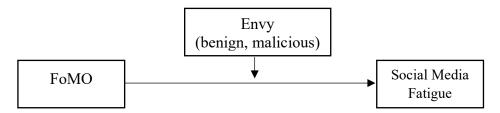


Figure 1: Research hypothesis

Method

Participants

This study is quantitative, with data collected from 210 participants using non-probability sampling, specifically purposive sampling technique. Participants were required to meet the criteria of being (1) aged 18 and above and (2) having a minimum of two social media accounts. Recruitment of participants took place through online social networks after obtaining their informed consent. The rule of thumb for determining the minimum sample size in this study, according to Muthén & Muthén, (2002), ranged from 150 to 315 participants. The participant composition included 39.05% males and 60.95% females, with 70% having a background in bachelor's degree. The majority of participants used 4 to 6 social media platforms, with 4 platforms at 22.38%, 6 platforms at 18.57%, and 5 platforms at 16.67%. The most common time spent on social media per day falls within the range of 3-4 hours (30.48%), followed by 5-6 hours (23.33%), and over 6 hours (22.86%). The social media platforms used by participants are as follows: WhatsApp (100%), Instagram (98.10%), Youtube (73.33%), TikTok (55.71%), Twitter(X) (48.10%), Telegram (45.24%), Facebook

(39.52%), LinkedIn (33.33%), Pinterest (25.71%), Line (9.05%), Threads (7.62%), Discord (5.24%), Snapchat (1.90%), Tumblr (1.90%), Reddit (1.90%), and Other (0.95%).

Data Analysis

In the beginning, the researchers conducted a test of normality assumption using skewness and kurtosis. All variables considered in this study have met the normality test. Then, descriptive analysis was then performed to understand the respondents' characteristics. Confirmatory factor analysis was conducted to test the validity of items involved in the regression analysis. The maximum likelihood (ML) method was employed for estimating continuous data (Umar & Nisa, 2020). JASP version 0.18.1.0. was used for both descriptive analysis and confirmatory factor analysis in this study.

Subsequently, the researcher conducted descriptive analysis on variables and multiple regression analysis on FoMO and social media fatigue moderated by envy. To examine the moderation variable, Hayes' PROCESS Model 1 (Hayes, 2022) with SPSS 27 software was employed.

Instrumentation

Three measurement tools were utilized in this study, with assessing the construct validity through confirmatory factor analysis. The indicators used for testing goodness of fit was RMSEA (0.08), following Brown, (2006). After achieving a fitting model, the next step involved examining the factor loading for each item. If each item had a z-value greater than 1.96, it was deemed valid (Umar & Nisa, 2020). Once all items were validated, these items from each measurement tool were used to calculate the factor score, which would then be employed for regression analysis.

Firstly, to measure social media fatigue, the Social Media Fatigue Scale (SMFs) was utilized, developed by Zhang et al., (2021). The scale consisted of 15 items covering cognitive, behavioral, and emotional aspects. After conducting CFA, an RMSEA of 0.11 was obtained, indicating that the model was not fit. Modification indices (MIs) were applied to release measurement error parameters in the model. After modification, an RMSEA of 0.07 was achieved, demonstrating unidimensionality. All items were deemed valid as they had z-values >1.96 and positive factor loadings. The SMFs instrument in this study had a Cronbach's alpha (α) value of 0.81.

Secondly, the instrument used to measure FoMO was the Online Fear of Missing Out Inventory (ON-FoMO) developed by Sette et al., (2020). This scale comprised 20 items covering four factors: the need to belong, need for popularity, anxiety, and addiction. CFA resulted in an RMSEA of 0.14, indicating that the model was not fit. Modification indices (MIs) were applied for model modification, and after modification, an RMSEA of 0.07 was achieved, indicating unidimensionality. This finding aligns with Sette et al., (2020) who considered ON-FoMO as unidimensional. All items were valid as they had z-values >1.96 and positive factor loadings, except for item 9, which was excluded from further analysis due to a factor loading discrepancy. The ON-FoMO instrument in this study had a Cronbach's alpha (α) value of 0.89.

