Media Use and Gratification Sought by the Public during the Coronavirus Outbreak in Indonesia: A National Survey

Mira Rochyadi-Reetz[1*], Eni Maryani[2], Anna Agustina[3]

[1]Technische Universität Ilmenau, Ehrenbergstr. 29, 98693 Ilmenau, Germany
[2]Universitas Padjadjaran, Jl. Raya Bandung Sumedang KM 21, 45363 Jatinangor, Indonesia
[3]Universitas Pancasila, Jl. Srengseng Sawah, 12640 DKI Jakarta, Indonesia
*Corresponding author: mira.rochyadi-reetz@tu-ilmenau.de

Abstract
The recent coronavirus outbreak is without a doubt a global crisis event that has affected almost all nations of the world. This study aims to contribute to crisis communication research from the audience perspective in Indonesia by presenting the public's media use and gratification sought during the coronavirus outbreak based on a representative national mobile survey with 1,100 respondents. Results show that the majority of Indonesians intensively use (1) private television, (2-4) websites and social media accounts of actors providing information on the crisis and (5) public television to get information regarding the pandemic. The findings indicate that other types of media such as radio and local television are used to a much lower extent. Results also show that there are two media-use gratifications sought during the crisis: (1) *information and direction gratification sought* and (2) *entertainment and comparison gratification sought*. Sociodemographic factors such as gender, age and education level demonstrate some significant influence on public media use and the gratification sought during the coronavirus outbreak. Surprisingly, entertainment and comparison sought are demonstrated as having a higher effect on the increasing use of mass media, social media and messenger apps during the crisis event than the information and direction gratification sought.
Keywords: coronavirus outbreak; crisis communication; gratification sought; media use; representative survey.

Introduction

The coronavirus diffusion all over the world is without any doubt the reason for a multi-layered global crisis. It meets the criteria of crisis expressed by Roux-Dufort (2016) such as unanticipated and low probability events with high impacts that are "unscheduled, unstructured, unplanned, unexpected" (p. 26) and is characterized by the ambiguity of their causes and consequences in many fields such as health, economics, social and politics. The pandemic presents multidimensional challenges for countries affected by the outbreak. Indonesia, the fourth most populous country in world, is not an exception. By mid-June 2020, more than 40,000 people had been positively tested and more than 2,000 people had died. During the writing of this study in June 2020, the trend of infection is still on the rise. The first positive case identified in Indonesia was on 2 March 2020, and on 19 March 2020, the President of the Republic of Indonesia signed a presidential decree on the task force of rapid response to COVID-19. At the end of March, the government declared a Big Scale Social Restriction (PSBB) for

accelerating COVID-19 eradication. At that time, the number of infected individuals was still very low, with 122 people positively tested. A review and analysis of responses to COVID-19 in Indonesia until the end of March 2020 published by Djalante and colleagues (2020) gives an overview of the development of government responses to the outbreak of coronavirus in the country.

To coordinate the dissemination of information on the infection's rate and all related matters, the national government launched a website: www.covid19.go.id. Djalante et al. (2020) stated that, by the end of March 2020, there were 20 regional government websites launched to disseminate information related to the corona pandemic in their respective provinces. In response to the high use of social media (Indonesia Internet Service Provider Association, 2018), each of those websites linked to their social media platform such as Facebook, Twitter and Instagram. In addition to those official websites from national and regional governments, there are many websites that are actively spreading information on the outbreak of coronavirus in Indonesia, such as the websites of associations of medical doctors (http://www.idionline.org/) or health experts and Indonesia diaspora abroad (https://kawalcovid19.id/). Not only health experts, but also many community-based groups are actively spreading information on how to minimize the risk of corona infection. One example is an online and offline campaign initiated by Indonesian Digital Literacy Advocates Network (http://japelidi.id/), a national network of digital literacy activists. In order to raise the public's awareness on the risk of corona virus, they translated the hygiene standards into 43 traditional languages in Indonesia and distributed the information through printed posters and flyers as well as their social media channels.

As in other countries, the mass media in Indonesia seems to only have one issue on their agenda: the outbreak and consequences of coronavirus. The mainstream media criticized the government's low response to the pandemic (Djalante et al., 2020). Criticism was also expressed in the media due to the controversial statements of some high-ranking governmental officials who claimed that coronavirus would not affect the country, even though during that time the number of infections was already quite high in neighboring countries. Instead of looking for scientifically based explanations of the comparatively low infection rates, high-ranking government officials in Indonesia tended to use "…"pseudo-scientific explanations" for the cause of the virus spreading in the country, as seen in the

mass and social media, ranging from racial superiority to religious and paranormal reasons" (Djalante et al., 2020, p. 2). For example, a few days before the first corona-positive case was officially exposed, Vice President Ma'ruf Amin stated that Indonesia would not be affected by the coronavirus due to the blessing of the Qunut prayer by the Muslims in their prayer times (Maranda, 2020). However, the government's communication strategy was not the only factor that increased the feeling of uncertainty among the public. A survey by BPS-Statistics Indonesia (2020a) shows that the majority of Indonesians were concerned about media coverage of the outbreak of coronavirus in the country.

