



# Social Media Engagement as a Mediator of Fear of Missing Out and Self-esteem in Adolescents

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**Abstract.** This study examined Social Media Engagement (SME) could mediate the relationship between Fear of Missing Out (FoMO) and self-esteem. The 101 respondents of this study are those actively use social media with age range 15–23 years old (women and men). The instrument used are 11 items of Social Media Engagement for Adolescents (SMES-A), 19 items of FoMo Scale, and 20 items of Self-Esteem Scale. Mediation analysis was conducted using PROCESS macro. Result shows SME could mediate the relationship between FoMo and self-esteem.

**Keywords:** social media engagement · fear of missing out · self-esteem · adolescents · mediation analysis

## 1 Introduction

Based on the results of a survey by the Asosiasi Penyelenggara Jasa Internet Indonesia (APJII) released in 2022, it shows that there were 210.03 million internet users in Indonesia in 2021–2022 [5]. That number increased by 6.78% compared to the previous period which amounted to 196.7 million people. Thus, it made the level of penetration (access) of the internet in Indonesia to 77.02%. The highest internet penetration rate is in the age group 13–18 years, which is 99.16%. The second position is occupied by the age group 19–34 years with a penetration rate of 98.64%. From these results it can be concluded that almost all of the samples were 13–18 years old and 19–34 years old have accessed the internet. The increase in internet users has increased along with the use of social media. Social media are internet-based applications that enable the creation and exchange of user-generated content' [8].

Social media is widely used because it can help users connect with other people, reduce loneliness [16], and can be used as a media for sharing knowledge with others [24]. However, social media also has negative consequences from its use such as addiction to using smart phones [15], anxiety [7], depression [10] and Fear of Missing Out (FoMO) [21]. FoMO is an important factor in explaining the deviant use of social media. FoMO can predict the emergence of Problematic Social Media Use (PSMU) [9]. This usage problem is characterized by a lack of control over social media use behavior, and behavior that continues to cause adverse consequences in life.

FoMO which can be defined as an individual's fear of missing information, especially in social media. FoMO is a concept that describes the occurrence of a state of anxiety or fear in a situation when it is not possible to participate in the social field – especially through electronic communication [12]. FoMO can occur because in the digital world its users are used to being flooded with information. This makes users feel anxious, uncomfortable, and afraid if they are left with information, so they are always encouraged to use social media to update information. The need to be updated to this information makes individuals who have a high level of FoMO have a tendency to use many social media platforms such as Facebook, Snapchat, Instagram and Youtube [9]. FoMO is even related to the behavior of using mobile phones when driving which can increase the risk of accidents [18].

When social media users who experience fomo are left behind with information, they experience anxiety because they feel socially excluded [1]. Feeling isolated and different from people on social media makes individuals feel worthless. This feeling of worthlessness directs them to compare themselves to social media [23]. These conditions can have an impact on individual self-esteem. Self-esteem is an individual's assessment of himself. Individuals who have low self-esteem tend to seek protection on the internet, because they can control the aspects of themselves that they want to publish [4]. However, based on a systematic review of self-esteem showing inconsistent results on the problem of using a smartphone. Therefore, further exploration is needed by adding new variables.

Social Media Engagement (SME) might be an explanatory variable. Explained that to capture a broader picture of problems in social media is to look at the quality of individuals in using social media [22]. Those qualities are reflected in social media engagement. Social media engagement is a multi-dimensional concept which includes aspects of behavior, cognition and emotion [13]. Explained that the cognition aspect is an individual's understanding of an object or issue that appears in his perception, the emotional aspect is an aspect related to feelings that arise in individuals towards existing objects or issues, while the behavioral aspect is daily activities that involve a certain object [17]. Those aspects are quite comprehensive in capturing the description of the fear of missing out phenomenon related to self-esteem. This study aims to explore the role of SME as Mediator of FoMO.

## 2 Methods

Participants in this study were 101 adolescents aged 15 to 23 years, consisting of 22 men (21.8%) and 79 women (78.2%). The average age of the participants was 20.18 years. Research participants were selected using a purposive sampling technique. The study used three instruments, consists of the FoMO Scale, Social Media Engagement Scale for Adolescents (SMES-A) and Self-Esteem Scale. The FoMO Scale was developed by researchers based on Przybylski, et al. study which consists of 19 items with a Cronbach Alpha reliability coefficient of 0.877 [21]. SMES-A was from Ni, et.al., (2020) which consists of 11 items with a Cronbach Alpha reliability coefficient of 0.756 [17], and Self-Esteem Scale was modified by Pratiwi study based on Tafarodi and Swann which consists of 19 items with a Cronbach alpha reliability coefficient of 0.945 [19]. Descriptive analysis and correlation were performed on all variables. To test the hypothesis, statistical

analysis based on the mediation model was performed using the PROCESS model 4 macro from [11].

### 3 Result and Discussion

The result shows that the average age of adolescents when they first had a social media account was 12.73 years old and started using social media at 12.93 years old. These results indicate that in their early teens the respondents already had social media accounts and activities on social media (Tables 1 and 2).

The results shows that most of the research sample's FoMO level is in the high category at 70.3%. While those in the moderate category are 26.7% and 3% at low category (Table 3).

The level of SME in adolescents shows that most 69.3% are at a moderate category. In the high category there were 10.9% and 19.8% at low category (Table 4).

Self-esteem in adolescent based on the level of categorization shows that almost all samples fall into the high category, which is as much as 97%. While in the moderate category only 2% and 1% at low category (Fig. 1).