Thirdly, the instrument used to measure envy was The Benign and Malicious Envy Scale (BeMaS) developed by (Lange & Crusius, 2015). This scale consisted of 10 items covering

benign and malicious dimensions. CFA resulted in an RMSEA of 0.09, indicating that the model was not fit. Modification indices (MIs) were applied for model modification, and after modification, an RMSEA of 0.08 was achieved. All items were deemed valid, as they had z-values >1.96 and positive factor loadings. The BeMaS instrument in this study had a Cronbach's alpha (α) value of 0.80 for the benign dimension and 0.89 for the malicious dimension.

Results

Based on the descriptive analysis results in Table 1, the participants in this study predominantly exhibited low social media fatigue (52.4%), high FoMO (50.5%), high Benign envy (57.6%), and low Malicious envy (58.1%).

Variable	Μ	SD	Low		High	
			n	%	n	%
Social Media Fatigue	50.00	9.21	110	52.4 %	100	47.6 %
Fear of Missing Out	50.00	9.53	104	49.5 %	106	50.5 %
ENVY (Benign)	50.00	9.05	89	42.4 %	121	57.6 %
ENVY (Malicious)	50.00	9.52	122	58.1 %	88	41.9 %

Table 1: Results of descriptive analysis on research variables

In the hypothesis testing results regarding the influence of FoMO on social media fatigue moderated by benign, the following findings were obtained:

Table 2: Result from Regression Analysis Examining the Moderation of the FoMO on Social Media Fatigue by Benign

	Coeff	SE	t	р	LLCI	ULCI
Constant	50.02	0.63	79.77	0.00	48.78	51.25
FoMO (X)	0.25	0.07	3.77	0.00	0.12	0.39
Benign (W)	0.19	0.07	2.62	0.00	0.05	0.33
FoMO x Benign (XW)	-0.00	0.00	-0.08	0.93	-0.01	0.01
				R ² = 0.14, MSE = 74.07 F(3, 206) = 11.17, p<0.05		

Based on the moderation regression table above, the results indicate the influence of FoMO on social media fatigue moderated by benign (F(3, 206) = 11.17, p < 0.05, R2 = 0.14). This means that 14% of the proportion of variance in social media fatigue can be explained by both variables.

However, the results of the interaction between FoMO and benign on social media fatigue showed that it was not significant. The interaction results reveal p = 0.93, LLCI = -0.01, and ULCI = 0.01, crossing through 0. This implies there is no moderating effect of benign on the relationship between FoMO and social media fatigue.

Moving on to the hypothesis testing results regarding the influence of FoMO on social media fatigue moderated by malicious, the findings are as follows:

	Coeff	SE	t	р	LLCI	ULCI
Constant	50.47	0.59	85.98	0.00	49.32	51.63
FoMO (X)	0.32	0.07	4.92	0.00	0.19	0.45
Malicious (W)	0.21	0.06	3.21	0.00	0.08	0.34
FoMO x Malicious (XW)	-0.02	0.00	-3.94	0.00	-0.02	-0.01
			R ² = 0.19, MSE = 69.34 F(3, 206) = 16.62, p<0.05			

Table 3: Result from Regression Analysis Examining the Moderation of the FoMO on Social Media Fatigue by Malicious

Based on the moderation regression table above, the results indicate the influence of FoMO on social media fatigue moderated by malicious (F(3, 206) = 16.62, p < 0.05, R2 = 0.19). This means that 19% of the proportion of variance in social media fatigue can be explained by both variables.