It is important to note that from the sociological perspective, "objective criteria for a crisis only really take on meaning when they are perceived and interpreted" (Rogers & Pearce, 2016, p. 48). This means that people's perception of crises in most cases is influenced by what they hear, listen to or read in the media. Meanwhile, people's perception of an issue is widely known as one of the most important factors to influence their behavior (Ajzen, 1991). In the time of coronavirus outbreak, this includes simple behaviors like washing one's hands to avoid or reduce the risk of infection right up to deciding whether to support or refuse government policy to restrict people's mobilization during the pandemic. With this in mind, understanding the public's media consumption during the crisis is of high relevance as people's need for information is likely to differ between a crisis event and routine situations as they face a high degree of uncertainty (Avery, 2010). A telephone interview by Avery (2010) about information-seeking behavior during health crisis conditions in the U.S. shows that people tend to actively seek more information during health crises than in normal conditions. A national representative survey in Sweden (Ghersetti & Westlund, 2016) also shows that, although different types of media are used by different generations, all show an increase in their daily media use, traditional as well as digital, during societal crises. However, at the moment there is a lack of academic research from the audience perspective during crisis events in Indonesia. Existing research on communication during crisis events in the country is highly concentrated on the communicator perspective, such as research on companies' (Adi & Kartikawangi, 2016; Aditya & Nasrianti, 2016; Akhyar & Pratiwi, 2019; Amali, 2019; Erwind & Jessica I., 2015) or government's strategies (Fauzia & Sujono, 2017; Handayani, 2016; Putri, Sutopo, & Rahmanto, 2019) to cope with organizational crises. Audience perspective

during crisis is almost totally ignored in this kind of research.

Therefore, this study aims to answer the following questions: (RQ1) What are the most relevant information sources during a crisis event? (RQ2) Is media use during the coronavirus outbreak increasing and what gratification have people sought during the crisis? (RQ3) Do these aspects differ according to social demographic factors? This study will start with describing the relevance of use and gratification theory (UAG) as a framework, then move to current research on media use and gratification sought in Indonesia, and then continue with a description of methods of data collection. Afterwards it will continue with a description of results and discussion of the findings. We end the paper with a conclusion, limitations and possible agendas for future research.

Use and Gratification as Framework

The possibilities for seeking information about a certain topic or issue nowadays are almost unlimited. Traditional as well as new media offer so much information at the same time. A click on a remote control, computer or gadget can open an almost infinite array of information possibilities to the audience. Use and gratification theory (UAG) is one of the most common frameworks used to explain the functionality of certain media for their audience and why these media are preferred by that audience. A review of the relevance of the UAG theory in the twenty-first century by Thomas E. Ruggiero even claims it as "provid[ing] a cutting-edge theoretical approach in the initial stages of each new mass communication medium: newspapers, radio and television and now the Internet" (2000, p. 3). The theory is widely applied to explain the function of media to gratify the audience's need for information (e.g., Tustin, 2010), entertainment and escapism (e.g., Shade, Kornfield, & Oliver, 2015), and even self-actualization in the form of fame-seeking (Rui & Stefanone, 2016).

Indonesian researchers also use UAG as a framework to explain the motives of media use in the country. Existing research shows that television users mostly use this media to satisfy their entertainment motives followed by information-seeking motives (Masriah, 2018; Talengkeng & Herlina, 2014). Since the media landscape in Indonesia is highly dominated by private media driven by viewers ratings (Nainggolan, 2018; Souisa, 2020), it is not surprising that the content of Indonesian television is also dominated by entertainment programs. A quantitative content analysis of television content in Indonesia during the parliamentary and presidential election in 2014 by Souisa (2020) shows that even during important political events, entertainment programs still dominate television content in Indonesia. UAG is also used to explain the motivation of Indonesian radio listeners (Lestari, Sarwan, Syas, & Hamzah, 2019) and newspaper readers (Fauzia & Sujono, 2017). Research on radio listeners in Pariaman city shows that listener motives for using media are dominated by entertainment motives followed by social interaction motives (Lestari et al., 2019). Meanwhile, research from Fauzia and Sujono (2017) about the motive of newspaper readers in Cibinong district shows that most readers consume newspapers to satisfy their need for information regarding political and economic matters as well as legal cases and business. In addition to the information-seeking motive, newspaper readers also have a high motivation to use the information that they read for daily conversation with friends and family. A country report on media landscapes in Indonesia from European Journalism Centre (Eriyanto & Mutmainnah, 2019) describes that, from the perspective of mass media use, television is considered the most popular traditional mass media consumed in Indonesia. Nevertheless, radio has the highest possibility of access as it is broadcast everywhere in the country. Meanwhile, print media has experienced the most direct impact from the use of the Internet in the country. Many print media stopped publishing in Indonesia in the last five years because they cannot cover their production cost anymore. Some of them have migrated their content to digital form, but many have vanished completely.

