WHATSAPP GROUP AND DIGITAL LITERACY AMONG INDONESIAN WOMEN

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Content

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INTRODUCTION

WhatsApp is now the most popular mobile application in Indonesia, used by more than 52 million active weekly users, surpassing YouTube, Instagram, Line and Facebook (GDP Venture, 2018). Many Indonesians consider WhatsApp as user-friendly due to its simple and easy to use, there is no advertising and it doesn't need as much space on mobile phone as its rival Line.

WhatsApp has a group chat service which allows users to send information to multiple contacts at the same time and to have conversation with a group of people. Such chat application allows individuals as users to produce a whole or part of the information to communicate with surrounding environments (Fouad, 2017:16). Indonesian users are very active on WhatsApp, as they are engaging in a continuous conversation with multiple users in a chat group. It is common for Indonesians to have more than one chat group. As an illustration, an average Indonesian adult would typically have various chat groups dedicated to their work, close friends, elementary family, extended family, hobbies, friends from high school, friends from college and so forth. It is then argued that WhatsApp group plays a major role for Indonesians, from teens to adults, to receive and share information, from national politics to personal gossips.

For women in particular, as Indonesian women are moving away from the traditional role as solely wives and mothers to a more active role in public life, the use of WhatsApp group represents how women navigate their domestic and professional roles. For background information, as the fourth-largest country in terms of population size, Indonesia has population estimated at 265.015 million in which men (50.2%) outnumbered women (49.8%) in 2018 (BPS, 2019). In terms of workplace, men (61.4%) have more opportunity to work in public life compared to women (38.6%) (BPS, 2019). Women as minority is also found in the field or workplace in information, communication and technology (Farida et al., 2011).

This gender divide creates challenges for women in dealing with misinformation, mainly one that emerged before and after the 2019 election when this research was conducted. It needs to be noted that the 2019 election was the first time Indonesians elected their president/vice president, members of senate, and members of parliament on the same day. This massive political event drove enthusiasm among citizens to involve in the production and distribution information about the issue, especially related to the presidential election. Unfortunately, it also drove

“information disorder” in the forms of misinformation and hate speech among Indonesians (Adiputra et al., 2019:1).

This research project elaborated on how Indonesian women navigate information, including misinformation, from multiple WhatsApp groups and direct messages simultaneously. Such multitasking communication could lead to misinformation since there is very limited time to understand and verify the information before it is delivered to others. In addition, previous study shows that in Indonesia, women’s digital fluency tends to be lower than men (Wiratno & Samudi, 2009), therefore it is important to improve women’s digital literacy in the country (Suwana & Lily 2017; Ilahi, 2018).

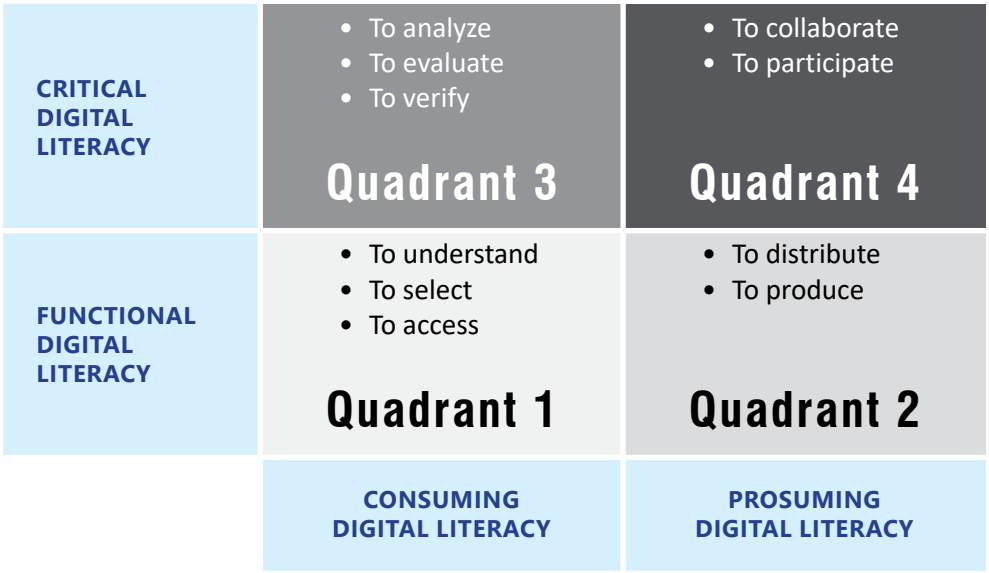
This study of Indonesian women’s use of WhatsApp draws on the work of Tzu-Bin Lin et al. (2013, p.162) to look at the new media literacy framework of Indonesian women in four different areas. Firstly, consuming information in terms of functional literacy that consists of ability to access and understand media content. Secondly, consuming information in terms of critical literacy that consists of ability to analyze and evaluate information as well as to critique and to synthesize. Thirdly, prosuming information in terms of functional literacy while users able to utilize technology to create information. Fourthly, prosuming information in terms of critical literacy while users able to create information and understand its social impact as well as to participate in the environments.

It is then combined with ten digital literacy abilities promoted by Jaringan Pegiat Literasi Digital or the Indonesian Digital Literacy Advocates, shortly called as Japelidi (Kurnia et al., 2018:7–20). These ten abilities are:

1) to access information on any digital media platform,
2) to select information,
3) to understand the meaning of information literally,
4) to analyze the information based on the structure and form of media content,
5) to verify information compared to similar information from other sources,
6) to evaluate information in relations to social, political and cultural context,
7) to distribute information to others by taking into account the consequences,
8) to produce or reproduce information,
9) to participate in any digital media platform’s community,
10) to collaborate with and lead other users in problem solving activities.

The Japelidi's ten digital literacy skills are not a multi-level ability but a complementary element to one another. Therefore, when combined with the new media literacy framework by Tzu-Bin Lin et al. (2013, p.162), it will create a new model of digital literacy competence as shown in the figure below.

Figure 1. Digital Literacy Competence Model



(Modified from Tzu-Bin Lin et al., 2013 and Kurnia et al., 2018)

Based on the model, this research project will map out Indonesian women's digital literacy skills in navigating information on WhatsApp guided by the following research questions:

1 The Use of WhatsApp

How Indonesian women aged 23 to 58 years old use WhatsApp to receive and share information? What are their challenges in using them and how they navigate them? How do they benefit from the information shared on WhatsApp?

2 Types of information

What kind of information that they usually receive and share on WhatsApp? Do they have any experiences in managing misinformation and hate speech shared on the application?

3 Digital literacy

To what extent are their abilities in functional consuming (understanding and consuming) information? To what extent are their abilities in critical consuming (evaluation, synthesis and analysis) information? To what extent are their abilities in functional prosuming (production, distribution and prosuming skill) information? To what extent are their abilities in critical prosuming (creation and participation) information?

METHOD OF STUDY

This research took place from April to October 2019, covering questionnaire development, validity and reliability test, and data collection and analysis. This study employs a mixed-research approach in the forms of survey and interviews conducted around the 2019 general election.

Survey was conducted to collect data from Indonesian women in order to show the use of WhatsApp in personal and professional life through scaled score representing degree of intensity. This method also allows researcher to make a prediction of the influence of variables such as age, education background, profession, etc. In the use of the application.

The survey population is women who are members of various WhatsApp groups related to their personal and professional life. They are aged 23 to 58 years old, considered to be productive age group, when women are most active on receiving and sharing information. The number of sample is 1250 women with an estimated margin error of under +/-2.7% at the level of confidence at 95%. Using quota sampling to gather data, this study has a number of advantages, i.e. the distribution of pre-specified characteristic of total sample is the same as the distribution of characteristics of the survey population (Babbie, 2013).

Cities of sample are five capitals of five main Indonesian provinces: Jakarta of DKI Province in Java island, Yogyakarta of DIY Province in Java island, Aceh of Nangroe Aceh Darussalam in Sumatra island, Makassar of South Sulawesi in Sulawesi island and Jayapura of Papua in Papua island.

Interviews were conducted with the aim of understanding more in depth the meaning of WhatsApp use and how economic, social, political, and cultural factors influence the usage. The informants were selected from the survey's respondents, with six informants in each city.

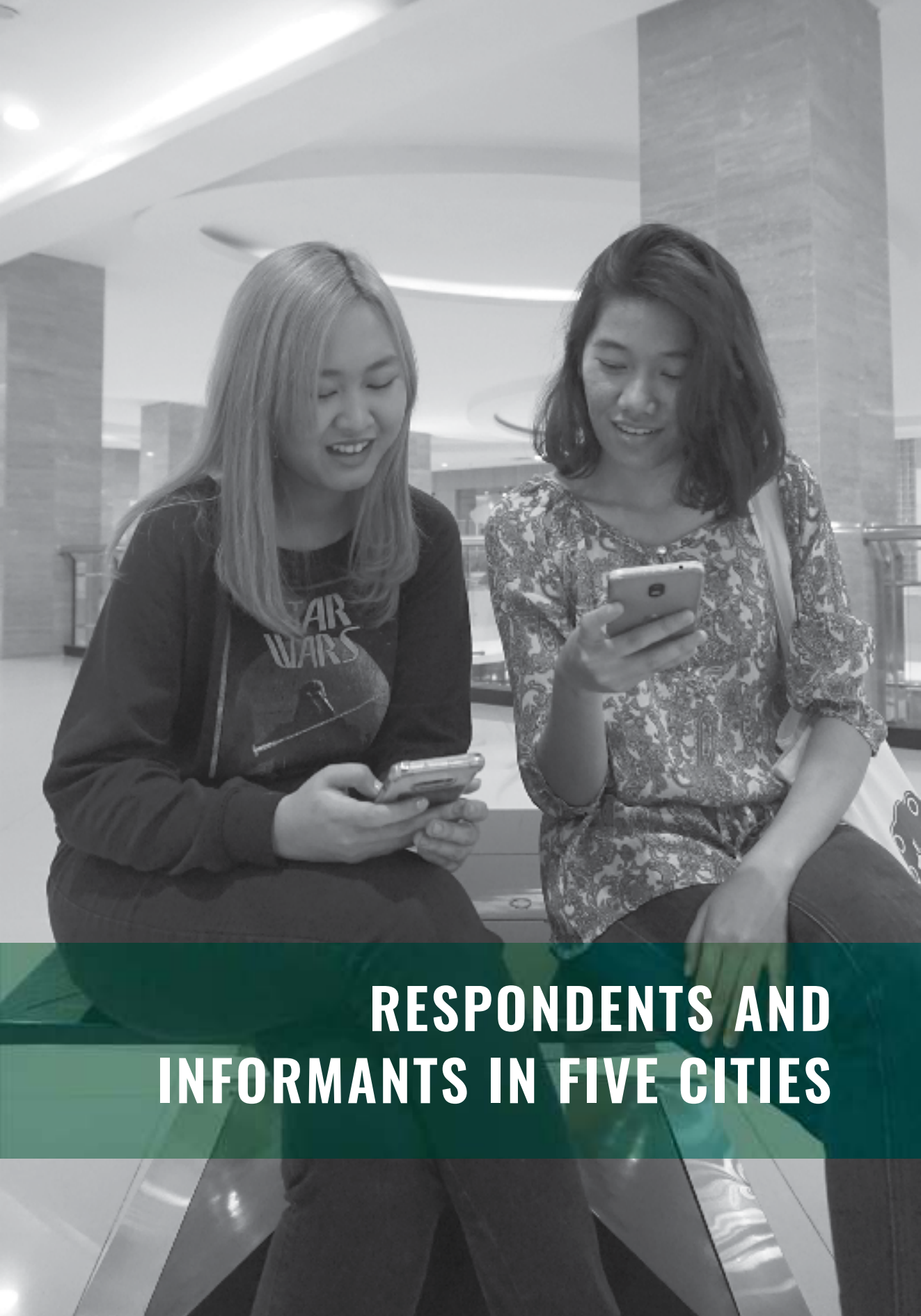
Data analysis from survey and interviews was conducted in two stages. Firstly, the survey data were processed with SPSS in order to obtain a distribution of sample, trend and cross tabulation. Analysis techniques such as a Pearson correlation, cross-tabulation, and linear regression were implemented in order to explain relationship, difference, and influence among variables and sample groups with a certain attribute that is assumed to contribute the use of WhatsApp. Secondly, the

results of the survey were analyzed by comparing and contrasting them with the results of the interviews in order to gain a deeper understanding of the various uses of WhatsApp in digital literacy perspective. In analyzing the interview data, researcher codes the interview transcript. Coding will portray the meanings, values and factors that might contribute to the usage of the application. It will also show the digital literacy skills of the respondents and informants.

Besides exploring the Indonesian women's use of WhatsApp and their digital literacy competence, this study also aimed to test the following hypotheses:

Hypotheses of the study are as follows:

1. Age correlates with digital literacy competence.
2. Educational background correlates with digital literacy competence.
3. The intensity of the use of WhatsApp correlates with digital literacy competence.
4. The number of WhatsApp group correlates with digital literacy competence.



