

Generation z's perceptions of health information about the Covid-19

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Abstract The COVID-19 pandemic has spread widely worldwide, and Indonesia is no exception. It has led the government to enforce an imperative policy, advising most activities to be done at home by everyone, including Generation Z, that has lived and grown up among the advances in communication and information technology. This study examines Generation Z's perceptions of health information regarding the COVID-19 pandemic. This study was conducted utilising a quantitative research technique utilising a survey methodology. In this study, it was found that Generation Z firstly learned about the emergence of the COVID-19 virus on the internet, especially on social media. No negative perception was found from Generation Z related to any information shared on the internet, including their social media. Additionally, the study found that getting health information through social media was their choice, closely related to their daily activities.

Keywords: perception; health information; covid-19

INTRODUCTION

COVID-19 was first discovered in China and spread rapidly to 29 other countries outside China. The confirmed cases nationwide reached 79,331 cases, while 2,618 deaths were reported worldwide. The COVID-19 virus has caused problems that have not been resolved recently (Xie et al., 2020). WHO reported that 11,305,850 people worldwide had been infected with the virus by 6 July 2020, of which 531,806 faced a death toll. The world's highest number of confirmed positive cases in one country reached 5,820,840, while Indonesia has become the country with the highest recorded cases in Asia. Indonesia has been identified as one of the countries hardest hit by COVID-19. The Indonesian Ministry of Health reported that 35,259 Indonesians had been exposed to COVID-19 and that 12,636 people had been reported to be successfully recovered from the virus.

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Because of the rapid spread of the COVID-19 pandemic, the Chinese government has imposed a mass quarantine in Wuhan, built emergency hospitals, and isolated people who have been proven to have COVID-19 (Sherman, Patterson, Tomar, & Wigfall, 2020). Regarding the social condition, mass lockdowns come with several problems, including the crisis of information, which is considered a big problem for the community. It causes the public to actively spread information, even without confirming whether that information is accurate or not (Xie et al., 2020). The public easily accepts anonymous and inaccurate information disseminated through social media. Thus, it is essential to clarify any received information by double-checking the primary source (Oneal et al., 2019).

A large amount of information and knowledge related to the pandemic has created a crisis of social trust (Kye & Hwang, 2020). Professionals, such as managers of educational institutions, librarians, health organisations and other professional organisations, are responsible for providing an integrated and reliable information system for the community. Communication Technology, including WhatsApp, WeChat, Facebook, and Twitter, is an alternative channel to provide health information (Stephens, Li, Robertson, Smith, & Murthy, 2018). The media are considered one of the most effective ways to obtain information during the COVID-19 pandemic since they are obligated to provide sufficient information to protect public health (Roy, Hasan, Sadri, & Cebrian, 2020).

Several studies of information-seeking behaviours involve those affected by the pandemic in Japan (Rahmi, Joho, & Shirai, 2019) as well as related research in Indonesia that focuses on the elderlies regarding how they obtain information, follow-up, and then successfully face the pandemic period (Pang, Karanasios, & Anwar, 2019); the validity and accuracy of information are useful during in decision-making. According to a study conducted on social media users in Australia, a person's impression is very important and will influence when making choices or taking actions (Jonason & Sherman, 2020). Moreover, based on the results of studies in Japan, Indonesia, and Australia, it can be concluded that each social group will respond differently when dealing with a pandemic emergency.

Generation Z, often referred to as Gen Z or the millennial generation, was born between 1980; Generation Z is the new digital native (Prensky, 2001). Information received by Generation Z might be distributed without reference and even reinforced by other information from various sources. The same rule also applies to the health information regarding the future condition of the COVID-19 pandemic. For this reason, the researchers want to conduct a survey targeting Generation Z regarding their perception of health information during the COVID-19 period.

Information-seeking behaviour is an individual activity that meets the need for information that can be used to decide the action to take

(Liddy, Blazkho, & Mill, 2014). Research on the search for information has been carried out since 1950. James Krikelas created the first model in the search for information theory in 1983 with the following stages, namely the first stage of the search for information, the second stage of the search for the information itself, the third stage of the search for information, and last stage of this search are satisfied with the information found and the end of the search for information (Krikelas, 1983).

Savolainens uses information that seeks behavioural models to solve problems that occur in everyday life (Savolainen, 1995). The concept of this information-seeking behaviour model was also used in Barahmand's research on female students in Iran (Barahmand, Nakhoda, Fahimnia, & Nazari, 2019), Yeoman's research on premenopausal women in America (Yeoman, 2010), Loudon's research on new mothers about having children in America. The hunt for information is strongly related to issues that arise for someone that needs to be handled as quickly as feasible by gathering as much information about them as possible to solve the problem. In order to find knowledge, one may question more experienced individuals, study books, or search the internet.

