The Pattern of Internet Use during the COVID-19 Pandemic in the 18-24 Years Age

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Abstract

Background: COVID-19 is still sweeping the world today. Communication and learning processes use the internet a lot. Internet usage in Indonesia is ranked the 6th largest in the world. Most of the internet usage is from adolescent and young adults. Youth is one of the critical phases of the human life cycle. Internet addiction is very prevalent and causes psychosocial and personality development affects that are more dangerous among adolescents than adults. Students and university students are subjected to an online distance learning process during COVID-19. Online learning requires an internet connection. The pattern of internet use in the COVID-19 era is unclear. Aims: Assessing patterns of internet use in the COVID-19 era in the 18-24 year age group. Settings and Design: This study was a non-experimental research. Methods and Material: The subjects of this study were 125 men and women aged 18-24 years. The independent variable was internet use. The dependent variable was the internet usage pattern. The data collection technique used a questionnaire. Statistical analysis used: The data were then analyzed using the Spearman test. Results: The result showed that there were the most internet usage times more than 4 hours (96.8%), the most for social media (68.9%), and the most frequency of internet use was more than 6 times/day (72.8%). Conclusions: There were differences in internet usage patterns during the COVID pandemic at 18-24 years of age. Internet use was increasing during the COVID-19 pandemic.

Keywords: COVID, adolescent, internet
Key Messages:

COVID-19 affects internet usage. Adolescent are the most internet users. The pattern of internet use among adolescents during COVID-19 is different from those without COVID-19.


Introduction

COVID-19 first occurred in Wuhan China. COVID-19 then spread rapidly to various countries. The COVID-19 pandemic is sweeping the world(1)(2). The first COVID-19 cases in Indonesia were reported on March 2, 2020, a number of cases. September 14, 2020 data shows 225,030 confirmed cases and 8,965 deaths. Indonesia's COVID-19 death rate is the highest in Southeast Asia(3)(4).

The use of the internet, computers, cell phones, smartphones and electronic devices in recent decades has increased all over the world. Active users in the adolescent and young adult age group are estimated to be the largest contributor to the number of internet use disorders with 15.6% of those aged 18-23 with internet usage problems. Internet addiction is higher in Asian countries serving in western countries. In Indonesia, internet users reached 150 million people with 56% penetration which is popular in all regions in 2019. This number is only slightly different from the number of mobile internet users which reached 142.8 million people with a penetration proportion of 53%. Indonesia is ranked 6th in the world in terms of number of internet users(5)(6). The internet is one of the media that is currently favored by teenagers. The internet has become a favourite for teenagers in finding the latest information and establishing relationships with other people in other places. The development of internet users in Indonesia from year to year is high, in 2015 there were 88.1 million people, in 2016 there were 132.7 million people, and in 2017 there were 143.26 million people(5)(7)(8).

Internet use increased during the COVID-19 pandemic. During the COVID-19 pandemic, face-to-face activities must be carried out has greatly diminished and online services are fast promoted, which definitely increases internet usage(9)(10). Adolescent are the largest internet users(11)(12)(13). We present an initial investigation into the patterns of internet use among adolescents during the COVID-19 pandemic in Indonesia.
Subjects and Methods

The design of this study was cross sectional. The research subjects were 125 men and women aged 17-24 years (late adolescence, WHO criteria). The sampling technique used was consecutive sampling. The independent variable is internet usage. The dependent variable is the internet usage pattern. The data collection technique used was a data collection technique using a questionnaire.

Results

The subjects of this study were 125 men and women. The age distribution description of research subjects shows that the largest number of ages is 20-21 years (43.2%). Most of the research subjects were women (59.2%) (Table 1).

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-19</td>
<td>29</td>
<td>23.2</td>
</tr>
<tr>
<td>20-21</td>
<td>54</td>
<td>43.2</td>
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<tr>
<td>22-24</td>
<td>42</td>
<td>33.6</td>
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<tr>
<td>Gender</td>
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<tr>
<td>Male</td>
<td>74</td>
<td>59.2</td>
</tr>
<tr>
<td>Female</td>
<td>51</td>
<td>40.8</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1 shows that the longest use of the internet is more than 4 hours /day (60%). while the length of internet use before COVID-19 was at least less than 2 hours/day (2.4%).

![Figure 1. The average internet usage per day before COVID-19](image)

The length of internet use per day when COVID-19 has increased. As many as 96.8% of subjects used the internet more than 4 hours / day (Figure 2).
The pattern of internet use before COVID-19 shows that the main use of the internet was for social media (WA / IG / Facebook). Then followed by the use of the internet for youtube. The use of the internet prior to the COVIT-19 was least for E-learning (Figure 3).
The pattern of internet use during COVID-19 is different from before COVID-19. Most of the use of the internet during COVID-19 was for Teams / Zoom / Internet Relay Chat (IRC). The next most used internet is social media (WA / IG / Facebook) and YouTube (Figure 4).

**Discussion**

The results of this study indicate that there is an increase in the percentage of internet use (duration > 4 hours) during COVID-19. Our results suggest greater internet use among study participants. The internet plays a very important role in the lives of today's youth. Today's youth generation is living in a world where media is not only used for entertainment purposes, such as listening to music or watching movies, but is also widely used to interact with colleagues through WhatsApp, Instagram, Snapchat, Facebook etc. Overall, this is related to media interaction that involves about 6-9 hours of American teenage days, excluding homework and schoolwork (14)(15)(16).

During the COVID-19 pandemic, face-to-face activities must be carried out has greatly diminished and online services are fast promoted, which definitely increases internet usage. The World Health Organization (WHO) launched "Play apart Together" on March 28, 2020, suggested a videogaming as a safe social activity to support stay at home strategy. Significant increase in internet usage due to Actions of COVID-19 has been reported by several people media. One consequence of this policy may be an increase in internet game addiction, especially among adolescent. Although internet usage plays a positive role in this pandemic prevention and control, it is important to adopt public health strategies that emphasize the need to include internet activity as part of daily routine, including physical exercise, to reduce dependence on the internet and thus help prevent the increase in internet addiction (9)(10)(17).

Our research shows that teens used the internet the most for social media both before and during the COVID-19. Facebook is the most visited social media site among teenagers and young adults. Factors associated with technology acceptance and social media use are influenced by age (18)(19). As researchers move beyond the use of basic mobile capabilities and take advantage of the more dynamic features of social and digital media platforms, it is important to first understand online behaviour and preferences for types of treatment and recovery support among adolescents (20)(21). Furthermore, as the development of treatment programs for adolescents tends to derive from adult research, it is important to have knowledge about access to mobile phones and use of digital platforms and social media among adolescents (22)(23).

The internet is one of the main channels for updating COVID-19 information as well as online learning tools (24)(25). During COVID-19, many of the learning processes were carried out online. This
can cause the duration and frequency of internet usage to increase. Adolescent use the internet the most. Several studies have observed a link between low life satisfaction and high Internet addiction(23)(26)(27). The increasing use of the internet must be balanced with efforts to prevent the negative impacts it can cause.

**Conclusion**

There were differences in internet usage patterns during the COVID pandemic at 18-24 years of age. Internet use was increasing during the COVID-19 pandemic.

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**Conflicting Interest:**

The authors declare that there is no conflict of interest.

**References**

4. Ri KK. COVID-19 dalam Angka. 2020;
   https://doi.org/10.1016/j.invent.2018.04.004