In relation to social media, research on motivations for using social media among university students in Surabaya city shows that the main gratification sought is to pass time followed by information seeking, information sharing and entertainment (Sari & Nugrahani, 2019). Surprisingly, information seeking placed higher than entertainment as a motivation for social media use among youth in the country. Research on the motivations of teenager use of Instagram (Sheldon & Newman, 2019) and young adult use of Facebook and MySpace in the U.S. (Urista, Dong, & Day, 2009) shows that young people use social media in the U.S. mainly to fulfill their interpersonal communication and self-actualization needs. Research on early voters in Bandung by Maryani and El Karimah (2015) supports the information-seeking motivation for social media use among Indonesian youth. Maryani and El Karimah found that, despite the importance early voters place on social media use for finding information, they also consider mass media,

particularly television, as an important source of information for making political decisions. This could be the reason for the high use of social media channels by government as well as non-government actors to share information in Indonesia during the coronavirus outbreak (Djalante et al., 2020). Despite low level of Internet users in Indonesia in comparison with other countries in Southeast Asia (World Bank, 2019), social media use in the country is among the highest in the world (We Are Social, 2020).

From the above review of the existing literature, it is clear that research on media use and its gratification motives in Indonesia still has several deficits. First, almost all the aforementioned research in Indonesia investigates the general gratification sought by using different types of media. Only the research from Maryani and El Karimah (2015) touches on the gratification sought in a certain condition, namely, a general election. Nevertheless, none of these researchers investigate gratification sought during a crisis event where the audience faces high risk and uncertainty in their lives. Thus, this study wishes to contribute to the knowledge of media use and gratification sought in a condition where audiences are facing many risks at the same time. Second, published studies are mostly conducted in several cities or regions in Indonesia that might not represent the diversity of the sociodemographic composition of the country. Existing research also concentrates only on the young generation of media users, especially those on social media, which gives less information on how adults and the senior population in the country use media and what functions or roles the media play for them. Furthermore, a representative national survey on media use in Indonesia is a rare thing. Almost all data regarding the public's media use in Indonesia come from AC Nielsen, which highly serves the interest of media companies for commercial issues. Even academic research has relied on Nielsen's data to get an overview of public media use in Indonesia (e.g., Lim, 2012; Nainggolan, 2018; Souisa, 2020). We consider these data as biased because the data collection has been highly concentrated in large cities in the western part of

Indonesia. For example, viewer ratings of public television in Indonesia were reported to be less than 2% in all Nielsen's data (as in Lim, 2012; Nainggolan, 2018; Souisa, 2020). Meanwhile, the reception of public television in villages in Indonesia is higher than all private television (Farré & Fasani, 2013). The latest report from the Indonesian statistics bureau only mentioned the number of television devices owned in Indonesia (BPS-Statistics Indonesia, 2020a) and the Indonesian Broadcasting Commission (KPI) only measures the quality of television programming and not the audience's media use (Indonesia Broadcasting Commission, 2019). With regard to these gaps, this study will take a closer look at people's media use and gratification sought during a crisis event with nationally representative data.

Material and Methodology

Data for this study were obtained from a nationally representative survey including 34 provinces in Indonesia with 1,100 respondents aged 17-79 using Jakpat Mobile Survey. The survey took place from 27 April to 18 May 2020. During the survey period, the trend of the infection rate of the coronavirus in Indonesia was still increasing. Because this study is part of an international comparative study on the Relevance of Communication during Corona Crises (RCCC), the questionnaire for this study was developed by an international research team at Technische Universität Ilmenau in Germany, which was translated and adapted to the Indonesian context by the authors. To assure data quality, a pre-test of the questionnaire draft was conducted with 23 Indonesian respondents. Afterward, the questionnaire underwent several revisions based on input from the pre-test. Only data from respondents who completely filled in the questionnaire in more than eight minutes were included in the final dataset. The minimum of eight minutes was decided from the results of the questionnaire pre-test. This procedure was taken to assure the data quality in the same way that Moreno, Fuentes-Lara, & Navarro (2020) did for their survey on communication management of the coronavirus outbreak in Spain.