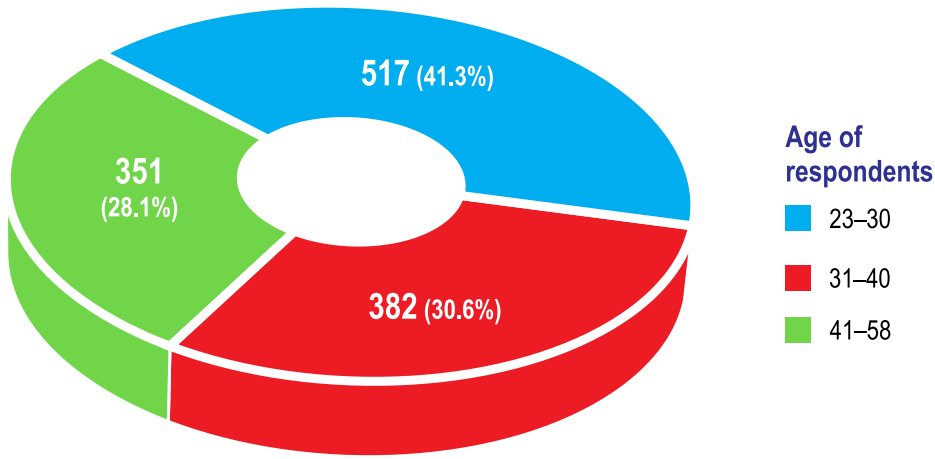
RESPONDENTS AND INFORMANTS IN FIVE CITIES

Profile of Respondents and Informants

This study surveyed 1250 Indonesian women residing in five cities (Jakarta, Yogyakarta, Banda Aceh, Makassar and Jayapura) with various age, educational, and professional backgrounds.

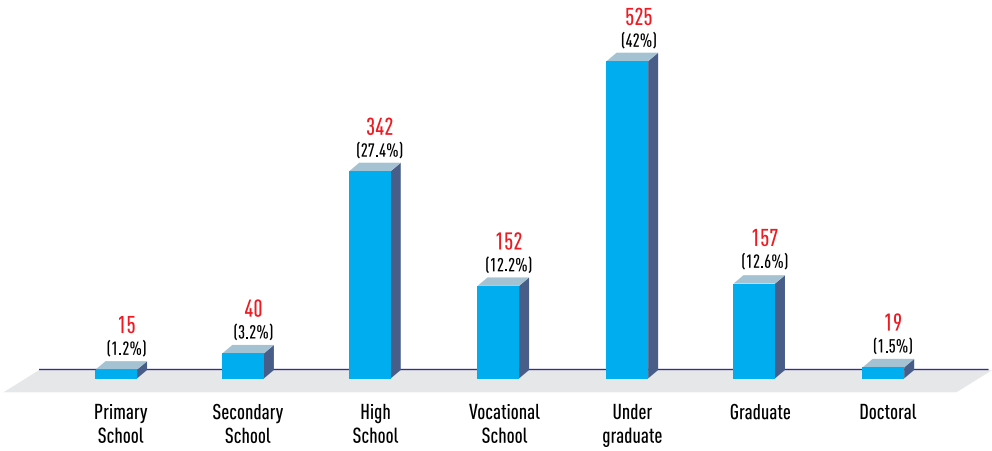
Most respondents are aged between 23–30 years (41.3%), followed by those aged between 31–40 years is 382 (30.6%), and 41–58 years (28.1%) (Figure 2).

Figure 2. The age of respondents



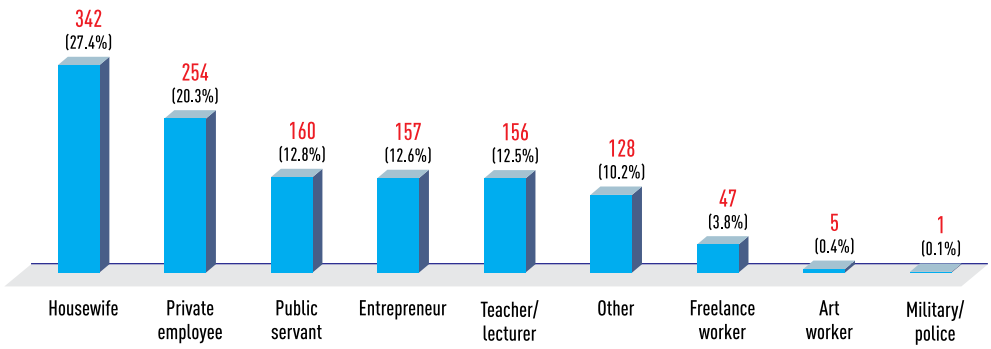
The educational background of most respondents are undergraduate degrees (42%), followed by high school degrees (27.4%), graduate degrees (12.6%), vocational degrees (12.2%), junior high school degrees (3.2%), and doctorate degrees (1.5%) (Figure 3).

Figure 3. The educational background of respondents



Most of them (27.4%) work as housewives, followed by private employees (20.3%), public servants (12.8%), entrepreneurs (12.6%), and teachers/lecturers (12.5%) (Figure 4)

Figure 4. The professional background of respondents



To support quantitative data from the survey, this study also interviewed 30 informants in the five cities. These 30 informants are drawn from 1250 respondents based on the diversity of age, education, and employment background.

There are 30 informants in total, consisting of 12 informants from the 23–30 years old age group; five informants from the 31–40 years old age group; 11 informants aged between 41–50; and two informants aged 51–58.

Six of the 30 informants are lecturer by profession. There are five informants who work as a housewife. Five other informants work as a public servant (state civil apparatus). While the remaining informants have varied professional backgrounds, which are private company employee, entrepreneur, and art worker.

This research recruited informants with various educational backgrounds. The majority of them have graduated with an undergraduate degree (14 informants), while others are master's degree graduates (eight informants), high school graduates (three informants), vocational (three-years Diploma) graduates (three informants), and doctoral graduates (two informants).

Cities of Sample: Five Cities in Four Main Islands

Cities of sample are five capitals of five main Indonesian provinces: Jakarta of DKI Province in the Java island, Yogyakarta of DIY Province in the Java island, Banda Aceh of Nangroe Aceh Darussalam Province in the Sumatra island, Makassar of South Sulawesi Province in the Sulawesi island and Jayapura of Papua Province in the Papua island.

Jakarta

Jakarta is one of the world's largest cities, the biggest city by a wide margin in Southeast Asia, and the commanding urban center of Indonesia, the world's fourth most populous country.

As the center of Indonesia's economy and politics, Jakarta's nominal GDP was US$483.8 billion in 2016, which is about 17.5% of Indonesia's (APREC, 2019).
As the home of six Forbes Global 2000 companies, two Fortune 500 companies, three Unicorn companies, and one Decacorn company, Jakarta's major markets are manufacturing, financial services, and public retail markets.

With more than 10 million population (BPS DKI Jakarta, 2018), there is approximately one male for every one female in Jakarta. The city's internet penetration rate is 80.4% by the end of 2018, which makes Jakarta a very attractive market for online companies. As an illustration, around 30–40% of the 22 million users of GO-JEK, an Indonesian Decacorn company, are residents of Jakarta (Fitriani, 2018).

By 2025, the population of the city is expected to reach 11.6 million (BPS Jakarta, 2018) with a mass migration from other areas in the country that will further worsen the problems for residents, including poor sanitation, a lack of housing, transportation issues, and environmental quality.

Its metro area is so large it has its own name: Jabodetabek (for the initials of Jakarta, Bogor, Depok, Tangerang, and Bekasi). The metropolitan area of Jabodetabek has a population that exceeds 30 million. Around 1.38 million people commute daily from Bogor, Depok, Tangerang, and Bekasi to Jakarta.

Yogyakarta

Yogyakarta is a small student and cultural city with multicultural young residents, and its province has a special autonomy due to the political role of the Yogyakarta monarchy.

It has a population of 418,000 people of which 51.20% of them are women and 48.80% are men. Women in the work force amounts to 57.31% of all men, and from that figure those with worker status are as many as 53.99%, doing housework at 26.65%, unemployed at 3.31%, and with student status at 11.76%. Meanwhile, men in the work force amounts to 71.41% of all men, and from that figure those with worker status are as many as 66.22%, doing housework at 7.31%, unemployed at 5.19%, and with student status at 14.90% (BPS Kota Yogyakarta, 2018).

The level of internet penetration in Yogyakarta is relatively high, reaching over 70%. In terms of misinformation, based on a study conducted by the Lembaga Ilmu Pengetahuan Indonesia (Indonesia Institute of Sciences – LIPI) in 2018, the city of Yogyakarta is included as one of the regions with a low level of misinformation acceptance (CNN Indonesia, 2019). The residents of Yogyakarta quite actively fight against misinformation through campaigns. Among them are "the Declaration of

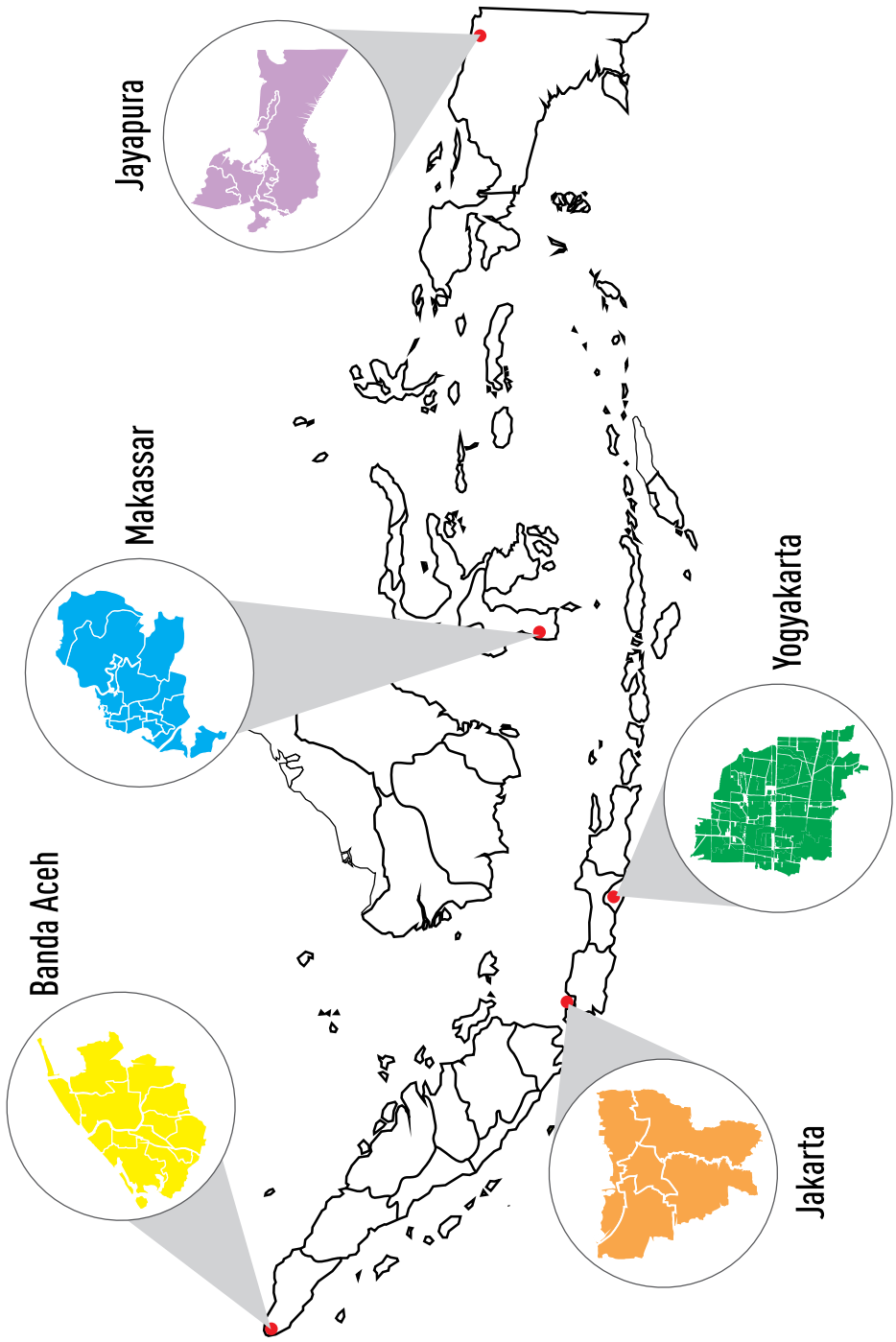


Figure 5. Cities of sample

Peaceful and Anti-Hoax Ridden General Election of 2019" initiated by Pemuda Kreatif (Creative Youth) (Nugroho, 2019) and "Education on the Use of Social Media to Fight Against the Hoax" (Mafindo, 2019). Yogyakarta was also selected as the second province for implementing the Smart Province with Digital Literacy Series program called "Linimasa Asik di Tahun Politik" (Fun Timelines in the Year of Politics) (Ministry of Communication, 2019).

Banda Aceh

Banda Aceh is the capital of Aceh Province, the only province in the country that applies Islamic sharia law, which is governed as a special territory.

Banda Aceh's population reaches 265,111 people, with as many as 51.43% of them are men and 48.57% are women. Accordingly, this places Banda Aceh as the city with the highest population density and largest gender ratio in Aceh Province (BPS Provinsi Aceh, 2019). Given its population quantity, internet penetration in Aceh Province reached 50% in 2018.

Meanwhile, Aceh's work force as of August 2018 was recorded at 2.35 million people. The level of open unemployment of women as of August 2018 reached 7.12%, which is 1.23% higher compared to that of men at 5.89% (BPS Provinsi Aceh, 2019).

Banda Aceh acquired a Human Development Index score of 84.37, which was calculated by comparing life expectancy, literacy, education, and living standards of all countries around the world. While in terms of Gender Development Index, with its assessment criteria being: life expectancy knowledge, and adequate living standards, Banda Aceh obtained a score of 95.46 in 2018 (BPS Kota Banda Aceh, 2019).

Makassar

Makassar is the center of trade in East Indonesia due to its strategic location in the archipelago with its agrarian and maritime culture.

Located on the Southwest coast of Sulawesi in the Eastern part of Indonesia, Makassar is the capital of South Sulawesi Province and the largest city in the Eastern

part of Indonesia. The city is also the fourth largest center for economic growth in Indonesia following Medan, Jakarta, and Surabaya.