Access to reliable health information is difficult to come by in the setting of the COVID-19 epidemic, which necessitates everyone to remain at home (Buttorff, Ruder, & Bauman, 2017), so online searches are expected for health information (Fox & Purcell, 2010). Social media can obtain information in line with the advancements in communication technology and information. Social media users can actively share information through this platform and reread it with people interested in the same thing (De Choudhury, Morris, & White, 2014). The synergy of the search for information between the internet, social media, and the general media has stimulated the activeness of information seekers to obtain the requested information (Park, Oh, & You, 2020)

The search for health information using social media is usually done to determine whether other people have experiences similar to those they felt at the time (Cartright, White, & Horvitz, 2011). Sometimes, information searches are carried out through websites to seek advice, connect with experienced officers, and seek further professional action (Cartright et al., 2011). Although some individuals believe that discussing health information with friends and family is more comfortable, searching for health information on the internet is more manageable and can be done at any time (Duchastel, 2001).

Differences in information-seeking behaviour based on health information sources give rise to community groups and how they obtain this information; community groups or social generations are defined as social formations formed in the form of groups of people with different levels of ability based on similar levels of differentiation, differentiating between the year of birth, the time and the age of birth. The research will look at how Generation Z behaves while looking for health

information on the COVID-19 epidemic in Indonesia. It is carried out using quantitative and survey research to establish a theory of information-seeking behaviour while referring to the research topics.

METHODOLOGY

According to a report released by the Indonesian Internet Provider Service Association, 143.26 million Indonesians were registered as internet users in 2017. On a percentage basis, it is estimated that 74.23 per cent of the Indonesian population uses internet services for various reasons. According to Fraenkel, if the number of people researched cannot be determined, the researcher must pick at least 100 people for a quantitative descriptive study (Fraenkel, Wallen, & Hyun, 2012). This research employs a formula for unknown or approaching populations with a confidence level of 0.95 per cent, an error margin of 0.05, a standard deviation of 0.5, and a formula for a bigger population (Smith, 2013).

RESULTS AND DISCUSSION

The research regarding Generation Z's perceptions of COVID-19 health information, with the characteristics of respondents being Gen-Z internet users in Indonesia, found that 485 people have completed questionnaires which were distributed across all platforms frequently used by Generation Z so far. The demographics of the respondents are shown in Table 1.

Table 1. Demographics Respondents

	N = 485	Percentage %
Gender		
Women	325	67
Man	160	33
Generation		
Gen X (45-60+ years)	4	0.89
Gen Y (25-44 years)	15	3.092
Gen Z (17-24 years)	466	96.08
Residence		
Urban	319	65.77
Rural	151	31.13

Source: Data Process by Author (2022)

Table 1 contains demographic information for the respondents. The questionnaire was filled out by 325 women and 160 men, 67% and 33%, respectively. The division of this generation is based on the development of communication and information technology that comes with the time of birth for each generation; the first generation of Generation Y was born in 1980 in which Helsper and Eynon said that at that time, Facebook and MySpace gave birth to the second generation, namely digital natives(Helsper & Eynon, 2010). Digital natives refer to

those knowing the Internet only to the extent of their social and participatory functions(Fuchs, 2011). The new digital native is characterised by the presence of a more reachable internet in which mobile phone technology is synchronised with the use of the internet. Therefore, those present in this century cannot only read the information via the internet but can also produce information and share it with others