Table 1. Respondent demographics

	N = 1100 (%)	Percentage of estimated total adult population[*]	Percentage of weighted sample by education (N=1097)
Gender			
Male	55.1	50.2	52.2
Female	44.9	49.8	47.8
Age			
Generation X and older (45-60+ years)	20.7	25.5	31.9
Generation Y (25-44 years)	50.0	44.2	42.3
Generation Z (17-24 years)	29.3	30.3	25.8
Education**			
Primary education	9.5	41.7	41.6
Lower secondary education	8.4	22.3	22.3
Secondary education (SM/equivalent)	53.2	36	23.4
Higher education (D1 and above)	29		12.7
Location			
Java	63.1	56.35	68.2
Sumatera	22.3	21.84	19.3
Kalimantan (Borneo)	4.8	6.15	5.0
Bali and Nusa Tenggara	4.5	5.55	4.0
Sulawesi (Celebes)	3.0	7.35	2.0
Maluku (Moluccas) and Papua	2.4	2.76	1.4

*BPS-Statistics Indonesia 2020
**Indonesia Statistic Bureau (BPS) classifies education attainment population aged 15 years and over as following: (1) not/never attending schools 3.96%, (2) not completed primary school 12.66%, (3) primary education (SD/MI/equivalent) 25.13%, (4) lower secondary education (SPM/MTs/equivalent) 22.31% and (5) secondary education and above (SM/equivalent+) 35.95%. In our category, we combine categories 1, 2 and 3 as lower secondary education and split category 5 into secondary education (SM/equivalent) and higher education (D1 and above).

Detailed information on the demographic profile of the respondents can be seen in Table 1. The distribution of the respondents according to age is classified into three groups: generation X and older, generation Y and generation Z. Included in the classification of generation X are those who are older than 44 years, including the baby boomer generation. Generation Y refers to respondents aged 25-44 years old and generation Z refers to respondents aged 17-24 years old. To simplify the geographic position of the respondents, we classified the 34 provinces based on their position in each of the island. Table 1 also shows the percentage of national demographic composition based on a national survey from Indonesia's statistical bureau (BPS-Statistics Indonesia, 2020b). When comparing the composition of our representative survey with actual current demographic data, several biases due to the online mobile survey method of data collection should be taken into consideration. The bias is particularly

high in the category of education. The majority of respondents in this study have secondary education and above (81.2%), while the current national level of secondary education and above is only 36%. The problem of such data bias from mobile surveys is also acknowledged by BPS, which recently released a mobile survey report on the social demographic impact of COVID-19 (BPS-Statistics Indonesia, 2020a). That report shows an even bigger data bias based on education level as respondents with higher education levels comprise up to 71% (BPS-Statistics Indonesia, 2020a, p. 2), whereas in our data, respondents with higher education levels (Diploma 1 and above) make up 29%. To accommodate the education level gap within the sample, we weighted the data for further analysis based on the educational level.

Results and Discussion
Media use regarding coronavirus outbreak
The results in Table 2 show that during the coronavirus outbreak, private television was the

medium most used (rank 1) to get information related to the pandemic. It was followed by non-journalistic information productions such as (rank 2) online information from website or social media of healthcare scientist/expert, (rank 3) comments of private person on websites and social media and (rank 4) information from government through its website and social media. The result that private television was the most relevant information source was not a surprise. Private television is always reported to have the highest audience rating in Indonesia despite its low quality of programming (Indonesia Broadcasting Commission, 2019) and the strong political interests of media ownership in the country (Armando, 2014; Lim, 2012; Rochyadi-Reetz & Löffelholz, 2019; Souisa, 2020). Surprisingly, more than 60% of respondents used public television (TVRI) to get information about the coronavirus outbreak. Despite the fact that the number is still lower than the use of private television, the number is extremely high in comparison to public television use during non-crisis events. Viewers' ratings of public television in Indonesia has been claimed to be less than 2% in non-crisis times (Lim, 2012; Nainggolan, 2018; Souisa, 2020). Print and online national and regional newspapers were also included among the top seven media information sources in the country during the pandemic, whereas public and private radio were among the media least used to seek information about the coronavirus outbreak. Research on radio listeners by Puji Lestari, Devi Wening Astari, and Aqmarina Laili Asyrafi (2019) described that most radio listeners use the medium for entertainment and social interaction purposes. Our survey shows that this form of gratification sought remained the same during the crisis event. In relation to the sociodemographic profile of the respondents, our survey shows that women consumed fewer media to get information during the crisis event than men. Even if the difference in some media types is not significant, the trend is similar. This is an alarming condition as low media consumption among Indonesian women in looking for information about the coronavirus outbreak could lead to information insufficiency about the risk of the virus. This result is similar to the findings on risk communication from Griffin, Neuwirth, Dunwoody, and Giese (2004), which also recognize that due to a low level of information consumption, women generally report having slight informational insufficiency about risks. Audience research by Sommerfeldt (2014) shortly after the earthquake disaster in Haiti also found that women used fewer media to get information about the risk after the disaster hit the country. Since "crises are possible outcomes of

risks" (Wolling, 2016, p. 236), women's low media consumption about the coronavirus outbreak could lead to a low perception of the crisis and less active behavior to avoid risk.