The education level in the city of Makassar is very good, with only around 1% of the population aged 7–24 had never gone to school (BPS Kota Makassar, 2018). Although Makassar's population in 2017 tended to be gender balanced, women's participation in work (34.64%) was far smaller than men (65.36%) for those aged 15 until over 60 (BPS Kota Makassar, 2018).

South Sulawesi Province had 72% internet user penetration (APJII, 2018). Such penetration level is considered high since the population in South Sulawesi Province is the highest in the island of Sulawesi.

Jayapura

Jayapura is the capital city at the eastern point of Indonesia, Papua, where issues of women are prominent.

As a region far-flung from the center of government and economy in Jakarta, and with a time difference of two hours, Jayapura is often considered to be underdeveloped compared to other cities in the country. This also applies to its communication technology infrastructure. Consequently, in the last several years, the government of Indonesia has been focusing to develop the region's infrastructural capacity. Although internet infrastructure in Papua Province remains disproportionate, the penetration of internet users in Papua Province is 80% of its total population (APJII, 2018).

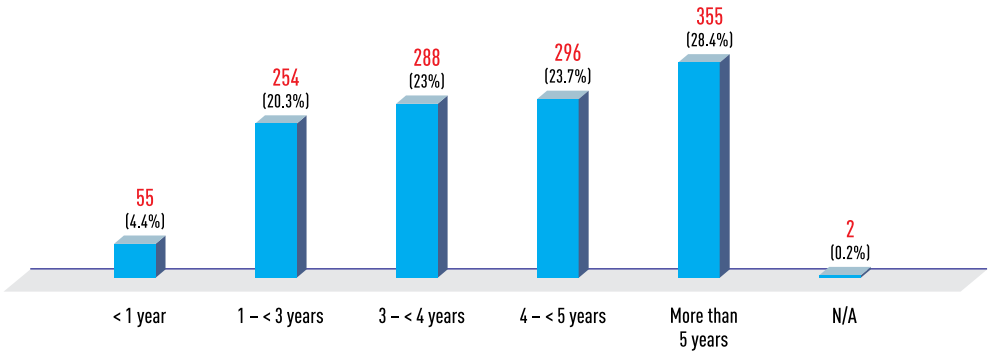
Jayapura is a city with abundant mining natural resources. Development of branch industries in the city of Jayapura consists of: leather-based industry; electronics, machinery, and metal industries; forestry products and mining industries; and chemical and agroindustry (BPS Kota Jayapura, 2018). In terms of politics, Jayapura is one of the regions in Indonesia with relatively high political sensitivity. Bearing in mind that there are separatist groups throughout the entire region of Papua wanting to secede and gain independence from Indonesia.

THE USE OF WHATSAPP

Most of respondents have been actively using WhatsApp daily for years to help them connecting with family members, friends, and colleagues for personal and professional purposes.

Out of 1250 respondents in five cities, most of them have been using WhatsApp for more than five years (28.4%), as shown in the table below (Figure 6).

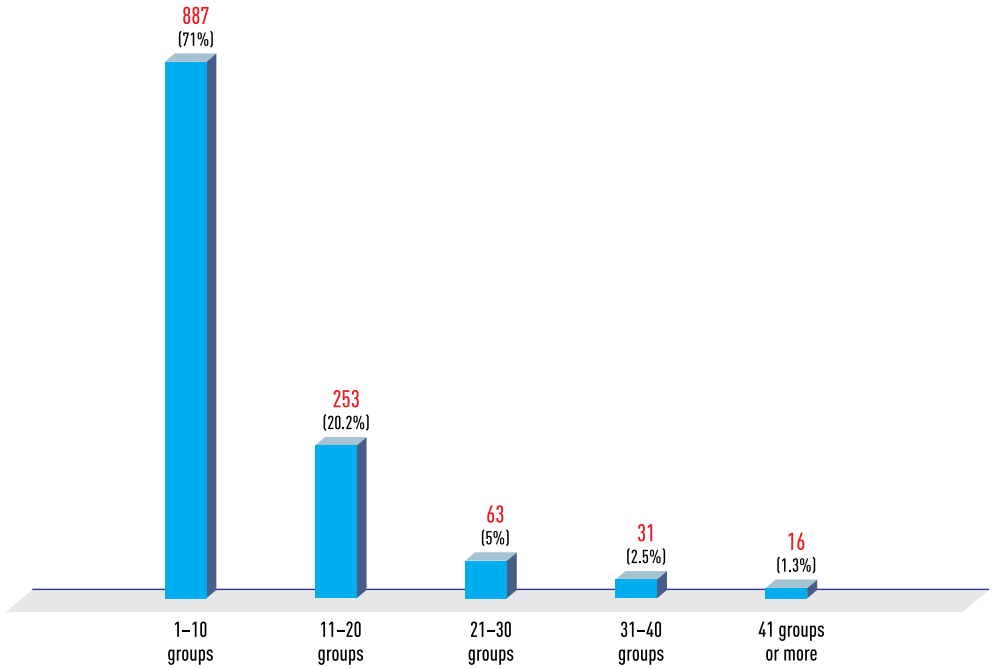
Figure 6. The period of time respondents using WhatsApp



The survey also found that most respondents (71%) have one to ten WhatsApp groups, which could indicate that there is an awareness to limit the number of WhatsApp groups and involve only in groups that are considered useful. Another reason is respondents found it difficult to know the exact number of groups they belong to because there is no feature in WhatsApp that allows them to know it (Figure 7).

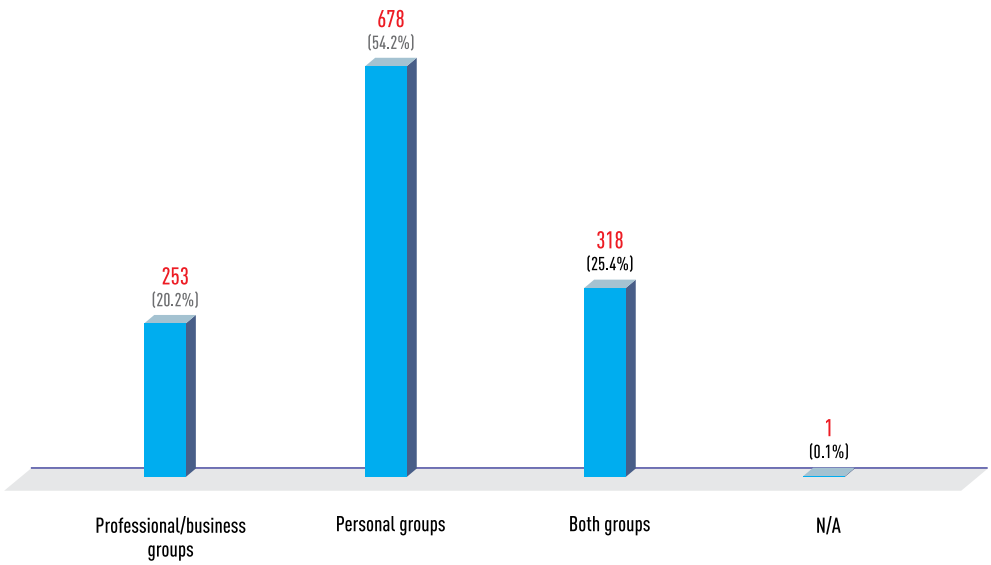
More than half respondents have more personal than professional WhatsApp groups, which represents how Indonesian women using WhatsApp as an extension of their social life.

Figure 7. The number of WhatsApp groups



The respondents were also asked to clarify in which types of WhatsApp groups they more belong to; do they belong to more professional groups rather than personal groups or vice versa, or do they join both groups in equal quantities? The majority of respondents join more personal groups (54.2%) rather than the professional ones. Other respondents who belong to both personal and professional groups in equal quantities are 25.4% and those who join more professional groups are 20.2% (Figure 8).

Figure 8. Types of WhatsApp groups



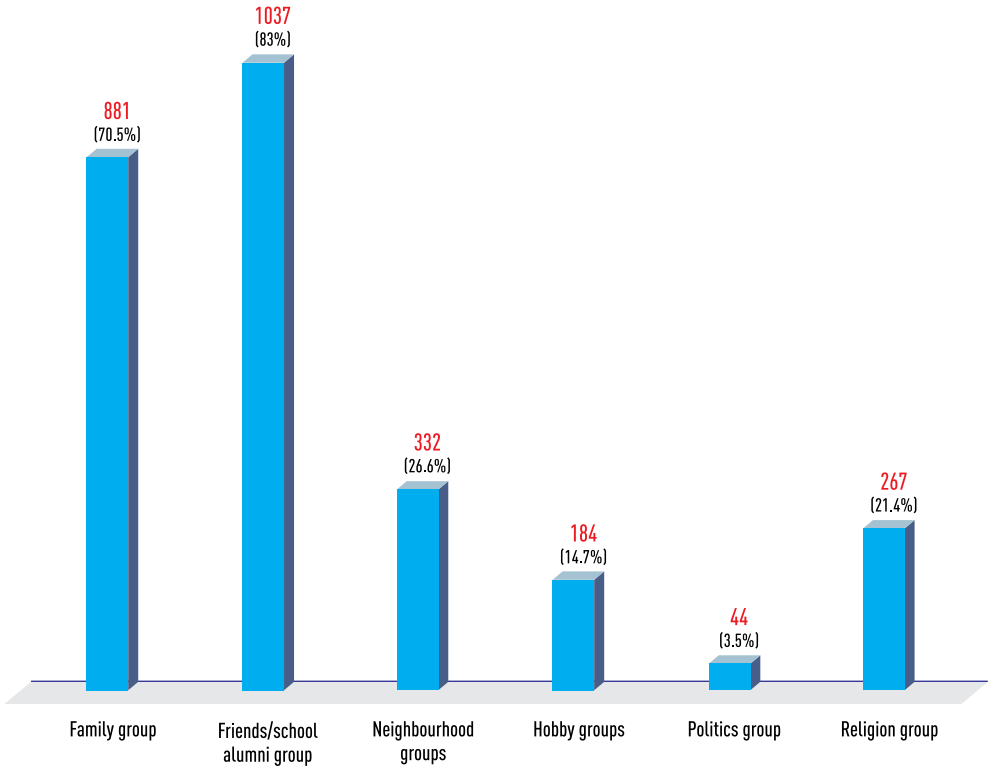
Regarding the types of personal group, mostly are friends/school alumni group (83%), followed by family group (70.5%). For the community group, the most popular groups are neighborhood (26.6%), religion (21.4%), hobby (14.7%) and politics (3.5%). It is also found that the main reason respondents joined friends/ school alumni groups is to reconnect with their old friends (Figure 9).

As an illustration, TL (56), an informant in Jakarta, said that the most interesting thing in her WhatsApp group is her college alumni group.

> "I think the college alumni group is rousing. I can reconnect with my former fellows when I went to college in Yogya. I often receive appealing and surprising information, such as one of my friends was elected subdistrict head, and the other one was becoming the district head." (TL, 56 years old, Jakarta, May 18, 2019).

In TL's college alumni group, about 95% of the members are performing the governmental function, such as village head, subdistrict head, district head, head of governmental body, governmental body staffer at provincial level and subdistrict

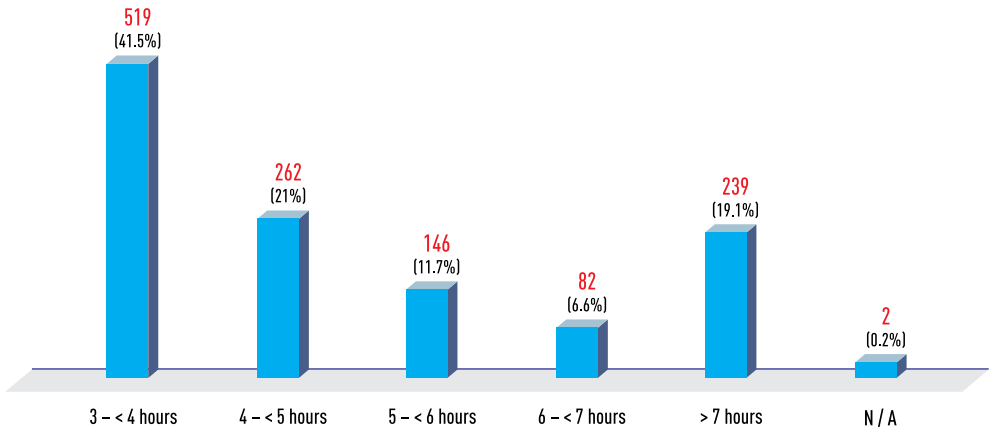
Figure 9. Types of personal WhatsApp groups



level across Indonesia. Being an active member in the group, TL can recall a memory with her friends, receive and respond information and misinformation from many regions in Indonesia, especially In terms of the 2018–2019 political years.

Regarding the average daily use of WhatsApp, most respondents (41.5%) spend three to four hours per day to read and send messages on WhatsApp, followed by four to five hours per day (21.0%), and more than seven hours per day (19.1%) (Figure 10).

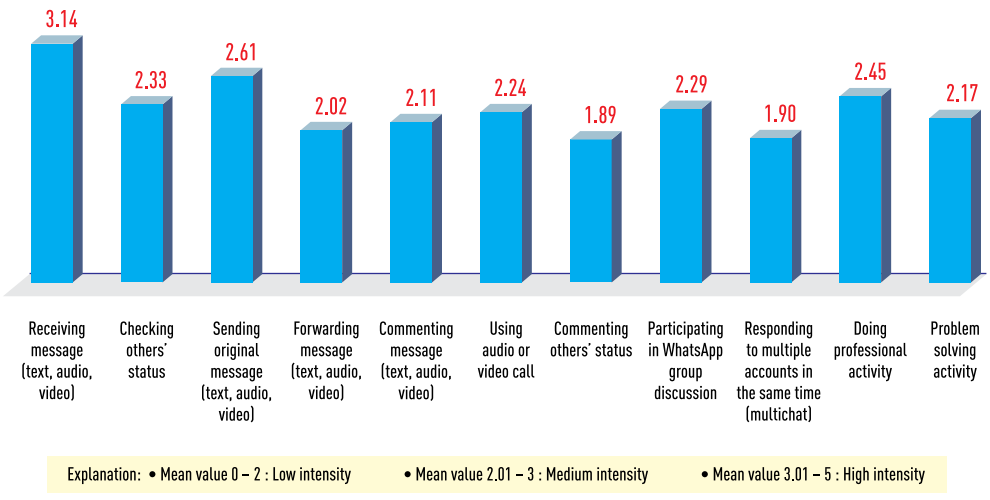
Figure 10. The average daily use of WhatsApp



It is also important to note that, according to the survey by APJII in 2018, the average internet use daily by Indonesians, both men and women, is eight hours and above (APJII, 2018).