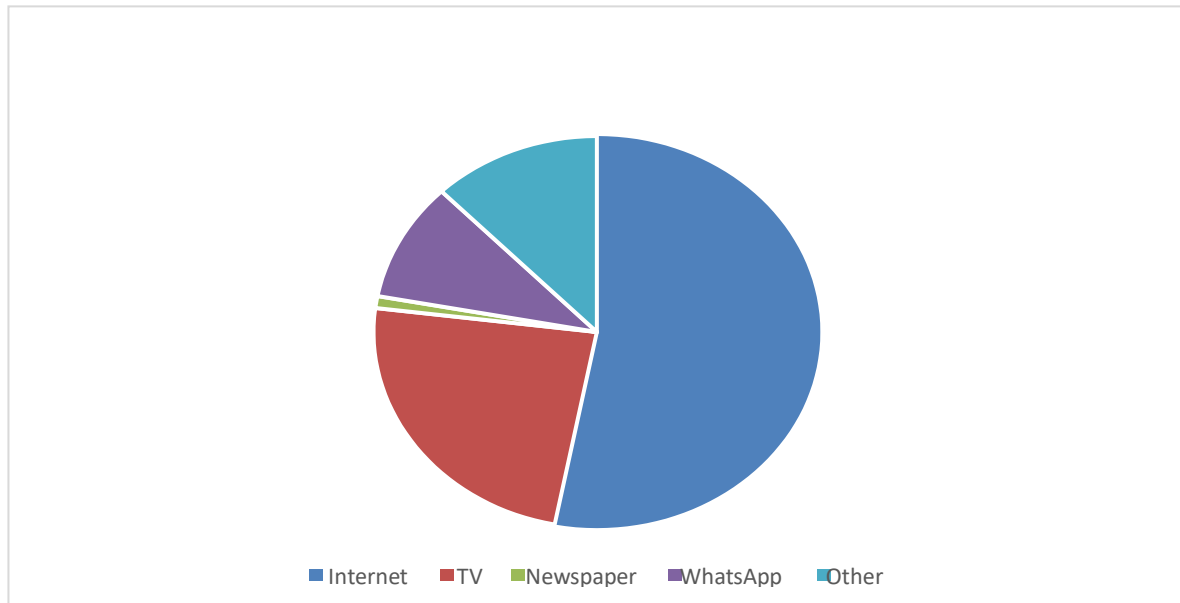


Figure 1. The first resources where the respondents find out about COVID-19
Source: Data Processed by Author (2022)

The distribution of the initial information sources utilised by respondents to gather information regarding the existence of coronavirus is shown in Figure 1 . As many as 64 per cent of respondents said that the internet became their first source of information when they found out about COVID-19, while 29.3 per cent of respondents received the information from television, and the rest received it from radio, newspapers, and the WhatsApp Group application. The existence of communication and information technology that has been internalised with a mobile phone makes it easy for Generation Z to get information quickly without being limited by time and space. What is unique in Generation Z is that they can easily share any information they have obtained with other people

Figure 2 provides an overview of the length of time respondents spent accessing the internet during the Covid-19 pandemic. Table 3 shows that 8.9 per cent of respondents access the internet for 1 to 3 hours, 44.5 per cent use it for 3 to 6 hours, while those accessing the internet for 7 to 9 hours are 46.6 per cent.

Figure 4 shows the information requested by the respondents via the Internet. Health information was the most searched by respondents on the Internet, followed by information on education, economics, politics, lifestyle, and entertainment. The COVID-19 pandemic prompted

respondents to keep an update on the development of the pandemic to consider their actions and to find out how it would affect their health.

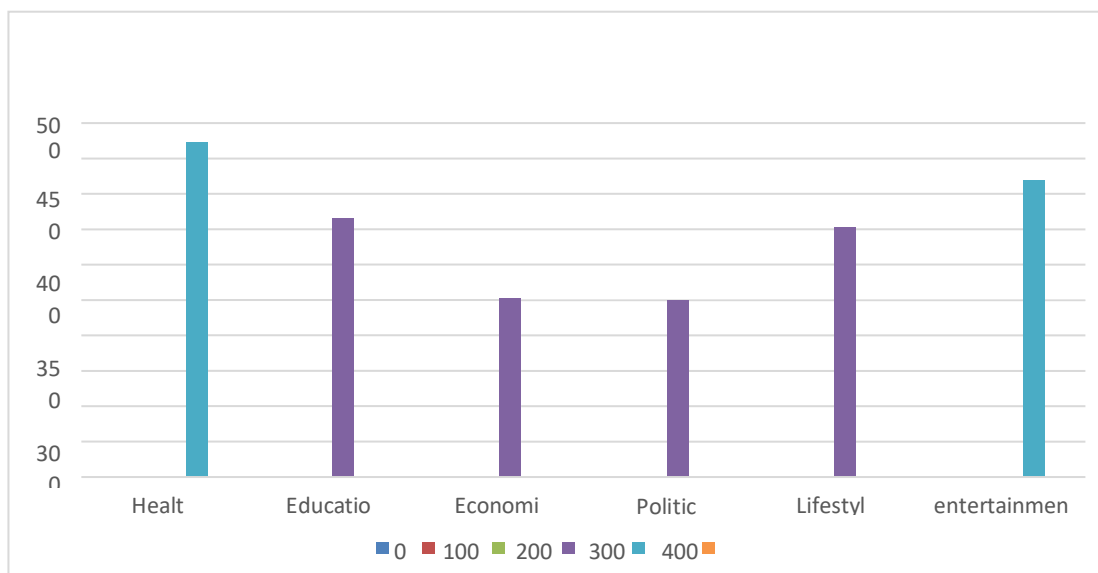


Figure 3. Types of Information obtained from respondents on the internet
Source: Data Processed by Author (2022)