Furthermore, the results of the interaction between FoMO and malicious on social media fatigue show significant and negative outcomes. The interaction results reveal $\beta = -0.02$, p < 0.05, LLCI = -0.02, and ULCI = -0.00, not crossing through 0. This implies that there is a moderating effect of malicious on the relationship between FoMO and social media fatigue. The role of malicious in moderating FoMO and social media fatigue, when considering conditional effects, is positive and significant for low malicious levels with -1SD below average (b = 0.45, SE = 0.08, p = 0.00, LLCI = 0.30, ULCI = 0.61), medium levels (b = 0.32, SE = 0.07, p = 0.00, LLCI = 0.45), and high malicious levels with +1SD above average (b = 0.16, SE = 0.07, p = 0.02, LLCI = 0.03, ULCI = 0.30). However, those with low malicious tendencies show a more significant impact on FoMO and social media fatigue.

Discussion

This paper aims to verify two hypotheses. Firstly, whether benign can moderate the relationship between FoMO and social media fatigue, and secondly, whether malicious can significantly moderate the relationship between FoMO and social media fatigue. The findings indicate that although Liu & Ma, (2018) confirmed that envy can lead individuals to social media fatigue, it does not universally apply to being a moderator variable between FoMO and social media fatigue. There is a fundamental difference between benign and malicious envy. Benign, which motivates individuals to surpass those above them, and malicious, which drives individuals to demean and undermine the advantages of others (Lange & Crusius, 2015), have distinct differences.

The hypothesis of this study regarding benign moderating the influence of FoMO on social media fatigue is rejected. This indicates that benign does not necessarily influence the direction and magnitude of the relationship between the two variables. Benign, which encourages individuals to surpass others, actually motivates them to interact with the envied. Therefore, when individuals with benign tendencies sees the envied on social media, it does not make them use social media until they feel tired. Instead, social media is considered beneficial as a means to interact and learn from the envied (Yan et al., 2023).

Next, the subsequent hypothesis, that malicious moderates the influence of FoMO on social media fatigue, is accepted. The results show that the interaction between FoMO and malicious on social media fatigue is significant and negative. This implies that the need to

interact with others on social media drives users to remain on social media when accompanied by feelings of maliciousness. Malicious envy triggers users to persistently use social media as a reason when the need to connect with others strengthens.

However, whether at low, moderate, or high levels, malicious behavior demonstrates significant outcomes. This indicates that regardless of the level of malicious, individuals with a need to connect with others are inclined to continue using social media. However, the difference lies in individuals at a high malicious level, whose desire to remain on social media is not as strong as those at a low malicious level. This seems to be related to individuals at a high malicious level tending not to want to interact with the envied (Van de Ven et all in Yan et al., 2023). Those at a high malicious level are potentially inclined to ignore information uploaded by the envied and may even block them, thus reducing social media usage. Therefore, it is reasonable to assume that individuals with low malicious tendencies exhibit a more significant correlation with FoMO in social media fatigue.

These findings indicate the reality that the presence of envy in individuals does not directly worsen the influence of FoMO on social media fatigue. Depending on the type and level of envy present in individuals, whether benign or malicious, whether the feeling of envy is high or low.

Conclusions

This research provides an overview that feelings of envy do not entirely moderate the influence of FoMO on social media fatigue. It is malicious envy, whether at low, moderate, or high levels, that shows significance towards FoMO and social media fatigue. However, malicious envy at a low level is more significant compared to other levels.

Limitations and Future Work

This study has limitations regarding the use of instruments in the research process. Reconsideration is needed regarding the use of the online Fear of Missing Out Inventory (ON-FoMO) by Sette et al., (2020), which is linked to the construct of social media fatigue by Zhang et al., (2021). This is based on the difference in operational definitions between ON-FoMO by Sette et al., (2020) and FoMO by Przybylski et al., (2013). ON-FoMO focuses on the need to interact with others and stay connected to what they are doing, while FoMO focuses on the feeling of worry due to not being involved. This is supported by the research of Świątek et al., (2021), who previously used the construct of social media fatigue by Zhang et al., (2021) and linked it to FoMO by Przybylski et al., (2013). Therefore, future researchers could try using the same variables but with different instruments. Certainly, this will affect the results obtained from the research.

Acknowledgment

LPDP Indonesian Ministry of Finance Scholarship Fund for funding the participation in presenting the abstract at ACP2024.

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