This survey also asked respondents regarding their intensity in various activities, such as receiving message, checking others' status, and problem-solving activity. It is found that most respondents use WhatsApp to receive messages with a mean value of 3.14, while the lowest is to comment on the status of others with a mean value of 1.89 as seen in the Figure 11.

Figure 11. Score-Mean WhatsApp activity intensity



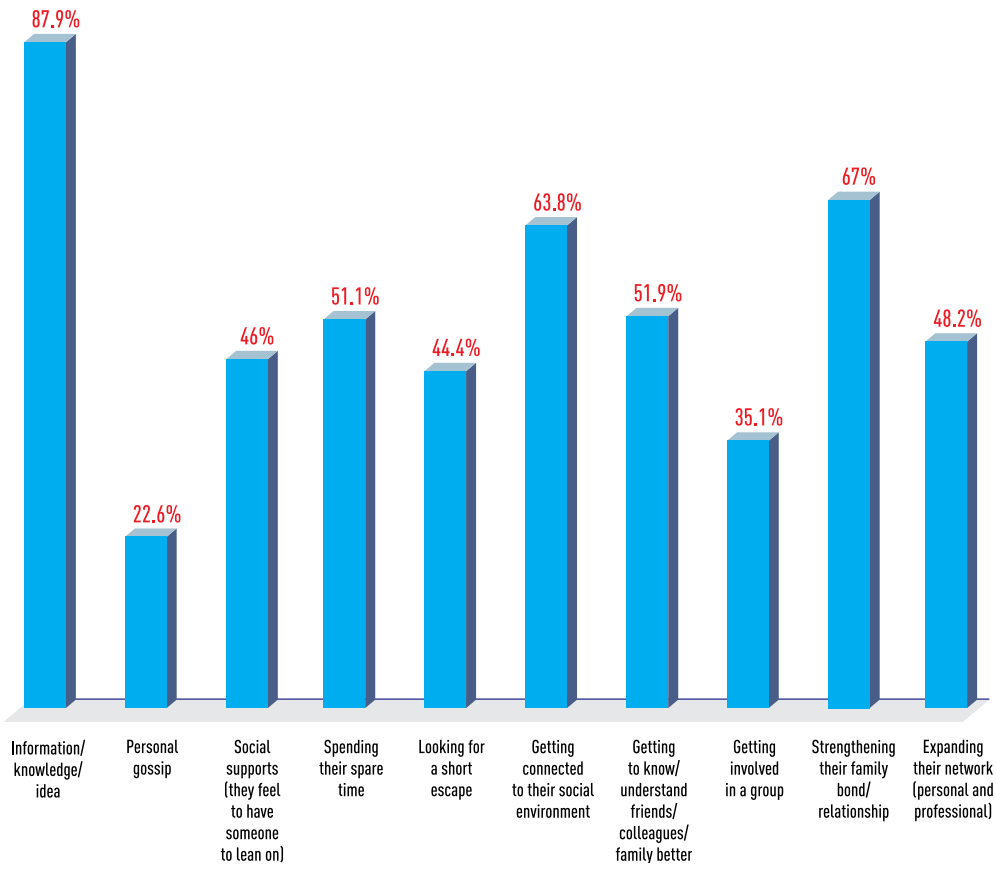
MOTIVATION FOR USING WHATSAPP AND TYPES OF INFORMATION

Nation-Wide

Most respondents' motivation for using WhatsApp relates to their desire to be connected with their personal rather than professional networks.

When the respondents were asked what motivated them to use WhatsApp, most respondents in the five cities answered that they want to gather information/ knowledge/idea (87.9%), strengthen their family bond/relationship (67.0%), connect with their social environment (63.8%), get to know/understand their friends/colleagues/family better (51.9%), and spend their spare time (51.1%) (Figure 12).

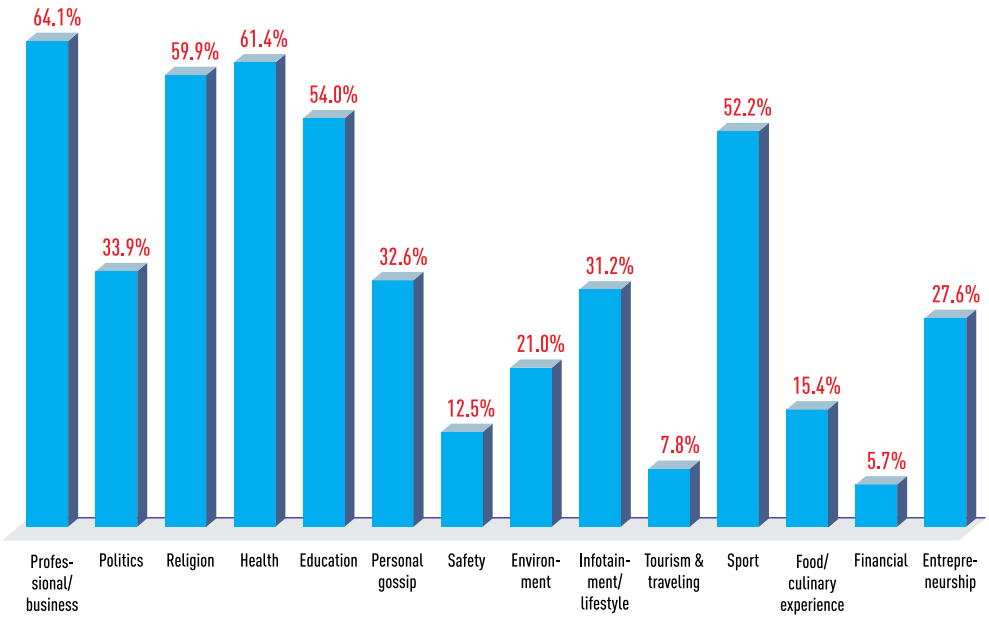
Figure 12. Motivation for using WhatsApp in five cities



The type of information respondents receive most is professional/business, while the mostly sent information is food/culinary experience.

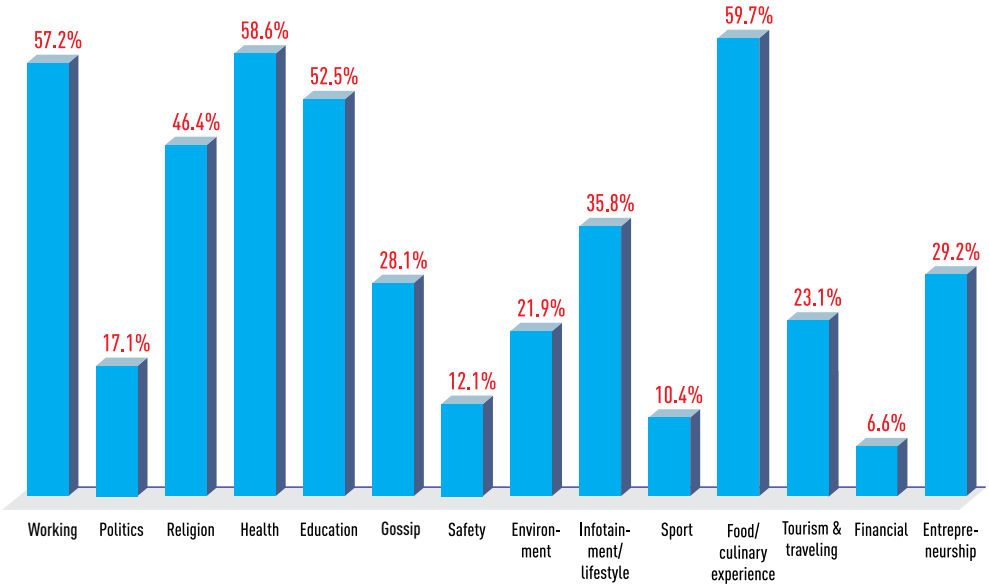
Five types of information mostly received on WhatsApp by respondents are professional/business (64.1%), followed by health (61.4%), religion (59.9%), education (54.0%), and food/culinary experience (52.2%) information (Figure 13).

Figure 13. Types of information received



Five types of information mostly sent on WhatsApp by respondents are food/ culinary experience (59.7), followed by health (58.6), professional/business (57.2), education (52.5), and religion (46.3) (Figure 14).

Figure 14. Types of information sent



Jakarta

When this survey asked what motivated respondents to use WhatsApp, most of 250 respondents in Jakarta answered that they use WhatsApp to gather information/ knowledge/idea (81.6%), strengthen their family bond/relationship (69.6%), get connected to their social environment (66%), and to know/understand their friends/colleagues/ family better (60.4%).

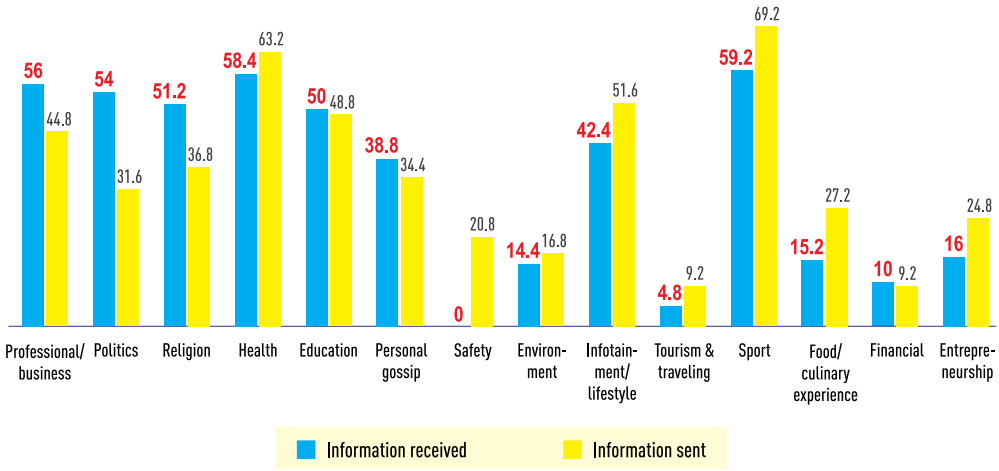
One of the informants, W (42), said that WhatsApp had given her so much ease to communicate, particularly to receive feedback and an update pertaining to professional and personal life. Being a working mother, W uses WhatsApp actively, spending 6–7 hours per day.

> "Now, it provides a voice message feature. I think it has been a great help for me. My little child cannot read yet, so we exchange voice messages a lot." (W, 42 years old, Jakarta, May 22, 2019).

Moreover, the types of information mostly received by the respondents on WhatsApp are food/culinary experience (59.2%), health (58.4%), professional/

business (56%), politics (54%), and religion (51.2%) information. Whereas, the all-time sent information via WhatsApp includes topics such as food/culinary experience (69.2%), health (63.2%), infotainment (51.6%), education (48.8%), and professional/business (44.8%). See Figure 15.

Figure 15. Types of information received and sent in Jakarta



Yogyakarta

According to 250 respondents in Yogyakarta, they installed WhatsApp on their phone because they want to get information/knowledge/idea (92%), get connected with their social environment (74%), strengthen their family bond (72.8%), build up both personal and professional networks (60%), and to obtain a social support (54%).

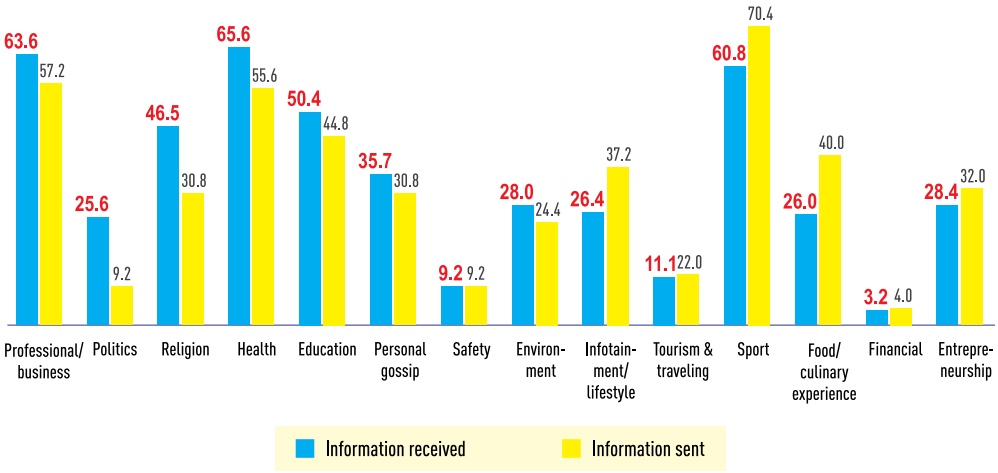
One of the informants, I (26 years old), said:

> "WhatsApp makes everything easier, for instance I can call and text my old friends and, of course, my family. It helps me a lot. I joined several professional WhatsApp groups whose members have the same type of job, so I get many updates from them." (I, 26 years old, Yogyakarta, May 27, 2019).