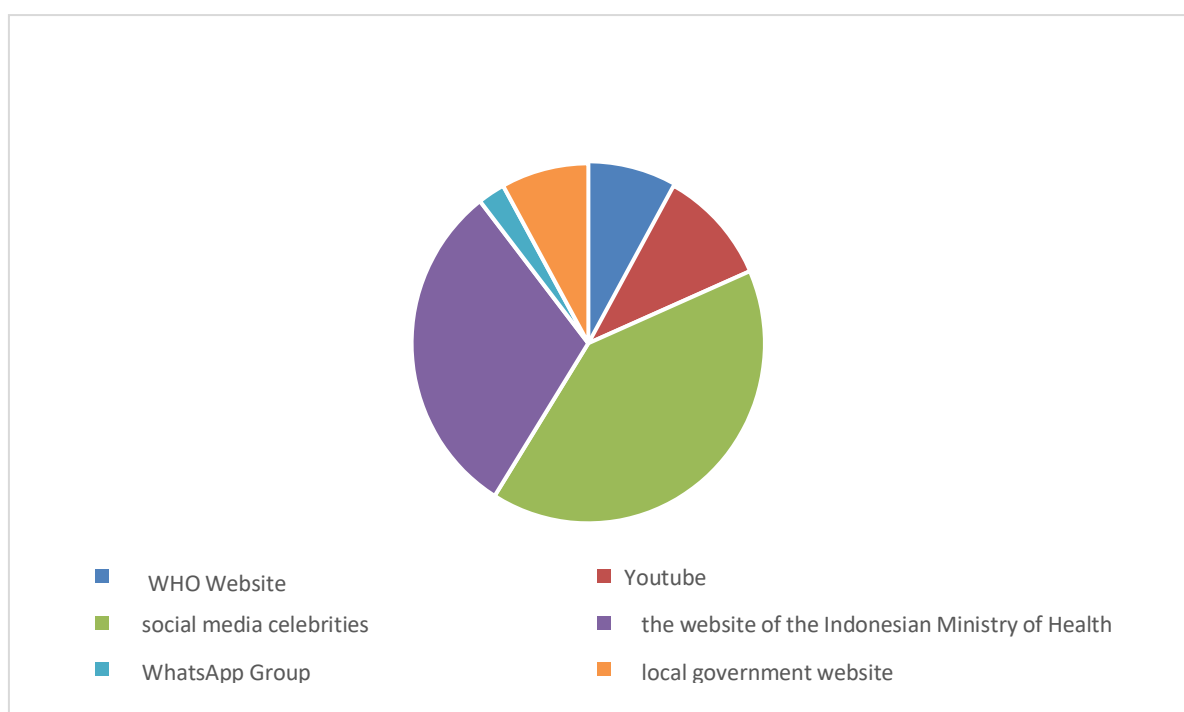


Figure 4. Most frequently used sources to find information about COVID-19
Source: Data Processed by Author (2022)

Figure 4 describes preferable platforms and most frequently selected organisation websites to seek health information related to the coronavirus. To learn more about COVID-19, 43.9 per cent of respondents used social media operated by artists or influencers. These websites are social media platforms such as Facebook, Instagram, and

Twitter. 33.2 per cent of respondents sought health information from sites operated by the federal government, 11.3 per cent sought information from local governments, and the remaining respondents obtained information through broadcast messages posted on the WhatsApp group. As previous researchers have done (Roy et al., 2020), the research results are not much different, and social media are still the primary source used by respondents to seek health information. Social media owned by celebrities and public figures, also known as influencers, serve as the next preferred sources seen and used as a reference to update the Indonesian people's health status because influencers present good implications for every message they convey.

Table 6. Most Preferred Social Media Platforms to Find Out the Information about COVID-19.

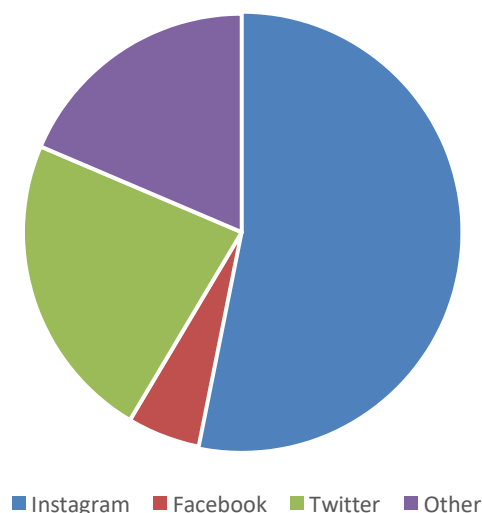


Figure 5. Most Preferred Social Media Platforms to Find Out the Information about COVID-19

Source: Data Processed by Author (2022)

In this study, respondents were also asked which social media they prefer when looking for health information related to COVID-19, as presented in Figure 5. It can be seen that 53.2 per cent of respondents liked the information shared on Instagram, 22.9 per cent via Twitter, while 18.6 per cent of them chose to use other social media such as TikTok, YouTube, and podcasts. Developed in 2010, Instagram is a social media for sharing photos and video network services.

