Keywords: Fear of Missing out, Compulsive Internet Use, The Millennials.

Abstract: The rapid development of internet usage has an impact on changing behavior patterns on its users. One of them is related to the inability to use the internet proportionately. Compulsive Internet Use (CIU) is a maladaptive internet use indicating the user's inability to control, too busy surfing the internet, and experiencing conflicts when wanting to stop using the internet. Researchers assume that feelings of worry or fear will be left behind or missed information from others, or fear of missing out (FoMO) may play a significant role in using the internet. This study involved 300 millennials with convenience sampling technique. The results of this study showed FoMO has a definite contribution to CIU. This study also showed that daily internet use time has a significant effect on CIU, which means the desire to stay continually connected with what others are doing makes people stayed online longer than originally intended. Nonetheless, the results of this study suggest that developmental age groups do not affect internet use. Understanding compulsive internet use requires acknowledging the purpose and context of internet use.

1 INTRODUCTION

Nowadays, the growth of information, communication, and technology in Indonesia has increased rapidly year by year. The survey report of Penetration and Internet User Behavior in 2018 by APJII (Asosiasi Penyelenggara Jasa Internet Indonesia, 2018) states that internet penetration in Indonesia has reached 64.8% of the total population, especially in West Sumatra, reaching 84.2%. This data explicates that the extension of internet users is advancing quickly. Internet penetration is in line with the 4.0 industrial revolution. The current system is integrated with computers, and the internet has spread to all ages, levels of education, and socioeconomic status.

In current years, generations have been designated by popular culture. One of the most contemporary is millennials, which describes a generation born in 1980s and as children of the Baby Boomers (Burke et al., 2015). Two main characteristics of the millennial generation are ethnic diversity and their connection with technology. Substantially, Millennial is also known for using digital technology and social media in almost all of the daily activities (Santrock, 2016). The trademark of millennial characters is acknowledged as 3C, namely Creative, Confident, and Connected (Alvara Strategic Research, 2019).

Based data obtained by the APJII survey shows that internet penetration is dominated by ages 13-18 years (75.50%) and 19-34 years (74.23%). In line with the results of the Indonesia Millennial Report 2019 by IDN Research Institute (IDN Research Institute, 2019) explains that the millennials generation (people born in 1983-1998) is 98.2% connected to the internet. Thus, the utilization of the internet has penetrated throughout life's area.

The most accessed services are chat (89.35%) and social media (87.13%). The extent of the already using the internet can affect daily behavior patterns caused by individuals' increasing needs for the internet, especially the millennial generation.

The ease of communication with unlimited internet service access makes internet users get many benefits for various purposes, ranging from work, education to social interaction. In addition to the benefits gained from using the internet, the development of information, communication, and
technology also brings several risks. Previous studies conducted by Xiaokang, Song et al. explains that the high dependence on the internet can harm work and academic performance (Kirschner & Karpinski, 2010), everyday life (Karaiskos et al., 2010), and other psychological conditions, such as psychological wellbeing (Alabi, 2013). Evidence suggests that some individuals may lose control over the use of the Internet, and this negatively alters critical aspects of their lives both in the short term (e.g., heightened levels of stress at a task, diminished work-life balance) and in the long term (e.g., social isolation, depression, and anxiety)(Quiñones-garcia & Korak-kakabadse, 2014).

One of the risks by using the internet superfluous to their needs, called compulsive internet use (CIU). CIU is described as an internet use pattern characterized by loss of control, preoccupation, conflict, withdrawal symptoms, and using the internet as a coping mechanism (Meerkerk et al., 2009). Prolonged time spent internet usage manifests the significant dependency on the internet. Such conditions are giving rise to a new phenomenon called Fear of Missing Out (FoMO). FoMO is described as a desire to be continuously linked to what other individuals are doing and is primarily linked to social media technology that offers an endless opportunity to compare what other individuals are doing. (Przybylski et al., 2013a). FoMO is also defined as a persistent concern that other people will have a more enjoyable experience without the presence of the person concerned, consisting of feelings of irritability, anxiety, and inadequacy, which will worsen when the individual is attached to social media sites (Gupta & Sharma, 2021).