In terms of age, generation Y (25-44 years old) shows as the group with the highest media consumption in comparison with generations X and Z. This might be due to the fact that people belonging to this generation are in their productive age with high mobility and thus constantly need information updates about the outbreak to help them organize their daily life. Unexpectedly, there is no significance difference in website and social media use of health expert, government and private person based on age. Generation Z, which has been categorized as the "DotNets" generation (Ghersetti & Westlund, 2016), is not the generation that used this medium the most. This generation even reported high use of private television to get information about the coronavirus outbreak. Research by Maryani and El Karimah (2015) on early voters in Bandung, which belong to generation Z, shows that even though young people are high users digital media, they still trust the television as an institution that can give them reliable information to make political decisions related to the general elections.

It is interesting to see the significant difference between generations regarding the use of public television. Generation X (age 44 and above) shows high use of public television in comparison with the young generation (less than 25 years) in terms of information-seeking about the coronavirus outbreak. TVRI is the only public television channel and the oldest television station in Indonesia. It was also the only television station in Indonesia until the late 1980s when private television was allowed to air in the country. Thus older people (generation X) might be expected to still have high trust in TVRI to get information related to the coronavirus outbreak. Many crisis communication experts acknowledge that trust is an important aspect of information-seeking behavior during crisis events (Cairns, Andrade, & MacDonald, 2013; Shore, 2003; Taha, Matheson, & Anisman, 2013).

Table 2. Source of information during coronavirus outbreak in comparison with social demographic[a]

Rank of media use[b]	Gender % (df=2)		Age % (df=4)			Education % (df=6)			
	Male (N=573)	Female (N=524)	X (N=350)	Y (N=563)	Z (N=283)	Primary (N=456)	Lower (N=244)	Secondary (N=256)	High (N=140)
1. Private TV (M=4.55; sd=1,5)	$\chi^2=9.98^*$		$\chi^2=14.7^*$			n.s.			
Never	1.7	4.6	5.1	1.5	2.8	3.9	2	2	4.3
Seldom	19.7	15.5	19.1	14.9	20.8	19.3	19.7	15.2	13.6
Often	78.5	80.0	75.7	83.6	76.4	76.8	78.3	82.8	82.1
2. Web and SM of healthcare association (M=4.25; sd=1.3)	n.s.		n.s.			n.s			
Never	2.6	3.4	2.9	3.4	2.8	2.9	3.3	2.3	5.0
Seldom	24.5	25.8	24.6	23.3	28.6	23	31.6	24.9	20.7
Often	72.9	70.8	72.6	73.3	68.6	74.1	65.2	72.8	74.3
3. Comments on website and SM (M= 4.13; sd=1.3)	n.s		n.s.			$\chi^2=16.2^*$			
Never	2.3	4.2	3.4	3.4	2.5	3.9	1.2	3.1	5.0
Seldom	26.7	29.4	27.2	26.1	32.5	24.1	35.9	30.0	24.3
Often	71.0	66.4	69.4	70.5	65.0	72.0	62.9	66.9	70.7
4. Web and SM of National Government (M=4.06;sd= 1.3)	$\chi^2=13.3^*$		n.s.			$\chi^2=25.9^{**}$			
Never	4	5	3.4	5.2	4.2	3.9	2.0	5.4	8.6
Seldom	24.8	34.3	28.1	28.2	32.9	24.9	39.3	30.4	24.5
Often	71.2	60.8	68.5	66.6	62.9	71.1	58.6	64.2	66.9
5. Public TV/ TVRI (M=3.92; sd=1.3)	$\chi^2=16.2^{**}$		$\chi^2=12.5^*$			n.s.			
Never	5.8	12.8	11.4	7.8	8.5	8.8	7.8	9.7	12.9
Seldom	30.6	29.0	23.1	32.1	33.9	26.0	31.4	33.1	32.9
Often	63.6	58.3	65.4	60.1	57.6	65.2	80.8	57.2	54.3
6. National Newspaper (M= 3.89; sd=1.5)	n.s.		n.s.			n.s.			
Never	8.6	11.8	9.7	9.5	9.7	10.5	13.1	8.2	7.1
Seldom	27.1	29	29.1	25.3	29.1	29.8	27.0	28.9	22.1
Often	64.3	58.2	61.1	65.2	61.6	59.6	59.8	62.9	70.7
7. Regional Newspaper (M=3.79; sd=1.5)	$\chi^2=12.8^*$		12.4*			n.s.			
Never	7.7	14.3	10.6	9.3	13.8	10.5	14.3	9.0	9.4
Seldom	29.4	29.0	25.4	28.9	34.6	29.8	30.3	31.6	20.9
Often	62.9	56.7	64.0	61.8	51.6	59.6	55.3	59.4	69.8