Instagram users may access the platform through a feature-limited app or online interface and alter content using different filters. A paragraph known as a caption may accompany each Instagram photo. There is a maximum of 2200 characters. This platform also has a private chat, the ability to tag material with hashtag searchability, the ability to incorporate numerous photographs or videos into a single post, and the tales feature, which allows users to upload original content that others

may view for 24 hours. Messages, bars, and tales allow users to connect in various ways, with varying degrees of privacy and formality (Carpenter, Morrison, Craft, & Lee, 2020).

One of the most popular Internet programs in the past decade, Facebook has over 2 billion members globally (Feng, Wong, Wong, & Hossain, 2019). Facebook allows users to post status updates, wall updates, remark, read news feeds, give likes, message, publish, take images, organise groups, play games, manage fan pages, create events, take notes, and talk in groups (Ryan & Xenos, 2011). Facebook has become essential for maintaining social presence and expanding social ties.

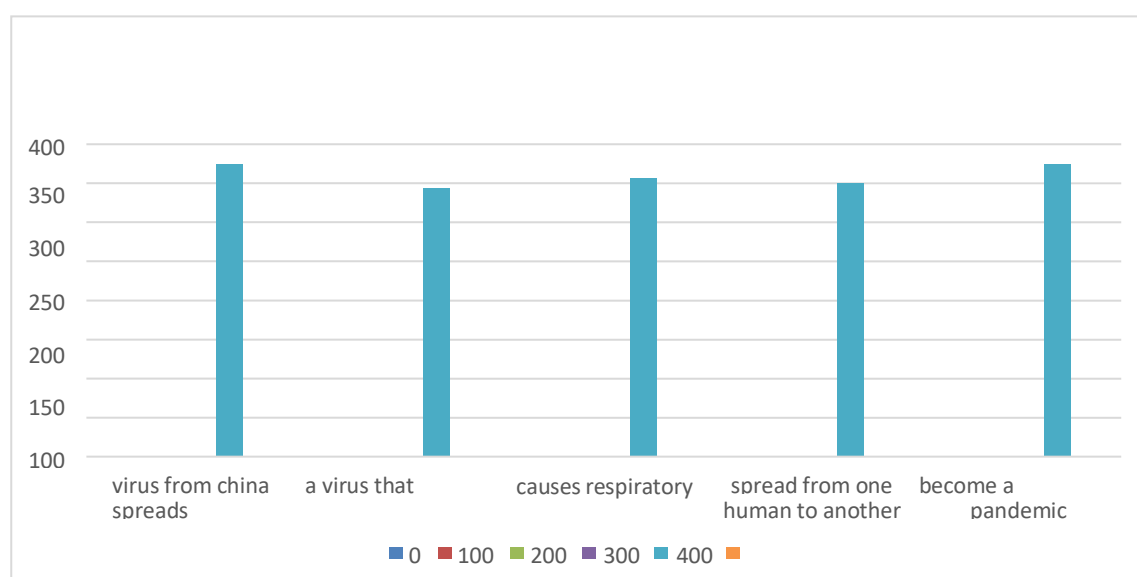


Figure 6. Respondents' Knowledge of the Covid-19 Virus
Source: Data Processed by Author (2022)

Figure 6 shows the respondents' degree of understanding of the COVID-19 virus. The COVID-19 virus, which has been declared a pandemic owing to its wide spread, was discovered in Wuhan, China, according to the majority of responses. They are also aware that the virus may cause respiratory diseases, spread from person to person, and become a global pandemic. The respondents' information is compatible with the standard statistics supplied by the WHO and needs to be seen by people all across the globe. People who took the questionnaire were given questions based on credible information from the WHO website. This makes it a good way to teach people about literacy and health.

The respondents fully recognised symptoms of patients infected with the COVID-19 virus, such as fever, cough, fatigue, dizziness, shortness of breath and heart palpitations, with an average level of knowledge closely reaching 90%. Respondents are well aware of the symptoms experienced by those infected with the coronavirus. As can be seen in Figure 6, the data presents the respondents' basic knowledge regarding the signs and symptoms of coronavirus infection.

