INTI JOURNAL | eISSN:2600-7320
Vol.2022:13

# Impact of Digital Media Usage on Preventive Behavior among Young Adults

Karen Sabina Freeman[1*], Chan Pee Ven[1], Revathi Sagadavan[1]

[1]Faculty of Business and Communication, INTI International University, Putra Nilai, Negeri Sembilan, Malaysia

[*]**Email**: karen.freeman@newinti.edu.my

## Abstract

Most countries have endorsed preventive behavioral guidelines or SOPs to reduce the spread of the COVID-19 virus like using facemasks and maintaining physical distancing. Nevertheless, there are studies indicating that young adults least adhere to such guidelines which pose a public health concern. This study sought to establish the top digital media used by young adults in Malaysia, the reasons for those choices, and to assess the relationship between digital media usage and preventive behaviors. Results from an online survey ($N$=389) revealed that WhatsApp is most consumed by young adults and the main reason for accessing digital media is to get immediate/fast, up-to-date news and information. In addition, results revealed that TikTok has the highest mean of preventive behavior among young adults. Findings from this study establish that users consume specific digital media for discrete reasons. Results also reveal that the top most preventive behavior recorded by TikTok users is wearing face masks. These have implications for relevant policy makers to prepare for future contagious outbreaks.

## Keywords

Digital Media, Preventive Behavior, Young Adults, COVID-19

## Introduction

The emergence of the coronavirus has changed the daily life of citizens. News outlets saw spikes in their audiences as the public sought the latest coronavirus updates, and in particular, internet traffic grew with the implementation of lockdowns (Statistica, 2021). In a short period, there is a peak in the use of digital media since 2020.

As of writing this paper, the COVID-19 pandemic continues to be an unmitigated public health concern in the world. Although vaccines are being administered, there remains a pressing need to identify behavioral strategies to reduce person-to-person transmission (Van Bavel et al., 2020).

**Submission**: 9 December 2021; **Acceptance:** 1 March 2022

**Copyright:** © 2022. All the authors listed in this paper. The distribution, reproduction, and any other usage of the content of this paper is permitted, with credit given to all the author(s) and copyright owner(s) in accordance to common academic practice. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license, as stated in the website: https://creativecommons.org/licenses/by/4.0/

The Center for Disease Control and Prevention has endorsed empirically supported preventive behavioral guidelines that can reduce the spread of the virus, for example, using facemasks and avoiding congested indoor spaces (CDC, 2020). These preventive behaviors are critical to ongoing pandemic efforts, especially as citizens resume societal roles like returning to workplaces, schools, and other places.

In addition, Jorgensen, Bor & Petersen (2020) found that young adults are reporting the poorest adherence. One contributing factor is that many young adults feel less at risk for the consequences of COVID-19 (Park et al., 2020) and discount the importance of preventive behavioral guidelines.

This outlook of young adults needs to be further explored in Malaysia. As such, this study tries to fill the gap by examining if the digital media usage of young adults can influence them to embrace preventive behavior since they are digital natives and have a high consumption level for this environment compared to digital immigrants.

**Digital Media Consumption and Users' Preventive Behavior**

A study by Auxier and Anderson (2021) found that Instagram, Snapchat, and TikTok are the most highly used apps by young adults between ages 18–25 years. These apps were used even more in the recent year, and as much as several times a day.

During a crisis, digital media is a paramount source of information. Characteristically, facts and data from various digital media would have a different influence on behavioral outcomes. Liu (2020) states that the most used types of digital media channels to obtain pandemic-related information are social media, mobile social networking apps, social live streaming services, and, online news media. In addition, digital media users were found to distinctly practice preventive behaviors.

In another research, Kaya (2020) revealed that Facebook was the number one used social media followed by WhatsApp and Instagram. A majority of users also indicated a high usage of YouTube.

Meanwhile, Limaye et al. (2020) state that social media allows anyone to access a wide scope of information any time and offers users two-way communication that conventional media cannot provide.

Furthermore, one of the main reasons cited to use social media is to get up-to-date news, especially during this COVID-19 outbreak. In line with this, social media was found to serve as the main medium that has educated and encouraged people to place a higher level of importance on personal and environmental hygiene (Kaya, 2020).