Note: * $p <0.05$, ** $p <0.01$. a. Other media used than those stated on the table according to their rank are the following: (8) Local private television, (9) international television network, (10) local private radio, (11) public radio/RRI, (12) website and SM of NGO and (13) private television network. b. Question: Please tell us the source of information about corona that you have used for the last two weeks. Scale: 1 "never", 2 "very seldom", 3 "seldom", 4 "quite often", 5 "often", 6 "very often". We combined/recoded "very seldom" and "seldom" to "seldom" and "often" and "very often" to "often".

With regard to level of education, a significant difference in the media used to seek information about the coronavirus outbreak involved the use of website and social media of the national government and people's comments on websites and social media. Those are non-journalistic source media, which only present the voice of the government or people's opinion on certain topics related to the coronavirus outbreak. Table 2 shows that people with a low level of education (primary and lower secondary level) are consuming more information from these sources than people with higher education levels. It is important to note that information on those channels has no need to include second opinions or the opposition's standpoints because it has no obligation to present information in the objective way that is required by journalistic content on mass media. Thus, the tendency for people with less education to highly use this media reduces the possibility of them getting a diversity of perspectives on the issue. Information that covers different points of view on an issue is highly important for a functional democratic society as it will influence people's attitudes and help them to justify their decisions—in this case, the decision to avoid or to ignore the risk of coronavirus infection or the political decision to support or to oppose government policy to eradicate the virus.

Increasing media use during coronavirus outbreak

Table 3 shows the change of the public's media use during the coronavirus outbreak in Indonesia. In general, 45% of all respondents answered that they used more mass media and 50% of them said that they used social media more often. Meanwhile, 43.7% of all respondents said that they used more messenger services during the outbreak. Our survey shows that the increasing use of mass media, social media and messenger services during the coronavirus outbreak was higher for male than female respondents. Meanwhile, similar to the trend of the most relevant information source in Table 1, generation Y was also the one who reported that they consumed more mass media and social media during the crisis than did generations X and Z. Media consumption also showed significantly different depending on the level of education. People with higher education levels tend to consume more in all media categories than those who have low education levels.

Table 3. Change in media use for the last two weeks in comparison with sociodemographic

Media Type	Gender % (df=2)		Age % (df=4)			Education (df=6)			
	Male (N=573)	Female (N=524)	X (N=350)	Y (N=463)	Z (N=283)	Primary (N=457)	Lower (N=245)	Secondary (N=256)	High (N=140)
Mass media	n.s.		$\chi^2= 20.1**$			$\chi^2= 16.7*$			
Less	15.4	18.1	21.1	11.4	20.1	21.2	14.3	14.5	10.7
The same	38.6	38.0	37.1	37.6	40.6	38.5	41.2	35.9	36.4
More	46.1	43.9	41.7	51.0	39.2	40.3	44.5	49.6	52.9
Social media	$\chi^2= 8.2*$		$\chi^2= 19.9*$			$\chi^2= 14.5*$			
Less	14.5	16.6	19.7	11.0	17.7	17.3	19.6	11.3	10
The same	31.5	38.0	36.3	32.2	36.4	36.5	32.7	34.4	31.1
More	54.0	45.4	44.0	56.8	45.9	46.2	47.8	54.3	57.9
Messenger	$\chi^2= 7.2*$		n.s.			$\chi^2= 12.9*$			
Less	19.8	16.2	17.1	17.5	20.1	18.2	23.0	17.1	11.4
The same	34.5	42.2	39.1	39.9	34.3	38.5	40.2	37.0	35.7
More	45.7	41.6	43.7	42.7	45.6	43.3	36.9	45.9	52.9

Question: How was your frequency in using the following media for the last two weeks? Scale: -2 "much less", -1 "less", 0 "the same", 1 "more" 2 "much more". * $p <0.05$, ** $p <0.001$

Gratification sought from media use during coronavirus outbreak

To answer the research question on what gratification people sought from the media during the crisis event, we asked 10 questions about the reasons behind respondents' media use during the crisis. Table 4 shows that the highest agreement is on the statement that the reason they used media during coronavirus outbreak was to "know whether corona is dangerous for me or my family" (M=4.17, sd=0.81) followed by "to know the latest policies in preventing or eradicating corona" (M=4.16, sd=0.85). Meanwhile, gratification sought to "entertain myself and reduce my stress" has the least agreement with a mean value of 3.78 (ds=1.01). To check the underlying latent class

from all 10 questions to measure people's gratification sought, we used principal component analysis to test the variability among the items. The result shows that questions were merged into two factors of gratification sought.