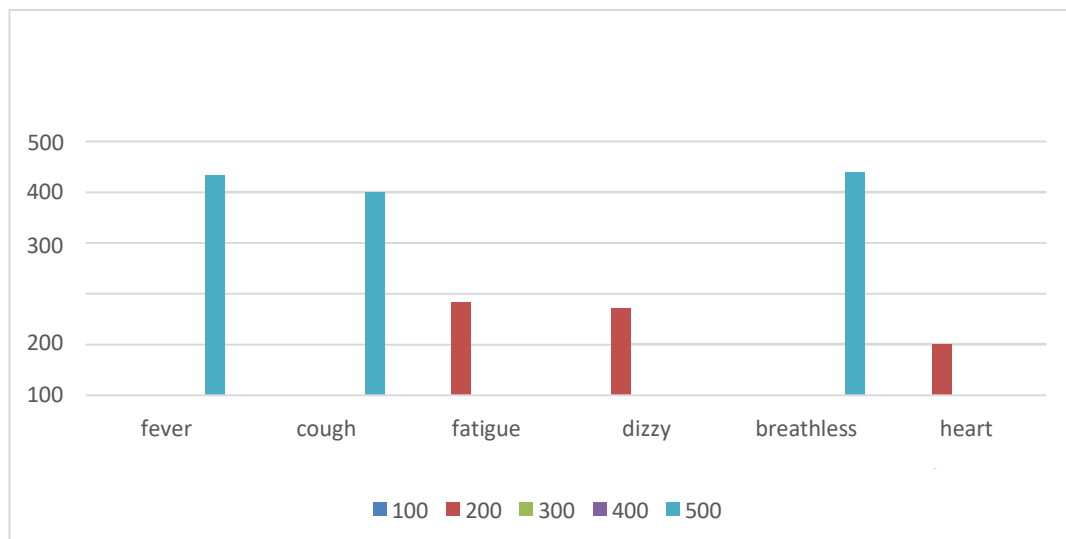


Figure 7. Knowledge of early symptoms in patients infected with COVID-19 virus
Source: Data Processed by Author (2022)

The respondents fully recognised symptoms of patients infected with the COVID-19 virus, such as fever, cough, fatigue, dizziness, shortness of breath and heart palpitations, with an average level of knowledge closely reaching 90%. Respondents are well aware of the symptoms experienced by those infected with the coronavirus. As can be seen in Figure 6, the data presents the respondents' basic knowledge regarding the signs and symptoms of coronavirus infection.

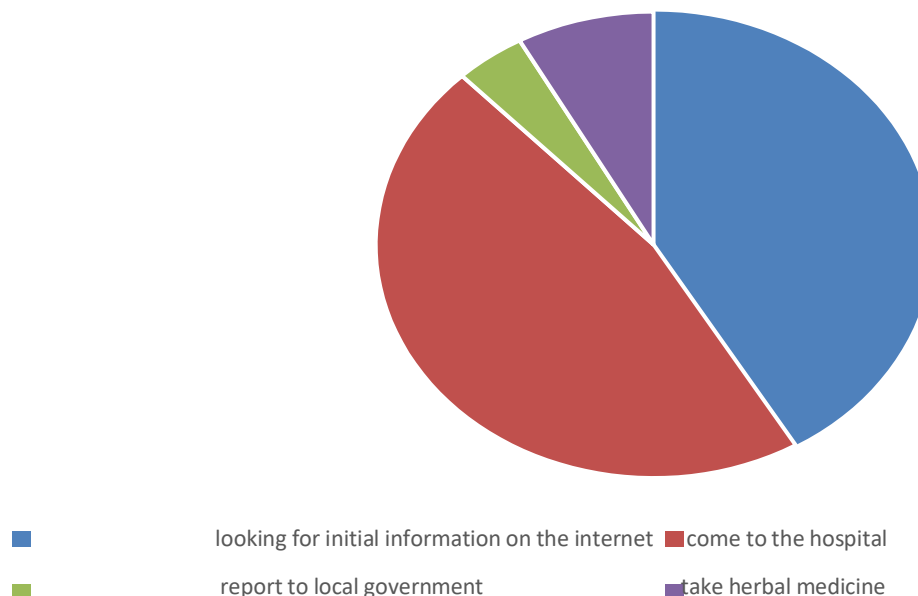


Figure 8. Steps taken by respondents if they experience symptoms of coronavirus infection for the first time.
Source: Data Processed by Author (2022)

The first step taken by respondents when they experienced the COVID-19 virus infection symptoms is to seek information and confirm these symptoms through the hospital, as seen in Table 8. While 41.4 per cent of respondents chose to find out about this via the internet before coming to the hospital, others decided to report to the local government. There were even those who used natural treatments to treat their problems. The Internet has made a wealth of health and medical information freely accessible(Akram, Khan, Jan, & Shehryar, 2021). Millions of people use the internet for health information (Atkinson, Saperstein, & Pleis, 2009). As much as 61 per cent of American adults use the Internet for health information, according to the Pew Internet & American Life Project, one of the most recent and extensive studies on American health information (Jones & Fox, 2009). Figure 9 shows the types of media that should be employed for health initiatives.