The top five types of information received on WhatsApp include health (65.6%), professional/business (63.6%), food/culinary experience (60.8%), religion (46.5%),

and education (50.4%) information. Meanwhile, the top five types of information sent on WhatsApp include food/culinary experience (70.4%), professional/ business (57.2%), health (55.6%), education (44.8%), and tourism/travelling (40%) information. See details in Figure 16.

Figure 16. Types of information received and sent in Yogyakarta



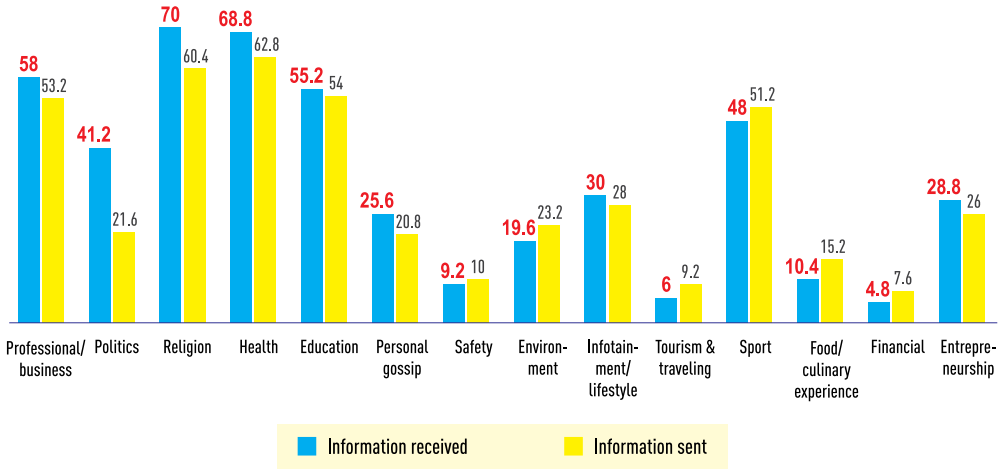
Banda Aceh

Out of 250 respondents in Banda Aceh, this survey found that they use WhatsApp to receive information/knowledge/idea (88.4%), get connected with their social environment (64%), and to get closer/strengthen their family bond/relationship (60.4%).

The mostly received information by respondents in Banda Aceh is religion (70%), followed by health (68.8%) and professional/business (58%). The reason why information on religion becomes the most popular information received on WhatsApp could be linked up with the fact that Aceh is the only province in Indonesia which adopts a special autonomic governmental system to implement the Islamic law.

Furthermore, the most popular information sent on WhatsApp is health information (62.8%), followed by religion (60.4%) and education (54%).

Figure 17. Types of information mostly received and sent in Banda Aceh



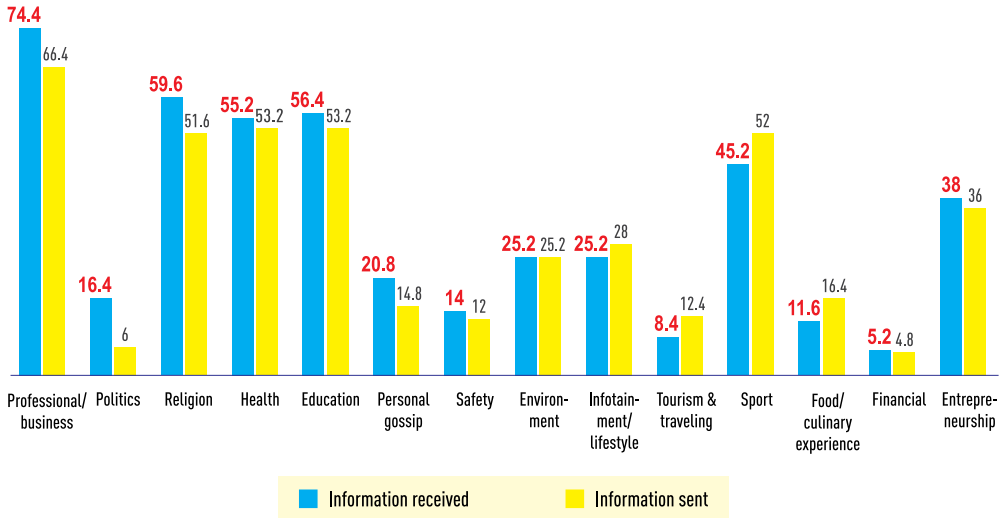
Makassar

The respondents in Makassar often use WhatsApp to receive information/ knowledge/idea (64.9%), followed by to strengthen their family bond or relationship (50.2%), to get connected to their social environment (51.7%), to spend their spare time (39.3%), and to grow their network (37.8%).

Meanwhile, the top five types of information received by the respondents on WhatsApp are professional/business (51.4%), religion (46.5%), health (44.4%), education (43.5%), food/culinary experience (35.7%), and personal gossip (35.7%) information.

When viewed from the other side, there are five information categories mostly sent on WhatsApp by the respondents in Makassar. According to the percentage, the following are the top five types of information sent by the respondents, namely professional/business (48.3%), education (46.2%), health (43.5%), culinary experience (41.7%), and religion (39%). See details in Figure 18.

Figure 18. Types of information received and sent in Makassar

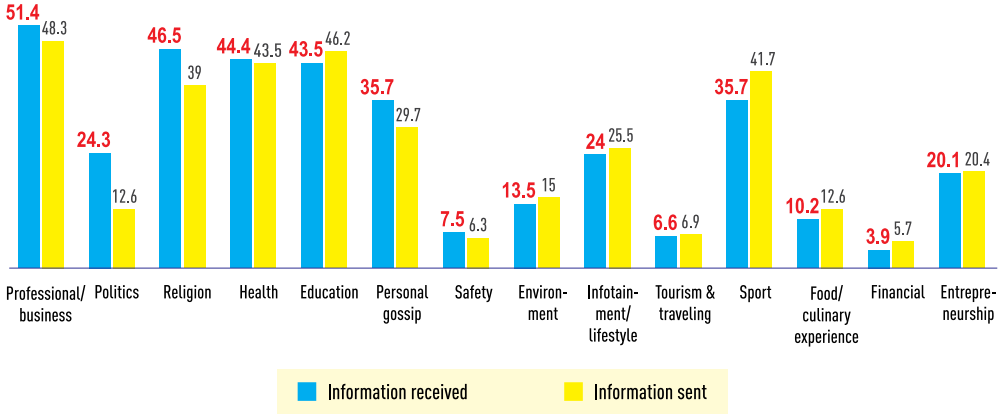


Jayapura

The respondents in Jayapura mostly use WhatsApp to collect information/ knowledge/idea (91.2%), to strengthen their family bond/relationship (65.6%), to get connected to their social environment (59.2%), to know/understand their friends better (51.2%), and to grow their network (47%). In addition to the above answer options, 4% of respondents stated that they use WhatsApp to facilitate their works.

Meanwhile, the types of information mostly received by the respondents on WhatsApp are professional (74%), religion (59.6%), education (56.4%), and health (55.2%) information. The information on food/culinary experience, which is popular in the other cities, is only taken by 45.2% of respondents in Jayapura. The percentage of the mostly-sent information is similar to that of the mostly-received one by the respondents in Jayapura. The types of information mostly sent by the respondent in Jayapura are professional/business (66.4%), health (53.2%), education (53.2%), food/culinary experience (52%), and religion (51.6%) information. In fact, the political, security, and financial issues are rarely discussed by the respondents in Jayapura. See details in Figure 19.

Figure 19. Types of information received and sent in Jayapura



MISINFORMATION

Most respondents receive dubious information regularly on a daily basis, most of which attempt to attest the information individually. Regarding the types of misinformation, politics are the top of the list, mostly encountered by respondents on friends/school alumni WhatsApp group. Responding to the misinformation on WhatsApp group, most respondents choose to ignore it, indicating that Indonesian women tend to avoid argumentation with other members on WhatsApp group. However, a small percentage of respondents are eager to combat misinformation.

While this book uses the term "misinformation", the survey and interviews used the term "hoax" in asking respondents and informants about their experience in dealing with misinformation, as the term "hoax" is more common among Indonesians.

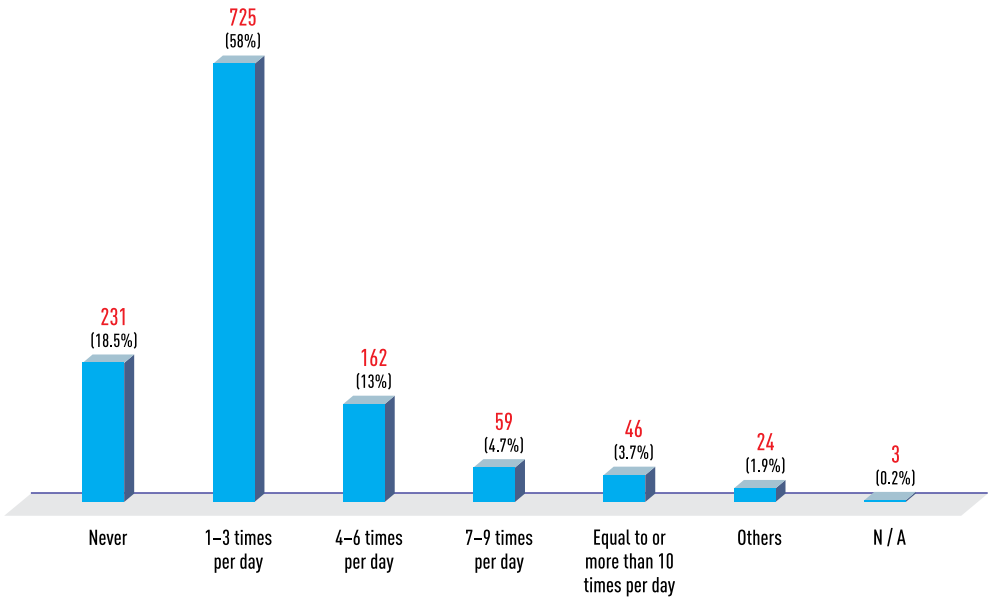
The Frequency to Receive Dubious Information

When the respondents in five cities were asked how often they may receive dubious information, they answered 1–3 times per day (58.0%), 4–6 times per day (13.0%), 7–9 times per day (4.7%), and equal to or more than 10 times per day (3.7%) (Figure 20).

In **Jakarta**, regarding the respondents' intensity to receive dubious information on WhatsApp, over half of them (59.2%) admitted that they receive it 1–3 times per day, followed by never receive it (20.8%), and 4–6 times per day (12%). Even though the highest intensity suggests 1–3 cases of dubious information per day. The data is quite relevant to describe that women living in Jakarta are still exposed to the risk of receiving dubious information which may lead them to bad decisions.

In **Yogyakarta**, regarding the intensity of respondents receiving dubious information on WhatsApp, over half of the respondents (63.6%) admitted that they receive such information 1–3 times per day, while the others (5.2%) admitted that they receive more than 10 times per day. The respondents said they never receive dubious information are only 9.2%.

Figure 20. The frequency to receive dubious information on WhatsApp



> "I find a lot of information to which I doubt its reliability on many occasions, particularly the information about health. For example, there is information saying 'If you want to lower your cholesterol level, you just need to drink water infused with some leaves'. Actually, even the herbs must undergo some research, years of research. But, it doesn't apply to such information. There is no introduction who confirmed the research. Where did they do the research? in a lab? Here it just said that if you have a high cholesterol level, you gotta drink this, if you suffer from uric acid, just drink this, and when it comes to cancer, you drink this." (SI, 49 years old, Yogyakarta, May 24, 2019).

In **Banda Aceh**, regarding the frequency of respondents receiving dubious information, the survey showed that most of them (55.2%) received it 1–3 times a day, followed by 22.8% of respondents who never received it at all, and 9.6% of respondents claimed to receive dubious information 4–6 times a day.

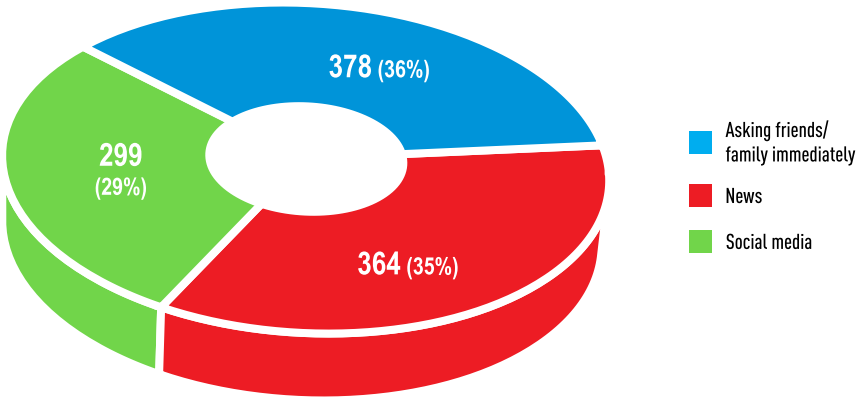
In **Makassar**, regarding the frequency of respondents receiving dubious information, the survey showed that most of them (58%) received it 1–3 times a day, followed by 18.5% of respondents who never received it at all, and 13% of respondents claimed to receive dubious information 4–6 times a day.

In **Jayapura**, regarding the frequency of respondents receiving dubious information, the survey showed that most of them (56.8%) it 1–3 times a day, followed by 21.1% of respondents who never received any, and 12.4% of respondents claimed to receive dubious information 4–6 times a day.

The Way Respondents Attest Dubious Information

Among the respondents in five cities who have received the dubious information, 68.2% of them will attempt to attest the information. In the process to attain the fact, most respondents would ask their friends/family immediately (36%), look around the news media (35%), and scroll through the social media (29%).