The first factor to emerge from factor analysis is related to the need to obtain information and guidance. Thus, we called the first factor *information and direction* gratification sought. All questions that merged in the first factor relate to people needing to get information during the crisis from the media so that they could know what action they should take to minimize their risk of getting infected by the virus or to minimize economic risk with regard to their jobs or businesses. The closing of schools, places of worship, offices and malls as well as mass restriction on mobilization forced people to rearrange their daily activities. Because the survey also was taking place during the holy

month of Ramadhan, the government's decision to ban the ritual of homecoming at the end of the holy month was a big issue, and it is plausible that people needed a lot of information to guide them on how to deal with unpredictable conditions.

Meanwhile, the second factor that emerged from the factor analysis was gratification sought which related to entertainment need, reducing stress, killing time and to compare their condition with other people. Therefore, we named this factor *entertainment and comparison* gratification sought. During physical and social distancing, it is most likely that people will experience more stress and continuously feel scared or worried because of many threats happening simultaneously. Thus, they use media to reduce their stress by watching movies, listening to music and concerts or simply to be in contact with friends and family.

Table 4. Gratification sought from media use during coronavirus outbreak

I read/ listened to/ watched media for the last two weeks because I wanted to…	N	Mean	Sd	PCA Loading factor	
				1	2
Factor 1: Information and direction					
… get a description about various aspects on corona	1057	4.14	0.80	**0.859**	
… know various opinions from experts about corona	1066	4.13	0.81	**0.836**	
... know whether corona is dangerous for me or my family	1069	4.17	0.81	**0.835**	
… know the latest policies in preventing or eradicating corona	1059	4.16	0.85	**0.793**	0.312
… know the latest situation so I can arrange my daily activities accordingly	1063	4.12	0.81	**0.711**	0.414
… look for information to be less worried	1058	4.09	0.82	**0.613**	0.495
Factor 2: Entertainment and comparison					
… compare my situation with other people	1054	3.83	0.91		**0.778**
… fill my time during the stay-at-home period	1054	4.00	0.79		**0.767**
… entertain myself and reduce my stress	1055	3.78	1.01	0.326	**0.730**
% variance explained				**42.6**	**26.5**
α				**0.91**	**0.71**

Scale: 1 strongly disagree", 2 "disagree", 3 "somewhat disagree", 4 "agree", 5 "strongly agree" and 0 "don't know".
People who answer "don't know" were not included in N.

Table 5 shows that, with respect to gender, men significantly show higher entertainment and comparison gratification sought than women. Meanwhile, women tend to use more media to fulfill their need for information and direction. However, the difference on this was not significant. This finding might be explained by the fact that more men in Indonesia are losing their jobs than women (BPS-Statistics Indonesia, 2020a) during pandemic conditions. Thus, it is plausible to assume that men have more stress because they experience, feel or perceive more economic threat than women during their stay at home in lockdown conditions. Research by Matsaganis and Seo

(2014) shortly after economic crisis in the U.S. shows that people who perceived higher economic threat in crisis experienced more stress. This high level of stress by male respondents could be the reason why the increasing media use by men to satisfy their need for entertainment and stress reduction is significantly higher than for women.

With respect to generation, our survey shows that increased use of mass media and social media by younger people (generations Y and Z) was to fulfill their information and direction need. This is significantly different from generation X who respond that their increasing mass media and social media consumption was to fulfill their

entertainment and comparison need. The government's lockdown policy that closed schools, offices and malls highly influenced the daily activity of the young (Z) and productive generations (Y). Thus, it is plausible that those generations had a higher need to get more information and direction to organize their daily schedule that was completely changed by the lockdown. Meanwhile, based on education level, motivation to seek information and direction for more highly educated people is higher than for people with lower levels of education. This might also be related to the reason for high mobility of

people with higher levels of education who might be university students, professionals and employees with positions in clerical, administrative, sales or service tasks than people with lower levels of education. The latest statistics reports from BPS-Statistics Indonesia (2020b, p. 129) show that people with low levels of education (primary and lower secondary) tend to work as low-skilled labor in agriculture, fishery and production facilities which are located not in urban areas and are thus relatively far from hotspots of the coronavirus outbreak.