**Table 1.** Descriptive of variables (fomo, sme, self-esteem)

No	Variables	Mean	Min	Max	SD
1.	FoMO	50,06	26	78	10,259
2.	SME	36,55	17	53	5,987
3.	Self-Esteem	67,30	29	95	12,508
1.	Age first time having a social media account.	12,73	5	22	2,328
2.	Age first time using social media.	12,93	5	22	2,418

**Table 2.** Fomo categorization

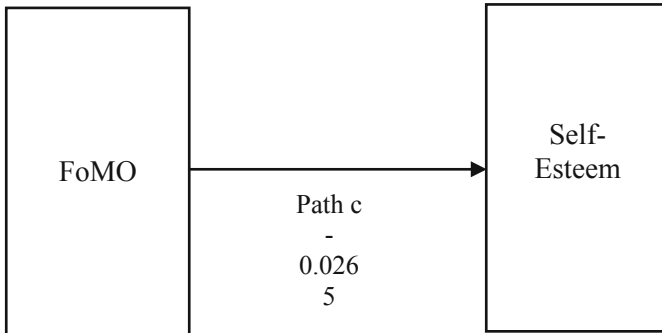
Categorization	N	Percentage (%)
High	71	70,3
Moderate	27	26,7
Low	3	3

**Table 3.** Sme categorization

Categorization	N	Percentage (%)
High	11	10,9
Moderate	70	69,3
Low	20	19,8

**Table 4.** Self-esteem categorization

Category	N	Percentage (%)
High	98	97
Moderate	2	2
Low	1	1



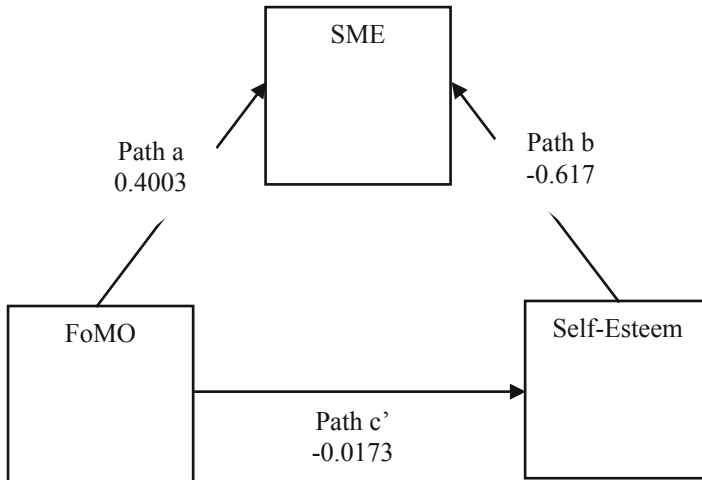
**Fig. 1.** Schematic of Estimating the correlation between FoMO and SME

**3.1 FoMO and Self-esteem (Path C)**

Based on the analysis using the PROCESS model 4 macro from Hayes shows that the path coefficient c is  $B = -0.265$  with  $p = 0.029$  ( $p < 0.05$ ), the total effect of FoMO on self-esteem is significant [11]. This can be interpreted when the FoMO level is high it will lower the level of self-esteem in adolescents. Shows that an increase in FoMO is associated with lower self-esteem in adolescents [14]. FoMO is also negatively related to general mood and level of life satisfaction [21], and can affect individual subjective well-being [2]. Meanwhile, low self-esteem is also related to other negative behaviors, such as problems with use of smartphone [14], and internet addiction [20] (Fig. 2).

**3.2 FoMO and SME (Path a)**

Path a shows a significant effect with coefficient  $B = 0.4003$  with  $p = 0.000$  ( $p < 0.05$ ), it means that FoMO can significantly affect SME, when the FoMO level in adolescents increases, the level of SME will also increase. According to Przybylski, Murayama, DeHaan and Gladwell, SME brings high efficiency for those who are oriented to being connected continuously [21]. This is one of the reasons that FoMO is strongly related to SME. Agrawal and Mewafarosh (2021) state that FoMO can directly influence SME [2]. This study proves that with a high FoMO, the level of social media engagement will be stronger. FoMO is associated with higher levels of engagement behavior on social media [3, 21]. Individuals with high FoMO levels tend to use social media more often before going to bed and during meals.



**Fig. 2.** Schematic of the Estimating Correlation between FoMO and Self-Esteem with SME as the Mediator.

### 3.3 SME and Self-esteem (Path B)

Path b shows the effect of SME on self-esteem significantly with coefficient B = -0.617 with  $p = 0.027$  ( $p < 0.05$ ). It shows that the higher SME will affect the lower self-esteem in adolescents.

### 3.4 FoMO and Self-esteem Are Mediated by SME (Path C')

Path c' is a direct effect between FoMO on self-esteem by controlling social media engagement showing a coefficient value of  $-0.0173$  with  $p = 0.9147$ . So it can be said that the direct effect between FoMO and self-esteem is not significant. Based on Baron and Kenny's (1986) guidelines, the relationship between the independent variable (X) and the dependent variable (Y) is not significant when the mediator variable (M) is controlled (path c'), this relationship is called perfect mediation REF\_Ref122537576 \r \h [6]. So it can be concluded from the results of the analysis above that the relationship between FoMO and self-esteem can be perfectly mediated by SME. Online media such as social media make social engagement, interconnection, communication, and information sharing easier, and enhance networking REF\_Ref122537537 \r \h [2]. SME can provide facilities for individuals who have a strong urge to continue to be connected with other individuals, so that they do not feel like they are missing activities or moments on social media. Alt's research showed that individuals who have a level of basic needs related to satisfaction are associated with higher FoMO and SME REF\_Ref122537387 \r \h [3].

## 4 Conclusion

The findings in this study are that SME can mediate FoMO with self-esteem so that it can be stated that the hypothesis in this study is accepted.

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