Beside of the heightened internet use risks highlighted, previous research on FoMO focused more on problematic smartphone use or social media use. A cross-sectional study by Lo Coco et al. (2020) shows a positive correlation between FoMO and Problematic Smartphone Use on two-time points of data collection among adolescence. In another study, FoMO is a significant factor that explains the use of social media by adolescents and found that adolescents' problematic social media use has mediated the relationship between FoMO and phubbing behavior (Van Rooij et al., 2018). These findings predominantly highlight teenagers as internet users.

The study’s main aim is to determine the impact of FoMO on CIU, particularly in the millennial generation as native internet users. Second, as previously stated, this study emphasized the Millennials generation, identified in three distinct generational diversity in internet-related variables in this study. Moreover, according to a research study conducted by Coskun & Karayagız Muslu, 2019, it would be valuable to investigate the problem from the Millennials’ point of view regarding FoMO and internet use.

2 METHOD

2.1 Participants and Procedure

This study was conducted on the millennial generation of the internet user population—the convenience sampling technique used to gather the variables study data. The participants' inclusion criteria are the internet users range from late adolescent to middle adult who included the millennial generation category (born 1981-1998) and is internet users (connected to the internet with any devices). Participants are unearthed in places where millennials do many activities such as campuses, government and private offices, teachers, and school employees included in the age group.

This study recruited 300 internet users as participants (115 males and 185 females). The participants were asked to fill the paper-based and internet-based Fear of Missing Out Scales (FoMOS), Compulsive Internet Use Scales (CIUS), and supplementary information as the data. Participants who received both paper-based and internet-based instruments were given informed consent beforehand and committed to filling out the questionnaire in earnest until the end.

2.2 Measure

Fear of Missing Out Scale (FoMOS)

The Indonesian version of FoMOS (Przybylski, Murayama, DeHann, 2013), includes ten questions regarding concerns that other people have more pleasant experiences or a desire to stay connected others are doing (Cronbach's alpha =.826).

Compulsive Internet Use Scale (CIUS)

The Indonesian version of CIUS includes six subscales that describe internet usage patterns such as loss of control, preoccupation, withdrawal symptoms, coping/mood modification, conflict, and tolerance (Meerkerk et al., 2009) (Cronbach's alpha = .932). The scale consist of 14-items with 5 likert scale from 0 scale for “never” to 4 scale for “very often”.
**Supplementary Data**

In this study, the supplementary data including developmental cohort, gender, the intensity of internet use, activities carried on the internet, and reasons for desiring to connect to the internet. For data analysis, we used developmental cohort and internet usage intensity as part of supplementary data. We assume that there may be diverse calls for the internet at varying stages of development of the Millennials generation to prognosticate compulsive internet use aside from FoMO.

### 2.3 Data Analysis

The administered instruments used in the study, the Indonesia version of fear of missing out scale (FoMOS) and the compulsive internet use scale (CIUS), were inspected by using Cronbach's alpha reliability coefficient. Hypothesis testing is performed by using the ANCOVA (Analysis of Covariance) test. ANCOVA testing involves the FoMO variable, developmental cohort, and internet usage intensity as the independent variable and CIU as the dependent variable.

### 3 RESULT

The main aim of the present study is to investigate the effect of FoMO on CIU. Further, we examine age-group categorization as we specify the millennial generation as inclusion criteria and internet usage intensity that might affect CIU. Table 1 describe FoMO and CIU categorization by age group and intensity of internet usage. In this study, the millennial generation involved three age groups (adolescent, early adult, and middle adult), and three levels of internet usage intensity range from light user to heavy user.

Based on the table, the adolescent group had a higher FoMO average than the early and middle adult groups. Likewise, the mean CIU of the adolescent age group was also the highest among the early and middle adult groups. Depending on the severity of the internet's use, it can be seen that the average FoMO and CIU of heavy users is higher than other users. The table 1 also explicates that the lower the intensity of internet use as indicated by the duration of use, the lower the average FoMO and CIU measurement results. The highest average score on FoMO and CIU in adolescent mean that this age group experience greater FoMO and tends to have more engagement on the internet.