Figure 21. The way to attest dubious information



In **Jakarta**, when dealing with the dubious information, the majority of respondents (64%) decided to attest it, while the others (36%) decided to be passive on such information. As the media grows rapidly, the news and social media play a significant role in the information verification process. It is confirmed by the fact that the respondents will verify the information through the news media (36%) followed by social media (35%). Meanwhile, asking friends and family is the last option for verification (29%).

In **Yogyakarta**, responding to the dubious information, most of respondents (77.2%) decided to attest it. The information sources they use to confirm the accuracy of such information are friends and family (41%), news media (36%), and social media (23%).

In **Banda Aceh**, responding to the dubious information, most of respondents (64%) decided to attest it. The information sources they use to confirm the accuracy of such information are friends and family (37%), news media (35%), and social media (28%).

One of the informants, V (41), said that the dubious information, recently, was related to political, security, and criminal issues. She verified this kind of dubious information by turning to experts. Then, once she verified it, she would broadcast the verification on direct messages and WhatsApp groups. Responses from other WhatsApp groups members tend to be positive and appreciative, meanwhile the broadcaster of the dubious content would immediately delete it.

> "I have tried to verify its accuracy with others whom I deem to be competent. Is it valid? And if it turns out misleading, I will directly personally chat my friends or share the verification on WhatsApp groups saying that, 'It's a hoax, do not share it again. It's misleading or that's an old unrelated video.'" (V, 41 years old, Banda Aceh, May 24, 2019).

In **Makassar**, responding to the dubious information, most of respondents (68.2%) decided to attest it. The information sources they use to confirm the accuracy of such information are friends and family (37%), social media (34%), and news media (31%).

One informant, GW (54), said that GW could immediately suspect a message as misinformation when reading it for the first time.

> "Because I am a linguist, when I read it, I will be able to recognize the general characteristics of a hoax. Misinformation, in my opinion, has the characteristics of using subjective words, containing propaganda, conveying abundant nonsenses. Every time I read anything like that, I will just ignore it." (GW, 54 years old, Makassar, May 20, 2019).

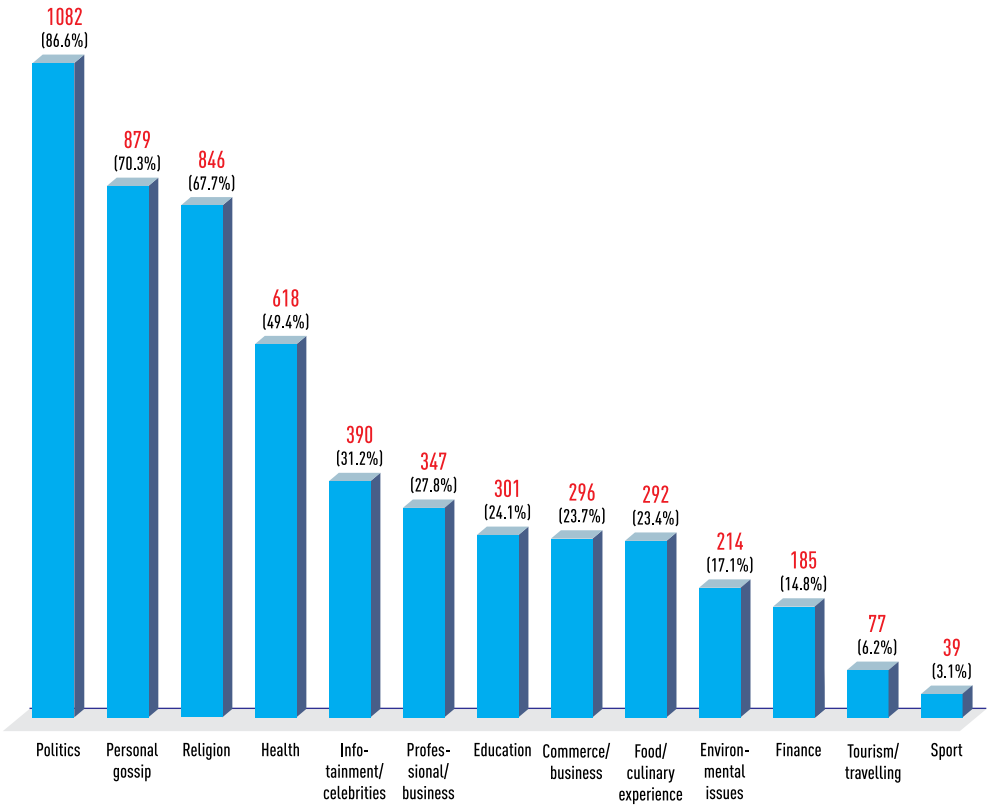
In **Jayapura**, responding to the dubious information, most of respondents (68.2%) decided to attest it. The information sources they use to confirm the accuracy of such information are friends and family (37%), news media (37%), and social media (26%).

Types of Misinformation

Politics is the type of misinformation mostly received by respondents which is inseparable from the turmoil of the 2018–2019 political years.

In **five cities**, the five types of misinformation mostly received by the respondents on WhatsApp are politics (86.6%), personal gossip (70.3%), religion (67.7%), health (49.4%), and infotainment/celebrities (31.2%) information.

Figure 22. Types of misinformation



In **Jakarta**, the types of misinformation all the time received by the respondents are politics (89.6%), followed by religion (78%), personal gossip (77.2%), health (46%), and food/culinary experience (40%) information.

One informant, TL (56) said that politics was the most misinformation she received on WhatsApp, particularly when it came to the 2019 presidential election. From all WhatsApp groups TL belongs to, TL mostly found misinformation on the college alumni group, and nearly all (90%) of the information were passed on by the male members.

> "All you see were mostly political hoaxes, and male members went in for these hoaxes. To respond them, I could only be neutral. I didn't want to start the fire, as I knew, they had their own perspectives on politics. I said it might be the fact, yet it could be otherwise, the most important is we should not bother other members of the group." (TL, 56 years old, Jakarta, May 18, 2019).

For TL, the college alumni WhatsApp group is important because it brings together solace and affections. Accordingly, TL wants to make sure all conversations go smoothly, stimulating, and comfortable. For TL, their friendship can be a common thread supporting the continuity of the alumni group.

For instance, even when TL was pretty sure that the member of the group spread misinformation, TL did not necessarily say it must be misinformation, as TL tried to respect friends and maintain the harmonious atmosphere of such a WhatsApp group.

The fact that the political issue is the most popular misinformation sent by the male members of the group is also confirmed by another informant, named Y (37). Y said that she mostly received misinformation pertaining to political issues or general election issues from her school alumni group. However, if there was no discussion related to the general election, Y hardly ever found misinformation on the WhatsApp group.

> "These political hoaxes are mostly sent by male members. While the female members frequently posted hoaxes related to health. The latest political hoax was in connection with the announcement of the ruling on the general election

> by the Constitutional Court on 22 May 2019. This widespread misinformation signalled that there would be a riot in Jakarta similar to that of the 1998." (Y, 37 years old, Jakarta, May 22, 2019).

In **Yogyakarta**, the five types of misinformation mostly received by the respondents on WhatsApp are politics (85.6%), personal gossip (71.6%), religion (71.2%), health (60%), and lifestyle (38%) information.

In **Banda Aceh**, five types of misinformation mostly received by the respondents are politics (88.4%), personal gossip (70.4%), religion (70%), health (53.6%), and infotainment (38%).

The propagation of political misinformation was also recognized by the informant TM as a problem encountered in the WhatsApp group interaction:

> "It made me feel anxious. I was about to respond to it and looked for the valid information. But, it will be exhausting to take care of all misinformation. Too many hoaxes, too many people with different perspective. We might find it's difficult to control their responses, as sometimes they are more reactive. It's tiresome. It doesn't bring any good for you." (TM, 28 years old, Banda Aceh, May 25, 2019).

In **Makassar**, the five types of misinformation most frequently received by the respondents on WhatsApp are politics (87.1%), personal gossip (76.6%), religion (68.5%), health (38%) and education (31.0%).

In **Jayapura**, the five types of misinformation mostly received by the respondents are about politics (82.8%), personal gossip (62.4%), and religion (51.2%).

Types of WhatsApp as the Source of Misinformation

Almost half of respondents receive misinformation mostly from their personal networks. According to 1,250 respondents in five cities, the survey found that the friends/school alumni group are the number one source of misinformation (49%), followed by direct message (14.1%), family group (13.3%), professional/business group (8.5%), and neighborhood community group (7.8%).

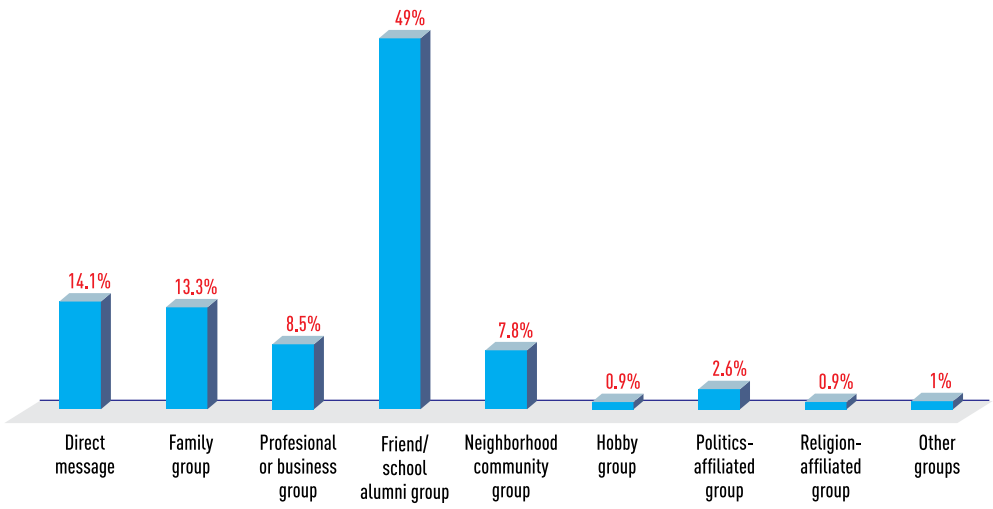
In **Banda Aceh**, the respondents admitted that they mostly receive misinformation from the friends/school alumni group (40%). The other channels used to spread misinformation are direct message (22%), family group (10.4%), and professional group (10.8%).

In **Makassar**, the respondents admitted that they mostly receive misinformation from the friends/school alumni group (52.6%). The other channels used to spread misinformation are direct message (7.3%), family group (19.4%), professional or business group (6.9%), neighborhood community group (6.1%), and political affiliation group (3.6%).

In **Jayapura**, the respondents admitted that they mostly receive misinformation from the friends/school alumni group (51.2%). The other channels used to spread misinformation are direct message (7.3%), followed by direct message (14.4%) and professional or business group (11.6%).

In **Jakarta**, the respondents admitted that they mostly receive misinformation from the friends/school alumni group (56.8%). The other channels used to spread misinformation are direct message (18.4%), neighbourhood community group (8.4%), family group (6.8%), and professional/business group (6.8%).

Figure 23. Types of WhatsApp as the source of misinformation



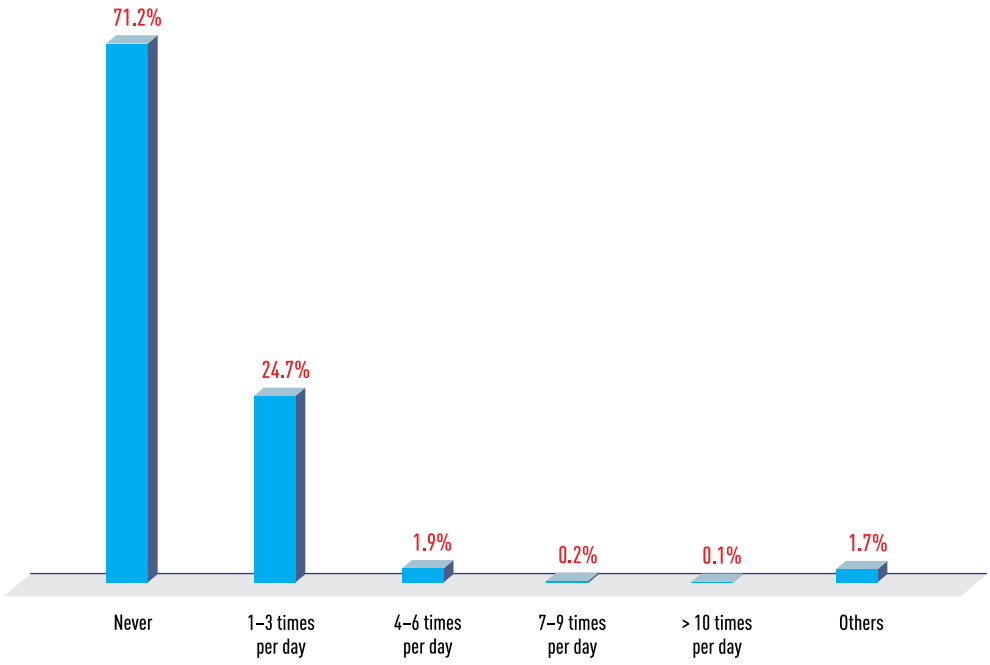
In **Yogyakarta**, the respondents admitted that they mostly receive misinformation from the friends/school alumni group (45.2%). The other channels used to spread misinformation are direct message (18.4%), neighbourhood community group (14%), and family group (22%).

The Frequency of Respondents to Share Misinformation Unintentionally

Most of respondents tend to avoid sharing misinformation on WhatsApp; however, above a quarter of respondents unintentionally share misinformation because of lack of digital literacy competence especially in verification.

In **five cities**, the frequency to unintentionally disseminate misinformation on WhatsApp are as follows: never (71.2%), 1–3 times per day (24.7%), and 4–6 times per day (1.9%).