In a study by Basu and Dutta (2008), they state that as opposed to social media, mobile social networking platforms like WhatsApp and WeChat have become channels that are most often used for daily communication with others especially with close family and friends. The researchers found that information shared or exchanged on such platforms could be more persuasive in terms of changing a person's behavior due to the higher personal and emotional connections.

This was further supported by Gray's (2019) research, which stated that social live streaming services could trigger behavioral change. This is because one can add their own creative ideas to their live videos and this makes it captivating to users.

Over the years, many researchers have found that social media can contribute to changing behaviors. According to Gesualdo et al., (2010) during the H1N1 influenza outbreak, digital media proved to be a prime mover in initiating preventive behaviors. This is due to its ability to disseminate information swiftly.

Additionally, research by Liu (2020) confirms that looking for information about the pandemic using mobile social networking apps and using online news media was significantly associated with preventive behaviors.

It was reported that individuals would engage in more behaviors that are preventive when they feel that there is a critical threat to them. As such, the coronavirus threat can trigger a behavioral change in individuals to engage in COVID-19 preventive behaviors (Harper, et al., 2020).

As such, digital media can greatly abet with reducing the risk of threats arising from pandemics.

**Uses and Gratification Theory**

People use media to gratify specific wants and needs. Unlike many media theories that view media users as passive, the uses and gratification theory sees users as active agents who have control over their media consumption. This theory is appropriate to be used in the context of this study due to users' selective and extensive usage of computer-mediated communication.

## Methodology

The main objective of this study is to gauge the ability of the independent variables to predict the dependent variables, which is to study the relationship between digital media usage and young adults' preventive behavior. The correlation design in this study helps to uncover the relationship between digital media usage and preventive behaviors, whereas the descriptive design uncovers information regarding the demographic data of respondents, the type of digital media most used, and the reasons for the usage.

To achieve the objectives of the current study, the survey design is used. An online questionnaire using Google Forms was developed. This online method is most suited to the respondents who are Malaysian young adults (18-25 years) and are highly engaged with social media and the internet. In addition, the online questionnaire was appropriate as Malaysia was experiencing a lockdown when the questionnaires were distributed. The questionnaire is adopted from the research of Liu (2020) where preventive behaviors were measured by advice from China's health authorities.

The online questionnaires were distributed to various universities and through friends and colleagues. The researchers secured 389 questionnaires. A pre-test was run and the Cronbach Alpha of both variables is reliable with values of more than 0.80.

## Results and Discussion

The sociodemographic variables covered several characteristics. Respondents ranged in age from 18 to 25 years (M=21.09, SD=3.88) with 56.8% being females. In addition, the statistics indicate that a high percentage (73.0%) of respondents are currently pursuing tertiary studies or have an undergraduate degree or diploma. Slightly more than half of the respondents (51.7%) are from urban areas in Malaysia while another 42.7% are from semi-urban areas. More than half (67.4%) of the respondents are not working and this corresponds with the young adult age group where many are still pursuing their studies.

Meanwhile, as for the top 5 types of digital media consumed by young adults in Malaysia during the COVID-19 pandemic, respondents were asked to rank the type of digital media that they most consumed. As evident from the results in Table 1, the top 5 digital media most consumed by young adults are WhatsApp (89.5%), Instagram (88.7%), YouTube (88.7%), Facebook (66.8%), and TikTok (52.2%).

These findings are in line with research conducted by Liu (2020) who established that the four most widely used digital media channels to obtain pandemic related information are social media, mobile social networking apps, social live streaming services, and online news media.

WhatsApp being the most used digital media is not surprising considering that WhatsApp was made for mobile devices. It is a useful app to keep in touch with others especially during pandemic lockdowns. The multiple functions allow users to send text messages, record voice messages, make voice/video calls, and send videos, images, or documents to others.

Basu and Dutta (2008) confirm this in their findings where they state that mobile social networking platforms like WhatsApp and WeChat have become channels that are most often used for daily communication with others especially with those in a close-knit social networking group.

Table 1. Top 5 Digital Media most consumed by young adults

| Media | *N* | Percent of Cases |
|---|---|---|
| WhatsApp | 348 | 89.5% |
| Instagram | 345 | 88.7% |
| YouTube | 345 | 88.7% |
| Facebook | 260 | 66.8% |
| TikTok | 203 | 52.2% |

Table 2 indicates that the main reason for accessing digital media is to get immediate/fast, up to date news and information (86.6%) followed by wanting to be more aware of what is going on around them (83.3%). Coming in at third and fourth placing is to be able to get different types of news and information and to communicate with family and friends (78.1%).