![Table 1: Descriptive Statistics of the variable study.](image)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>FoMO</td>
<td>Adolescent</td>
<td>16,15</td>
<td>7,663</td>
</tr>
<tr>
<td></td>
<td>Early Adult</td>
<td>11,54</td>
<td>7,664</td>
</tr>
<tr>
<td></td>
<td>Middle Adult</td>
<td>6,57</td>
<td>5,236</td>
</tr>
<tr>
<td>CIU</td>
<td>Adolescent</td>
<td>45,99</td>
<td>11,336</td>
</tr>
<tr>
<td></td>
<td>Early Adult</td>
<td>40,41</td>
<td>13,087</td>
</tr>
<tr>
<td></td>
<td>Middle Adult</td>
<td>31,11</td>
<td>8,329</td>
</tr>
<tr>
<td>FoMO</td>
<td>Light User</td>
<td>8,33</td>
<td>6,351</td>
</tr>
<tr>
<td></td>
<td>Medium User</td>
<td>11,50</td>
<td>8,738</td>
</tr>
<tr>
<td></td>
<td>Heavy User</td>
<td>14,14</td>
<td>7,639</td>
</tr>
<tr>
<td>CIU</td>
<td>Light User</td>
<td>29,62</td>
<td>10,052</td>
</tr>
<tr>
<td></td>
<td>Medium User</td>
<td>37,76</td>
<td>11,716</td>
</tr>
<tr>
<td></td>
<td>Heavy User</td>
<td>44,87</td>
<td>12,156</td>
</tr>
</tbody>
</table>

Note: Light user (<2 hours/day): 7%; Medium users (2-4 hours/day): 29.30%; heavy users (>4 hours/day): 63.67%

![Figure 1: Activity of internet use.](image)

Out of the ten activities, respondents have three various peak activities while connected to the internet. First, browsing or surfing the internet. As many as 79% of respondents search for the information it needs to connect to the internet. Second, building friendships/relationships through social media. Of the 300 respondents, 75.7% use social media to connect with others. Furthermore, as much as 61.7% of respondents use the internet to download files/data. The respondents will need the internet with various significant purposes from the whole variety of Internet users' activities.
This chart describes the various reasons regarding internet usage. As many as 90.7% of the 300 respondents stated that the internet provides easy access to information. The second most common reason as many 54.3% of respondents chose the ease of getting new relations. The most significant percentage of using the internet explained that respondents felt tremendous benefits from using the internet.

### Table 2: Analysis of Covariance.

<table>
<thead>
<tr>
<th>Dependent Variable: CIU</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>FoMO</td>
<td>99.98</td>
<td>0.000</td>
<td>0.256</td>
</tr>
<tr>
<td>Developmental cohort</td>
<td>2.833</td>
<td>0.060</td>
<td>0.019</td>
</tr>
<tr>
<td>Internet Usage Intensity</td>
<td>7.714</td>
<td>0.000</td>
<td>0.051</td>
</tr>
<tr>
<td>FoMO* Developmental cohort *Intensity</td>
<td>23.743</td>
<td>0.000</td>
<td>0.424</td>
</tr>
<tr>
<td>Developmental cohort *Intensity</td>
<td>0.880</td>
<td>0.476</td>
<td>0.012</td>
</tr>
</tbody>
</table>

Note: *p<.01

Hypothesis testing in this study was to test the relationship of FoMO to CIU. In this study, the variables of the developmental cohort and internet usage intensity were also measured whether they were associated with CIU. The result spired to determine whether FoMO affected CIU. The hypothesis testing results show that FoMO predict CIU significantly. Additionally, FoMO, developmental cohort, and internet usage intensity unityedly affected CIU. Independently, FoMO and internet usage intensity were significantly influenced CIU, but not the developmental cohort.

### 4 DISCUSSION

The purpose of this study was to discover the benefaction of FoMO to CIU among internet users. Based on the research results, FoMO contributes significantly to CIU. Engaging in any online activity, especially social media, makes social affordances encouraging, highlighting opportunities and connecting people. This need prompts the millennial generation to suffice their psychological needs to attach with other people by constantly connecting the internet, divine the higher FoMO phenomenon in this age group (Przybylski et al., 2013b). These findings align with previous research that explains that FoMO strongly correlates with the problematic smartphone and social media use, which led to excessively utilizing the internet (Casale et al., 2018; Fang et al., 2020; Fabris et al., 2020).