Figure 24. The intensity of respondents to share misinformation unintentionally on WhatsApp



In **Jakarta**, 67.6% of the respondents said that they never share any misinformation on WhatsApp. While the other 26.4% said that they share it 1–3 times per day, and only 4.4% respondents who share misinformation 4–6 times per day.

In **Yogyakarta**, the majority of respondents (77.6%) said that they never share any misinformation incidentally on WhatsApp. On the other hand, 21.6% of respondents said that they share it 1–3 times per day and only 0.8% of them share it 4–6 times a day.

In **Banda Aceh**, the majority of respondents (78.8%) said that they never share any misinformation incidentally on WhatsApp. On the other hand, 16.4% of respondents said that they share it 1–3 times per day and only 3.6% of them share misinformation unintentionally more than 10 times a day.

In **Makassar**, the majority of respondents (69.2%) claimed they never share misinformation, followed by 28.8% of respondents who share it unintentionally 1–3 times a day, and 1.2% of them share it 4–6 times a day.

In **Jayapura**, most of respondents (71.6%) said that they never share misinformation on WhatsApp. On the other hand, 26% of respondents said that they share it unintentionally 1–3 times per day and only 1.6% of them share misinformation unintentionally for 4–6 times a day.

The Way Respondents Respond to Misinformation

Each respondent responds to misinformation in numerous ways. For example, one respondent could ignore one political misinformation in one ocassion, but she could verify another political misinformation on another time so she chooses more than one responses during the survey. The data below ranks respondents' responses from the most popular to least popular ones.

In **five cities**, the most popular response is to ignore the misinformation on WhatsApp group (73.8%), followed by to give recommendation to verify it (25.5%), to verify it (16.6%), to counter it (10.2%), and to leave the group (8.6%).

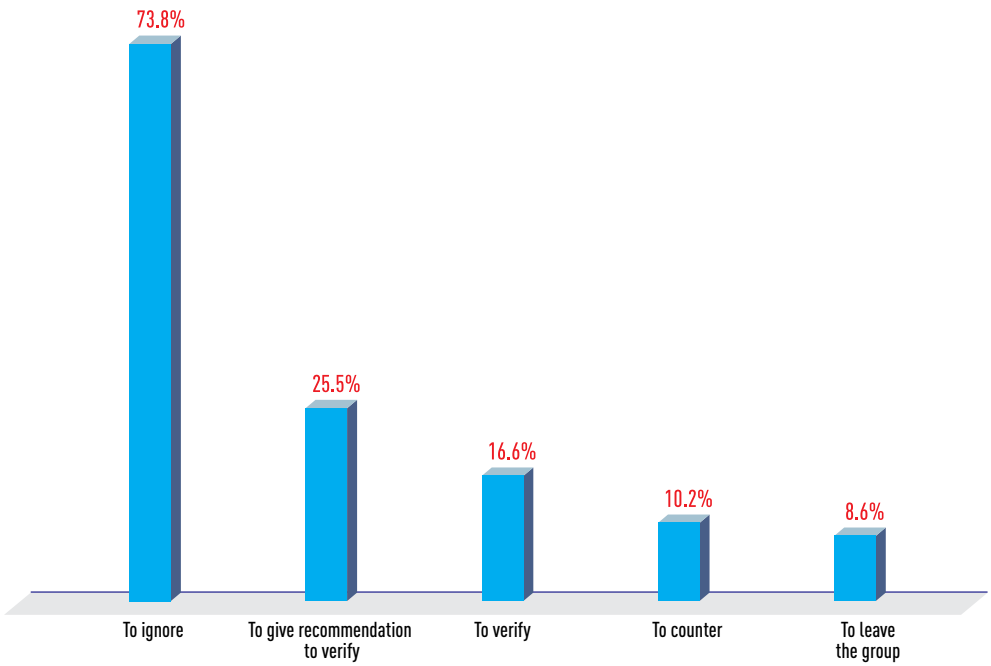
In **Jakarta**, the most popular response is to ignore the misinformation on WhatsApp group (84%), followed by to give recommendation to verify it (22%), to verifiy it (15.2%), to counter it (14%), and to leave the group (6.8%).

In **Yogyakarta**, the most popular response is to ignore the misinformation on WhatsApp group (74.7%), followed by to give recommendation to verify it (28.1%), to verify it (15.3%), to leave the group (8%), and to counter it (5.6%).

On many ocassions, when the misinformation is shared by respondents' close friends/relatives, some of the respondents will hold back to directly respond it, as illustrated by the following statement.

> "Sometimes, I choose to hold back my responses, so I just leave it. If I get annoyed, then I will delete it." (DF, 44 years old, Yogyakarta, May 24, 2019).

Figure 25. The way respondents respond to misinformation on WhatsApp group.



In **Banda Aceh**, the most popular response is to ignore the misinformation on WhatsApp group (73.6%), followed by to give recommendation to verify it (24%), and to verify it (18.4%).

In **Makassar**, the most popular response is to ignore the misinformation on WhatsApp group (69.5%), followed by to give recommendation to verify it (27.3%), to verify it (16.1%), to leave the group (8.8%), and to counter it (7.6%).

Below is the statement from an informant on how she responds to the misinformation on WhatsApp group.

> "I hold on to one principle: 'read and consider before sharing'. Education starts from home; it goes the same with the way we deal with social media. Now, not only children, adults are also very prone to be exposed to the wide world of internet without having sufficient understanding to properly deal with the content." (MM, 47 years old, Makassar, May 20, 2019).

In **Jayapura**, the most popular response is to ignore the misinformation on WhatsApp group (67.6%), followed by to give recommendation to verify it (26.4%), to verify it (18.0%), to leave the group (11.2%), and to counter it (10%).

Meanwhile in interviews, several informants claimed to actively respond to misinformation, as seen in the below statement.

> "I left a group once, but mostly, I just warned them, urging the sender to re-check any information before posting it. They have to make sure it is not misinformation. Don't carelessly share it. If it results in a conflict, I'll leave the group." (IN, 29 years old, Jayapura, May 29, 2019).

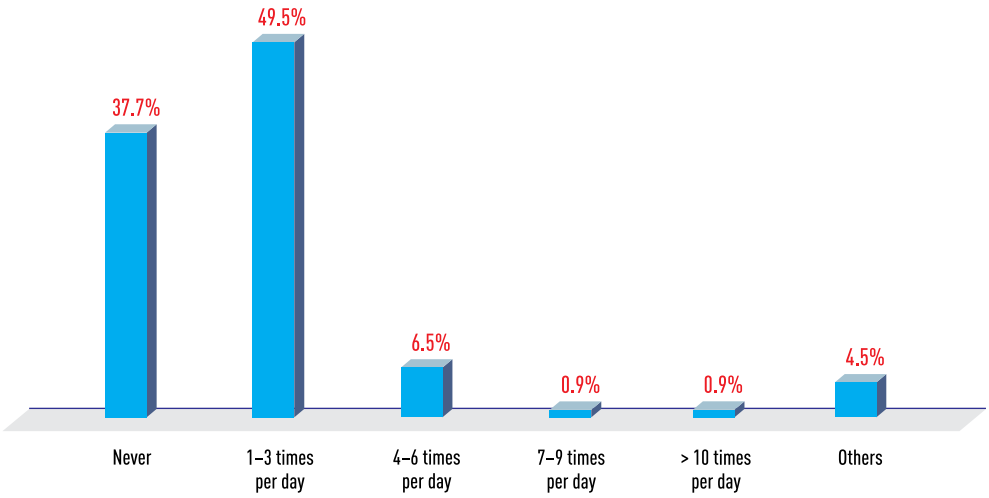
HATE SPEECH

Almost half of respondents deal with hate speech on a daily basis, with religion/belief/faith as the most encountered category. As been found on the case of misinformation, the type of WhatsApp group that shares most hate speech is friends/school alumni group. While this survey found that more respondents tend to ignore misinformation, regarding hate speech more respondents take a more active role, mostly by recommending verification. It is important to note that in the Indonesian context, hate speech is inseparable from misinformation and politics.

The Frequency of Respondents to Receive Hate Speech

In five cities, most respondents (49.5%) answered that they receive hate speech 1–3 times per day, followed by never receive it (37.7%).

Figure 26. The frequency of respondents to receive hate speech



In **Jakarta**, this survey found that 64.8% of respondents receive hate speech 1–3 times per day, and this figure records as the highest rank. Meanwhile, the second rank is taken by those who never receive hate speech (23.2%), followed by those who receive hate speech 4–6 times per day (10%), and 7–9 times per day (0.8%).

In **Yogyakarta**, over half of respondents (50.4%) admitted that they receive hate speech 1–3 times per day, while the others (1.6%) admitted that they receive it more than 10 times per day.

In **Banda Aceh**, the majority of respondents claimed that they never receive hate speech on WhatsApp (56%). However, 34.4% of respondents admitted to receive hate speech at least 1–3 times a day.

In **Makassar**, the majority of respondents claimed that they never receive hate speech (53.6%), followed by 1–3 times a day (32.8%), and 4–6 times a day (7.2%).

In **Jayapura**, the majority of respondents claimed that they receive hate speech on WhatsApp 1–3 times a day (65.2%), while 26.4% of respondents admitted they never receive hate sppech on WhatsApp.

The Categories of Hate Speech Encountered

The categories of hate speech found on WhatsApp are as follows: religion/belief/faith (46.6%), ethnicity (17.4%), physical appearance (14.3%), profession/job (14.2%), race (12.6%), gender (10.8%), and sexual orientation (7.6%).

In **Jakarta**, most respondents (64.4%) said the hate speech is dominantly addressed to religion/belief/faith, followed by ethnicity (26%), race (19.2%), physical appearance (19.2%), and job/profession (16.4%), gender (14,4%), sexual orientation (13,2%), and skin color variation (1,6%).

In **Yogyakarta**, the categories of hate speech found on WhatsApp are as follows: religion/belief/faith (57.6%), job/profession (17.2%), physical appearance (14.8%), race (12.4%), ethnicity (10%), and gender (10%).

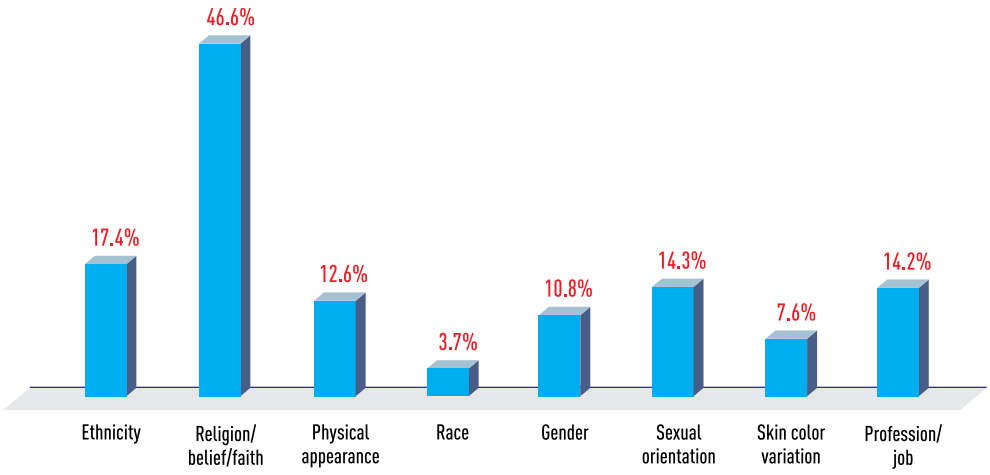
In **Banda Aceh**, the most common categories of hate speech encountered by the respondents are religion/belief/faith (32%), followed by ethnic group (16%), gender (14.8%), profession/job (11.6%), race (10.8%), and physical appearance (8.8%).

In **Makassar**, the categories of hate speech mostly found are as follows: religion/belief/faith (22.8%), job/profession (16.4%), physical appearance (15.6%), race

(12.6%), gender (7.2%), ethnic group (6.8%), sexual orientation (4.4%), and skin color variation (3.6%).

In **Jayapura**, the categories of hate speech mostly received by the respondents are religion/belief/faith (48.8%), job/ profession (16.8%), and race/ethnic group (13.6%).

Figure 27. The categories of hate speech encountered on WhatsApp



The Types of WhatsApp as the Source of Hate Speech

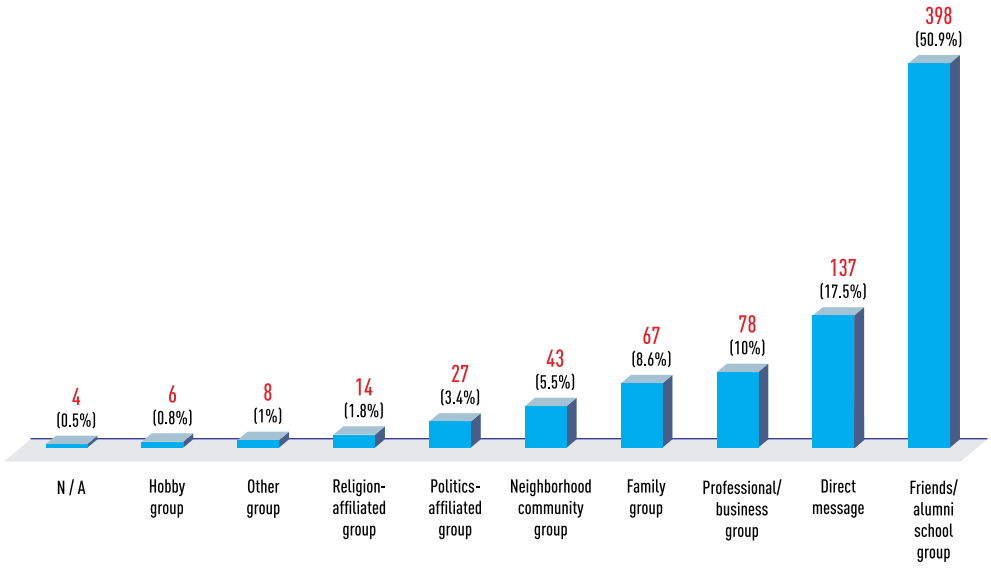
In five cities, from all respondents who receive hate speech (782 women), they mostly encountered hate speech on friends/school alumni group (50.9%), followed by direct message (17.5%), professional/business group (10%), family group (8.6%), and neighborhood community group (5.5%).