Social media allows timely access to a huge range of information. Limaye et al. (2020) state that social media affords users dynamic two-way communication beyond what any

conventional media could offer. As such, younger audiences will find this particularly engaging, especially to get speedy and timely access to any topic.

This study's finding is also supported by Kaya (2020) who states that one of the main reasons to use social media is to get up-to-date news especially during this COVID-19 outbreak. In line with this, social media was found to serve as the main medium that educates and encourages people to place a higher level of importance on personal and environmental hygiene.

Table 2. Top Reasons for Using Digital Media

| Reasons | *N* | Percent of Cases |
|---|---|---|
| To get immediate/fast, up to date news & information | 337 | 86.6% |
| More aware of what is going on around me | 324 | 83.3% |
| Can get different types of news and information | 304 | 78.1% |
| To communicate with family and friends | 304 | 78.1% |
| To get credible and accurate news and information | 162 | 41.6% |

Next, the researchers looked into determining the relationship between digital media consumption patterns and users' preventive behavior. Here, the focus was on the top 5 media most used by Malaysian young adults.

Inferential tests were conducted and for this study, the researchers ran non-parametric tests because the analyzed data was nominal and ordinal. In addition, the questionnaires were distributed using the random sampling technique. Non-parametric methods are also widely used for studying populations that take on a ranked order.

Meanwhile, the Kruskal-Wallis test or better known as the H test was employed to further examine if there are differences in the preventive behavior of the respondents based on the top 5 most consumed media. The results from the H Test show a p-value of 0.008 with the test statistics of 13.801. This shows a significant difference among the 5 categories of digital media in terms of preventive behavior.

Table 3 shows the results of mean rank values of preventive behavior based on the top 5 media most used. The usage of TikTok (M=220.86) has the highest score in terms of preventive behavior. This is followed by WhatsApp (M=184.49), YouTube (M=182.12), Instagram (M=167.57), and Facebook users (M=155.76).

The higher scores indicate that users have a higher chance of observing preventive behavior. It is interesting to note that TikTok has the highest mean of preventive behavior among young adults in Malaysia. This video sharing app has become the most downloaded social media app in the world overtaking Facebook. In fact, literature points to the fact that TikTok is fast replacing YouTube as the go-to application for video content consumption during the pandemic era.

The findings of this research concur with a study conducted by Auxier and Anderson (2021) which shows that Instagram, Snapchat and TikTok are the most highly used apps by young adults within the ages of 18–25 years. Their findings indicate that these apps were used even more in the recent year during the pandemic and as much as several times a day.

Table 3. Mean rank values of preventive behavior based on top media

| | | Average Preventive Behavior |
|---|---|---|
| Top media | *N* | Mean Rank |
| TikTok | 59 | 220.86 |
| WhatsApp | 79 | 184.49 |
| YouTube | 55 | 182.12 |
| Instagram | 114 | 167.57 |
| Facebook | 53 | 155.76 |

The results for the highest mean rank values for observing preventive behavior by TikTok users are displayed in Table 4. The top most preventive behavior recorded by TikTok users is wearing face masks. This is followed by avoiding travel to infected areas, avoiding people with flu-like symptoms, avoiding public transport, and keeping away from crowded areas.

Table 4. Mean rank values of preventive behavior for TikTok

| Preventive Behavior | TikTok (*N*=59) |
|---|---|
| Wearing a face mask in public | 4.83 |
| Avoiding travel to infected areas | 4.71 |
| Avoid people with flu-like symptoms | 4.64 |
| Avoiding public transport | 4.61 |
| Keeping away from crowded places | 4.61 |
| | |

These findings are supported by Liu's (2020) research, which found that users of digital media were found to distinctly practice preventive behaviors. In fact, a study by Gray (2019) also stated that social live streaming services could trigger a change in behavior.

This is in a large part due to the appealing nature of live video content that covers storytelling and allows an individual to add their personal touch of creativity. These engaging characteristics are particularly attractive to digital natives.

Gesualdo et al., (2010) state that since earlier influenza outbreaks, digital media was found to be a powerful driving force in instituting preventive behaviors due to its high potential in disseminating information fast.