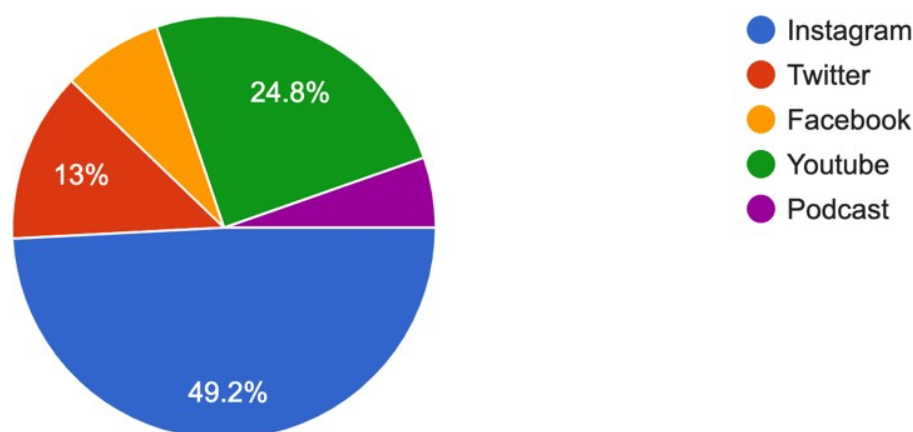


Figure 9. Types of media that should be employed for health initiatives
Source: Data Processed by Author (2022)

When searching for information on social media, Instagram serves as the respondents' primary choice. Table 10 explains which media are most preferred by respondents when seeking information. As many as 49.2 per cent of respondents chose Instagram as the main choice to seek health information, while other respondents chose Twitter, Facebook, YouTube, and podcasts as alternative media to obtain information regarding a health condition. Instagram's visual aspect is seen as the major element that separates it from other social media platforms, mostly text-based (Pittman & Reich, 2016); the use of images and captions on Instagram allows users to express and share writing through images. McLuhan (1964) said that the media is a technological message that shapes how people learn and think.

In Table 1, we can see the respondents' demographics who answered questions randomly distributed through social media platforms owned by the research team. Table 1 shows that the respondents are Generation Z, typically living in urban areas. Generation Z, or digital native, was born in 1980, along with the emergence of

communication and information technology that facilitates all the needs and activities of said generation. Some researchers refuse to classify society based on their adaptation to technology (Davies, Coleman, & Livingstone, 2016), but Prensky (Prensky, 2001) In order for everyone to understand the influence of technological advancements on human behavioural development, there must be distinctions between digital natives and digital immigrants (Helsper & Eynon, 2010). Table 1 also reveals that more respondents reside in cities than rural areas. The study also examines whether those living in rural areas can access information shared through high-level communication and information technology, given the difference in reception levels available in the city and the village.

Generation Z's Information-Seeking Behaviors on Social Media

An individual's attempt to find the necessary information will lead to information-seeking behaviour. It includes all behaviours of human beings when interacting with information sources and channels, involving active and passive search and data usage. Information-seeking behaviour is an effort to achieve particular objectives based on individuals' needs to meet specific goals. Information-search behaviour is a micro-level action taken by an individual when searching for information and interacting with the information system. This behaviour consists of various forms of designated interaction related to computer use, such as using the mouse or clicking a link at the intellectual and mental level. Moreover, information-user behaviour refers to a person's physical and mental actions when combining the information they find with their background knowledge.

Generation Z, born and raised along with the advancements in communication and information technology, has chosen the internet as one of the main sources to seek health information. This result is indicated in Table 7, which clearly shows that most respondents of this generation know about the pandemic for the first time through the internet, reaching 64.9 per cent of the total numbers. This behaviour is continuously carried on as the respondents proceed to find out health information and knowledge related to COVID-19 on the internet, as shown in Table 4. Meanwhile, when Generation Z experienced symptoms of the COVID-19 virus, this study discovered that they would immediately come to the hospital to check on it.

David Ellis has developed a theory of information retrieval behaviour closely associated with information retrieval systems. Ellis studied scientists engaging in their daily activities, conducting field or laboratory research, writing paper, and so on. In theory, his study explains information's general behaviour in a series of activities. Ellis suggested several characteristics of information-seeking behaviour. The first stage is Starting, meaning that the individuals search for information from an expert in one of the scientific fields that spark their interest. In the research on Generation Z's perceptions of COVID-19

health information, Generation Z began searching for information on the internet (Figure 1). This condition occurs because Generation Z's habit of being connected through smartphones makes them no longer need to wait for more expert individuals since the information they are looking for can appear naturally in their own hands.