Table 5. Gratification sought in comparison with demographic

Gratification sought	Gender % (df=2)		Age % (df=4)			Education % (df=6)			
	Male (N=558)	Female (N=508)	X (N=339)	Y (N=463)	Z (N=278)	Primary (N=443)	Lower (N=242)	Secondary (N=256)	High (N=139)
Information and direction	n.s.		$\chi^2 = 14.6$*			$\chi^2 = 25.1$**			
Disagree	9.5	6.4	6.8	9.1	7.9	10.8	11.2	3.9	1.4
Agree	45.3	46.2	54.0	43.0	40.3	43.7	48.3	47.7	44.6
Strongly Agree	45.1	47.4	39.2	47.9	51.8	45.6	40.5	48.4	54.0
Ent. and comparison	$\chi^2 = 9.1$*		$\chi^2 = 14.4$*			n.s.			
Disagree	11.8	14.4	10.7	15.2	12.5	13.2	14.5	11.4	13.7
Agree	59.7	65	70.1	58.0	59.3	64.3	63.6	60.8	55.4
Strongly Agree	28.5	20.7	19.2	26.8	28.2	22.5	21.9	27.8	30.9

Note: * $p < 0.05$, ** $p < 0.001$

Results of the correlation test between gratification sought and changing media use in Table 6 show that both categories of gratification sought significantly correlate with the increase of the public's mass media, social media and messenger use. Surprisingly, the entertainment and comparison gratification sought shows a higher r value than the information and direction gratification sought toward the increasing media use during the crisis. This means that the public tend to use more mass media, more social media and more messenger services because they would like to satisfy their need to be entertained and to compare their condition with that of other people than to obtain information to help them guide their actions. High levels of stress and fear during the crisis could be the reason for this condition.

Our preliminary results on the level of fear among Indonesians and Germans during the coronavirus outbreak shows that despite a high amount of positive tested coronavirus in Germany, the German public had less fear of the threat of the pandemic to their health and to their economic condition (EMPK, 2020). A similar international survey from YouGov (2020) on fears of COVID-19 also shows that Indonesians had the highest fear of getting infected and losing their jobs due to the coronavirus outbreak in comparison with almost all countries in the world. Since high levels of fear cause extreme levels of stress (Sommerfeldt, 2014), it is plausible that the increasing use of media in Indonesia was to fulfill the need to release stress and escape from the reality of high uncertainty and crisis.

Table 6. Correlation of change of media use and gratification sought during coronavirus outbreak

Change of media use[b]	Gratification sought[a]	
	Information and direction (M= 3.9, sd=0.72)	Entertainment and comparison (M=4.1, sd=0.67)
Mass media such as television, radio and newspaper (M= 0.36, sd=0.95)	.245**	.417**
Social Media such as Facebook, Instagram and Twitter (M= 0.47, sd=0.98)	.293**	.451**
Messenger such as WhatsApp, Line, Telegram (M= 0.34, sd=1)	.289**	.395**

Note: ** p <0.001, a. Min= 1, Max 5; b. Min=-2 Max=2

Conclusion

Based on a representative survey conducted during the outbreak of coronavirus, this study shows that private television, websites and social media of health associations and individual comments are the top three most used media to seek information related to the pandemic in Indonesia. Female respondents report less media use to seek information related to the pandemic in comparison with male respondents in all kinds of media types. Respondents with low education levels tend to use more non-journalistic sources of information in comparison with people having higher levels of education. This study also shows that the public's use of mass media, social media and messenger services increased during the crisis event. When it comes to gratification sought from media use during the crisis, factor analysis shows that there are two gratifications sought: (1) information and direction and (2) entertainment and comparison, which differ in relation to gender, age and education level. Surprisingly, the motivation to seek entertainment and comparison had a bigger influence on the increase in media use during the crisis. We argue that this might relate to the high level of fear and stress related to the impact of the pandemic.

Despite valuable information on audience perspective on media use and gratification sought during crises, this study does not take into consideration further important dimensions or variables that could explain or influence media use and its interplay with emotion, perception, or personal experience of the crisis. Previous research already shows a significant influence of those factors and the interplay between factors in a crisis condition (e.g., Matsaganis & Seo, 2014; Zhang, Kong, & Chang, 2015). Thus, future study should further investigate the interplay of such variables to be able to explain the importance of media and communication in processing a crisis event. With regard to the data collection methods, upcoming researchers are encouraged to use a combination of online and manual surveys to be able to reach respondents who have no access to mobile devices and Internet connection, which is considered a limiting factor for mobile surveys in Indonesia. Systematic mass media content analysis is also recommended for future research to be able to compare public perception and media content on the coronavirus crisis in Indonesia. A longitudinal panel survey would also be important to do in the future to measure the change of public emotion, perception and attitude and how those variables interact with media use during and after the coronavirus crisis. Such research will not only contribute to the body of knowledge of crisis communication but also be highly relevant to the design of effective communication strategies to contribute to the public's resilience in dealing with crises in the future. Last but not least, since the coronavirus outbreak is a worldwide crisis event, intercultural and international perspectives are also needed to understand the crisis from a global perspective.

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