FoMO is a feeling of deep anxiety that other people will have enjoyable activities in their absence (Przybylski, Murayama, DeHann, 2013). In other words, FoMO is an individual's tendency to feel anxiety because they feel 'left behind' from interactions, events, or social relationships. Przybylski et al. (2013a) proposed that FoMO can also be deciphered as a form of negative emotion that accompanies a decrease in longing for social contact (Appel et al., 2019). This worry provokes a person to continue to yearn to be connected to what other people are doing. FoMO increases the desire to use the internet or social media as a chance for social interaction (Alt & Boniel-Nissim, 2018).

The study finding also explores the many activities undertaken by the millennial generation when connected to the internet. Browsing predominated overall internet-related activity reflected the Millennials' eagerness to find more because of high curiosity about what happened throughout their interest. According to a model of the information search process, when someone feels anxious about being left out, they tend to feel uncertainty and seek clarity to satisfy their insufficiency for information through browsing (Rather & Ganaie, 2017). Browsing begins with unintended or non-intentional searching, making the user preoccupied and more engaged with the information stimulation given from the internet.

Aside from FoMO, the internet usage intensity variable also has a significant contribution to CIU. Data regarding the activities that encourage the
enthusiasm carried out by respondents while connected to the internet implied the enormous gain from using the internet makes more than half of the participants are heavy users. Being the "always connected" generation, the feeling of online exclusion makes adolescents, the young, and middle adults failed to control the intention of internet use and triggered to the extent online time (Ryan & Deci, 2020). Millennials need to feel that they are connected through Internet. They need to share their experiences through this medium—a platform for personalization and instant gratification and also feeling satisfaction with personal relationships: continuous understanding of what others do. Some studies called the avoidance of feeling disconnected due to continuous responsiveness is compulsive. Furthermore, the balance between the benefits and the risk of using the internet compulsively should be assessed as potential harm associated with excessive internet use among Millennials as the at-risk population (Yatan Pal Singh et al., 2020). As previously investigated, FoMÖ triggers social media fatigue, resulting in increased anxiety, depression, sleep quality, which lower psychological well-being and life satisfaction (Dhir et al., 2018; Zhang et al., 2020; Tandon et al., 2020). Nevertheless, there is a collided impact regarding the result of this study. Online interaction is regarded as a rewarding experience to alleviate worry due to negative emotion induced by FoMÖ that accompanies longing for social contact (Freire & Santos, 2021). Moreover, FoMÖ may initiate the Millennials’ eagerness to acquire new knowledge and skills while browsing. This study also discovered that diverse developmental age groups did not significantly affect CIU. This result aligns with the study conducted by Jorgenson et al., (2016) and Quitishat (2020); adolescents, young adults, and even middle adults have experienced increased internet overuse. However, this result slightly contrary with the study by Karadal & Abubakar (2021) and Butkovic et al. (2020) regarding the differences satisfaction of basic psychological needs especially need for autonomy and relatedness between the developmental cohort. The variability of the participants' limits this study. The participants are either college students or workers with minimum high school graduates may impact the result of the study to non-college or workers internet users. As the implication of the study is it would be propitious to consider redefining and distinguish healthy users, engaging users, and compulsive users of the internet in the Millennials generation based on the purpose of daily internet use and the requirement of given tasks as students or workers so we can make better judgement regarding the Millennials’ context on internet use. Recognize the causal processes are essential where the use of the Internet is ubiquitous may indicate underlying psychosocial predicaments.

5 CONCLUSIONS

This study proves that FoMÖ and time spent online prognosticate CIU in the millennial generation. This research implies that internet users of various development age groups apprehend the reasons for using the internet. Research's findings also explore the millennials' decisions and reasons behind their daily internet use, and behaviors which give the insight to promote positive outcomes of internet use. These reasons will be an initial recognition to consider the essence of internet use and user perceptions of the notion of excessive internet use.

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Trapped to Stay Connected: Fear of Missing out (FoMO) and Internet Use in Millennials