## Conclusion

As COVID-19 continues from a pandemic to an endemic stage, it is crucial to institute effective measures to fight the coronavirus effectively. The adherence to recommended preventive behaviors is important to ensure public health. Digital media is undoubtedly a powerful driving force and could be used effectively during a health crisis in instituting preventive behaviors due to its high potential in disseminating information fast. This could help in the efforts to curb the outbreak of diseases.

The theoretical framework of this research was developed based on the uses and gratification theory. The results provide adequate support for the proposed model. This study

sheds light on the findings that digital media and young people's likelihood of engaging in preventive behaviors are in tandem with their exposure to COVID-19-related information on digital media. This study provides new findings that add to the body of knowledge about the usage of specific digital media, in this case, TikTok, and its influence on the preventive behavior of young adults in this study.

In addition, the findings serve several important implications for the relevant authorities to better understand the role of digital media particularly in reaching young adults during a crisis. The usage of specific digital media can effectively be used to create awareness about important matters and to disseminate relevant information to specific audiences during a crisis in an expeditious manner.

## Ethics Statement

INTI IU University Research & Ethics Panel approved this study [INTI/UEC/2018/001].

## Acknowledgement

This study is supported by the INTI IU Research Seed Grant [INTI-FOBCAL-20-02-2021].

## References

Auxier, B., & Anderson, M. (2021, April 7). Social Media Use in 2021. Pew Research Center. https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/#fn-27044-1

Basu, A., & Dutta, M.J. (2008). The relationship between health information seeking and community participation: the roles of health information orientation and efficacy. Health Communication, 23:70–79. https://doi.org/10.1080/104102307 01807121

CDC. (2020). Implementation of mitigation strategies for communities with local COVID-19 transmission. Atlanta, GA: US Department of Health and Human Services, CDC. Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/downloads/community-mitigation-strategy.pdf.

Gesualdo, F., Romano, M., Pandolfi, E., et al. (2010). Surfing the web during pandemic flu: Availability of World Health Organization recommendations on prevention. BMC Public Health, 10 (561). https://doi.org/10.1186/1471-2458-10-561

Gray, J.B. (2019). The power of storytelling: Using narrative in the healthcare context. Journal of Communication in Healthcare, 2(3), 258-273. https://doi.org/10.1179/cih.2009.2.3.258

Harper, C.A., Satchell, L. P., Fido, D., & Latzman, R.D. (2020). Functional fear predicts public health compliance in the Covid-19 pandemic. International Journal of Mental Health and Addiction. https://doi.org/10.1007/s11469-020-00281-5

Jorgensen, F., Bor, A., & Petersen, M.B. (2020). Compliance without fear: Predictors of protective behavior during the first wave of the Covid-19 pandemic. British Journal of Health Psychology. https://doi.org/10.31234/osf.io/uzwgf

Kaya, T. (2020). The changes in the effects of social media use of Cypriots due to the Covid-19 pandemic. Technology in Society, 63, 101380. https://doi.org/10.1016/j.techsoc.2020.101380

Limaye, R.J, Sauer, M., Ali, J., et al. (2020). Building trust while influencing online COVID-19 content in the social media world. Lancet Digital Health, 2(6), 277-278. https://doi:10.1016/S2589-7500 (20) 30084-4 [Medline: 32322814]

Liu, P.L., (2020). Covid-19 Information Seeking on Digital Media and Preventive Behaviors: The Mediation Role of Worry, Cyberpsychology, Behavior, and Social Networking, 23(10). https://doi.org/10.1089/cyber.2020.0250

Park, C. L., Russell, B. S., Fendrich, M., Finkelstein-fox, L., Hutchison, M., & Becker, J. (2020). Americans COVID-19 stress, coping, and adherence to CDC guidelines. Journal of General Internal Medicine. 35, 2296–2303. https://doi.org/10.1007/s11606-020-05898-9.

Statistica. (2021, April 7). Global digital population as of January 2021. Retrieved from https://www. statista.com/statistics/ 617136/ digital-population-worldwide/

Van Bavel, J.J., Baicker, K., Boggio, P.S., et al. (2020). Using social and behavioral science to support COVID-19 pandemic response. Nature Human Behavior. 4(5), 460-471. https://doi.org/10.1038/s41562-020-0884-z