Moreover, the next stage of Ellis' information retrieval behaviour is Chaining. It refers to an activity when individuals write the important things they found on a small note. In Generation Z's case, the Chaining stage is not related to conventional notes on paper anymore. Instead, the essential information is sometimes written on social media platforms, making them available for others and can be opened at any time with no limitation in time and storage place.

Information sharing activities will be followed by information-seeking, knowledge-enhancing activities and arguments that can be used to make decisions. Browsing is an activity to find structured or semi-structured data. The search for information in the X generation has traditionally been carried out by visiting information centres such as libraries, academics or coming directly to the nearest health facility. Meanwhile, information-searching of Generation Z, closely linked to the internet, can be done more quickly. Smartphones with internet connections make it easier to find the information they need. The internet can help Generation Z obtain necessary information in various fields, including health, education, economics, politics, and other information (Figure 3). Moreover, Generation Z can spend 3 to 6 hours on their gadgets (Figure 2) to get and provide the information they need. The condition that requires them to stay at home is no longer an obstacle to obtaining information.

Generation Z's Perception of Health Information on Social Media

Perception is a process that occurs before sensing, which is a stimulus received by the person via the receptor, especially the senses. The sensory organs connect the person to the outer environment. Perception is a stimulus that a person senses, organises, and interprets so that the person recognises and understands what the person sees and hears.

Two types of elements impact perception: internal factors and external influences. *Internal variables influencing perception*, i.e., components present inside a person, encompass various aspects, such as (1) Physiological: Information enters the body through the senses, which influences and supplements people's attempts to make sense of their surroundings. Each person's assessment of importance is unique, as is the environment's understanding of it. (2) Attention: It takes a certain amount of energy for an individual to expend, pay attention to, or concentrate on an item's physical form and mental capabilities. Because each person's power varies, so does their attention to certain items, influencing their impression of the object itself. It is intriguing because the perception of an item varies depending on how much energy or perceptual alertness it expends to perceive it. Perceptual vigilance is

an individual's predisposition to pay attention to certain stimuli linked to their interests, which must occur unidirectionally. This aspect may be evident in how people search for items or messages that can supply the answers they seek. (3) Experience and Memory: Knowledge may depend on memory, meaning that a person can recall prior occurrences to receive a stimulus in a larger sense. (4) Mood: A person's emotional condition influences their actions. It reflects how a person feels and influences how they absorb, respond, and remember. *The qualities of the environment and the items involved are external variables that impact perception.* These components may alter a person's perception of the world around him and influence how he feels or perceives it. Furthermore, extrinsic influences that impact perception include: (1) The object's or stimulus's size and location: This component suggests that the bigger an item's link, the simpler it is to comprehend. It will be simple to pay attention to forming perceptions by examining the size of a specific item; (2) Object colour: Lighter items are easier to interpret or see than dark items. (3) Stimulus unity and contrast: An external stimulus that stands out against the backdrop and surroundings beyond other people's expectations will draw much attention. (4) Stimulus intensity and power: external stimuli have greater significance when you pay attention to them more than once. The strength of stimulation is the ability of an item to alter perception. (5) Movement or motion: People pay more attention to things that move in front of their eyes than to things that remain stationary and visible.

Several earlier studies on the behaviour of Generation Z respondents discovered that they prioritised the search for health information on the internet and actively shared the information they got via their separate accounts on different social media platforms. According to the survey findings, there was no unfavourable view of health information communicated over the internet, particularly through mass media, since respondents picked social media as a source of health, education, and entertainment information, as shown in Table 4.

The search for information should also consider some factors of a discrepancy, such as data division or reduction, to select which data to use and which one of them is not necessary to be included in the study. Not all the information obtained from any source is needed; even some of the news received cannot be justified based on its validity. Therefore, the data must be selected to prevent such occurrence.

CONCLUSION

The condition when all people are locked in becomes one of the reasons why they need to find the best information to reflect choices and considerations to make any decision. Generation Z. also experiences a similar condition, known as the new digital native. Generation Z is attracted to anything instant with a close relationship to communication and information technology, including the internet. This generation can obtain, manage, and even produce information through the internet,

mainly on social media. Generation Z is not just a web-based information specialist; it can also become a part of information transmission while spreading news items widely and quickly. There is no negative perception from Generation Z regarding health information shared through the internet and social media during this pandemic. This is since Generation Z obtained all health information related to the COVID-19 virus through the Internet and social media to recognise the pandemic conditions they are currently facing. As a policy maker, Generation Z hopes the government will consider using social media, particularly Instagram, to disseminate health information related to COVID-19. This research can serve as an input for policymakers; they can consider the findings of this study to expedite the resolution process of the COVID-19 problems.

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