In **Jakarta**, from all respondents who receive hate speech (192 women), most respondents (61%) encountered hate speech on their friends/school alumni group, followed by direct message (22%), neighborhood community group (6%), professional/business group (5%), and family group (4%).

In **Yogyakarta**, from all respondents who receive hate speech (179 women), most respondents receive hate speech on their friends/school alumni groups (53%)

followed by family groups (15%), direct message (12%), and professional/business group (6%).

Figure 28. The types of WhatsApp as the source of hate speech



In **Banda Aceh**, from all respondents who receive hate speech (111 women), most respondents receive hate speech on their friends/school alumni groups, (40%) followed by direct message (26%), professional/business group (15%), neighborhood community group (6%), and family group (5%).

In **Makassar**, from all respondents who receive hate speech (116 women), most respondents receive hate speech on their friends/school alumni groups (46%), followed by family group (16%), direct message (14%), professional/business group (11%), and neighborhood community group (4%).

In **Jayapura**, from all respondents who receive hate speech (184 women), most respondents receive hate speech on their friends/school alumni groups (48%), followed by professional/business group (15%), direct message (14%), neighborhood community group (5%), and family group (4%).

The Way Respondents Respond to Hate Speech

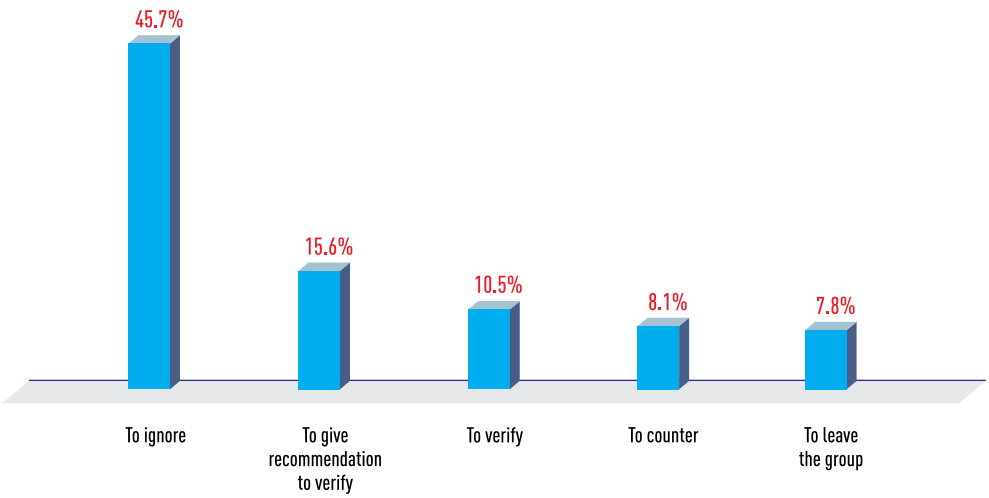
Similar to the case of misinformation, each respondent responds to hate speech in numerous ways. For example, one respondent could ignore hate speech in one ocassion, but she could counter hate speech on another time so she chooses more than one response in the survey. The data below ranks respondents' responses from the most popular to least popular ones.

In **five cities**, the most popular response is to ignore hate speech on WhatsApp group (45.7%), followed by to give recommendation to verify it (15.6%), followed by to provide with verification (10.5%), to counter it (8.1%), and to leave the group (7.8%).

In **Jakarta**, the most popular response is to ignore hate speech on WhatsApp group (30%), followed by to give recommendation to verify it (13.2%), followed by to counter it (12.4%), to verify it (9.2%), and to leave the group (6%).

In **Yogyakarta**, the most popular response is to ignore hate speech (54%), followed by to give recommendation to verify it (16.8%), to verify it (9.2%), to leave the group (7.6%), and to counter it (5.2%).

Figure 29. The way respondents respond to hate speech on WhatsApp group



In **Banda Aceh**, the most popular response is to ignore hate speech (30%), followed by to give recommendation to verify it (24%), and to verify it (18.4%).

One informant, C (27), for example, explained her experience in dealing with the hate speech:

> "If I'm in the mood, I'll respond to it just for a couple of times. It depends on to what extent it may sound severe." (C, 27 years old, Banda Aceh, May 24, 2019).

C said that the willingness to deal with hate speech would depend on C's intention to react and the severity of the hate speech.

Another informant, M (48), said that political issues make her feel uncomfortable. She strongly opposes any hate speech related to political issues on her alumni group. Initiating small talks other than politics is how M usually responds to hate speech on her alumni group.

> "I encouraged them to share their culinary information at that moment. It would be much better than discussing politics." (M, 48 years, Banda Aceh, May 24, 2019).

M said that any political discussions on WhatsApp could turn the WhatsApp groups into heating debate forums which potentially create conflict among the members. So when one of the members shares hate speech, M usually sends direct message to her/him encouraging them to stop the heated conversation.

In **Makassar**, the most popular response is to ignore hate speech (30.8%), followed by to give recommendation to verify it (14%), to verify it (9%), to counter it (8%), and to leave the group (6.4%).

In **Jayapura**, the most popular response is to ignore hate speech (50.4%), followed by to give recommendation to verify it (18.8%), to leave the group (14.4%), and to verify it (9.2%).

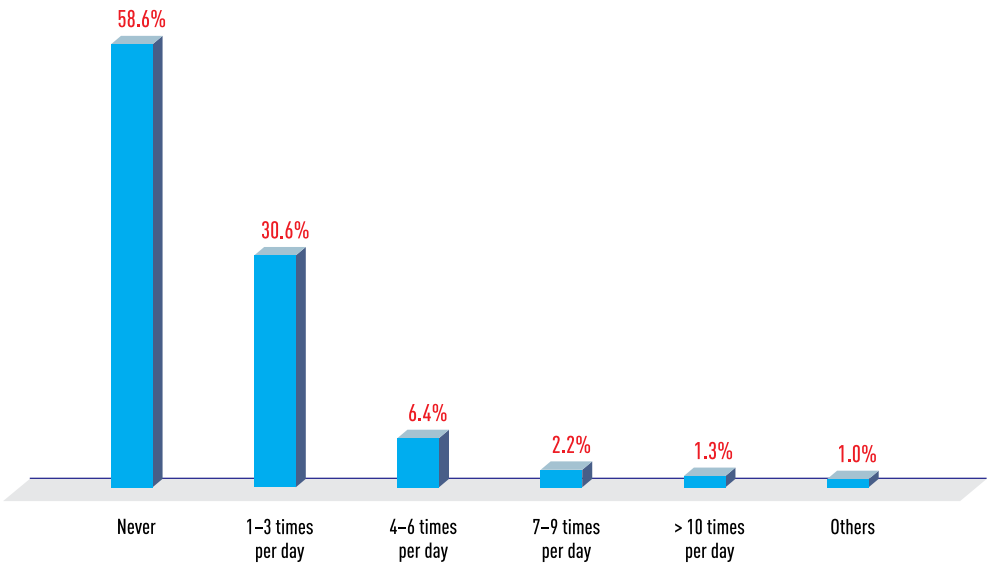
Frequency of Respondents to Receive Information that Offends Women

Besides investigating various categories of hate speech, this study also explores on how respondents deal with information that offends them as women. This offensive information is seen by the respondents in the form of harassment, marginalization, stereotyping, violence, and discrimination.

In **five cities**, the majority respondents claimed they never receive information that offends them as women (58.6%). However, some other receive such information 1–3 times per day (30.6%) followed by 4–6 times per day (6.4%), 7–9 times per day (2.2%), and equal to or more than 10 times per day (1.0%).

In **Jakarta**, most respondents claimed they never find any information which make them feel offended as women (57.6%). Even so, in low intensity, 29.6% of them admitted that they receive this offensive information 1–3 times per day, 8.4% of them receive it 4–6 times per day, and 2% of them receive it 7–9 times per day.

Figure 30. Frequency of respondents to receive information that offends them as women



In **Yogyakarta**, most respondents claimed they never find any information which make them feel offended as women (60%). Even so, in low intensity, 32.4% of them admitted that they receive this offensive information 1–3 times per day, 5.6% of them receive it 4–6 times per day, and 6.8% of them receive it 7–9 times per day.

In **Banda Aceh**, most respondents claimed they never find any information which make them feel offended as women (59.6%). Even so, in low intensity, 30.4% of them admitted that they receive this offensive information 1–3 times per day, 5.2% of them receive it 4–6 times per day, and 1.6% of them receive it 7–9 times per day.

In **Makassar**, most respondents claimed they never find any information which make them feel offended as women (55.6%). Even so, in low intensity, 33.2% of them admitted that they receive this offensive information 1–3 times per day, 7.2% of them receive it 4–6 times per day, and 2% of them receive it 7–9 times per day.

In **Jayapura**, most respondents claimed they never find any information which make them feel offended as women (55.6%). Even so, in low intensity, 33.2% of them admitted that they receive this offensive information 1–3 times per day, 7.2% of them receive it 4–6 times per day, and 2% of them receive it 7–9 times per day.

INDONESIAN WOMEN AND DIGITAL LITERACY

Respondents have moderate score for 10 different skills of digital literacy. In average, their functional skills are higher than their critical skills, while they have stronger consuming skills than prosuming skills.

This study also scored four factors that influence respondents' digital literacy competence. They are the intensity of the use of WhatsApp as the strongest factor, followed by the number of WhatsApp group, educational background, and age.

The Score of Digital Literacy Competence

This study employed ten digital literacy skills formulated by Japelidi (in Kurnia et al., 2018) as a tool to look at digital literacy competency as described in the figure below.

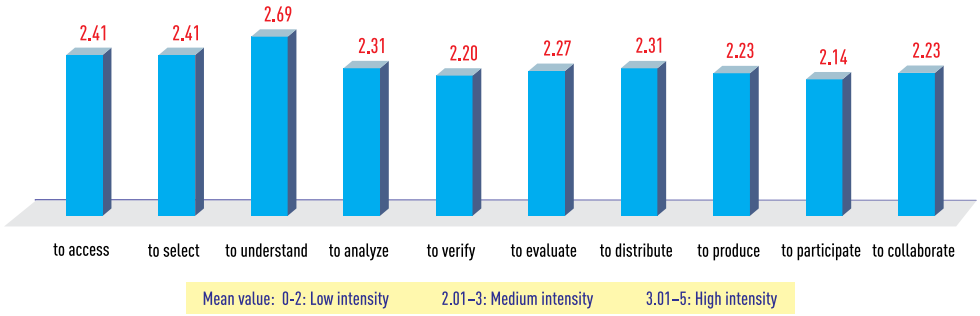
Figure 31. Japelidi's digital literacy competence

COMPETENCE
1. The ability of the respondents to access information on WhatsApp.
2. The ability of the respondents to select information received on WhatsApp.
3. The ability of the respondents to understand every information received on WhatsApp.
4. The ability of the respondents to analyze the information received on WhatsApp.
5. The ability of the respondents to verify information received on WhatsApp by comparing it with similar information from other sources.
6. The ability of the respondents to evaluate information received on WhatsApp in relations to social, political, and cultural context.
7. The ability of the respondents to distribute information on WhatsApp by taking into account the consequences.
8. The ability of the respondents to produce or reproduce information on WhatsApp.
9. The ability of the respondents to participate in discussion on WhatsApp.
10. The ability of respondents to collaborate with and lead other users to solve problems on WhatsApp.

This study found that the respondents in general have moderate score in terms of digital competence consisting of ten skills. The skill with the highest score is to understand every information received on WhatsApp (2.69), while the lowest score is to participate in discussion on WhatsApp (2.14). This data shows that there is an

opportunity to empower women through digital literacy programs by improving their skills in using digital media, especially in sending and sharing information on WhatsApp as the most popular chat messenger in Indonesia.

Figure 32. The score of digital literacy competence



The Score of the Use of WhatsApp and Digital Literacy Competence Model

Drawing on the work of Tzu-Bin Lin et al. (2013:162) and Japelidi (Kurnia et al. 2018:7–20), Figure 32 shows the score of the use of WhatsApp and digital literacy competence model.

This study found that, in general, digital literacy's score among respondents is on moderate level for all skills, but based on the x axis values, consuming digital literacy's score is higher than prosuming digital literacy's, while on the y axis, y, functional digital literacy's score is higher than critical digital literacy's.

Furthermore, if we look at the four quandrants offered by this study, the first quadrant, which is the functional-consuming digital literacy (to understand, to select, and to access), has the highest score, followed by the second quadrant, which is the prosuming-functional digital literacy (to distribute and to produce). The third highest score is on the the third quadrant, which is the consuming-critical digital literacy (to analyze, to evaluate, and to verify), while the lowest score is on the fourth quadrant that is the prosuming-critical media literacy (to collaborate and to participate).

Figure 33. The score of the use of WhatsApp and digital literacy competence model

CRITICAL DIGITAL LITERACY	• To analyze (2.31) • To evaluate (2.27) • To verify (2.20) Mean: 2.26 **Quadrant 3**	• To collaborate (2.23) • To participate (2.14) Mean: 2.18 **Quadrant 4**
FUNCTIONAL DIGITAL LITERACY	• To understand (2.69) • To select (2.41) • To access (2.141) Mean: 2.50 **Quadrant 1**	• To distribute (2.31) • To produce (2.23) Mean: 2.27 **Quadrant 2**
	CONSUMING DIGITAL LITERACY	**PROSUMING DIGITAL LITERACY**

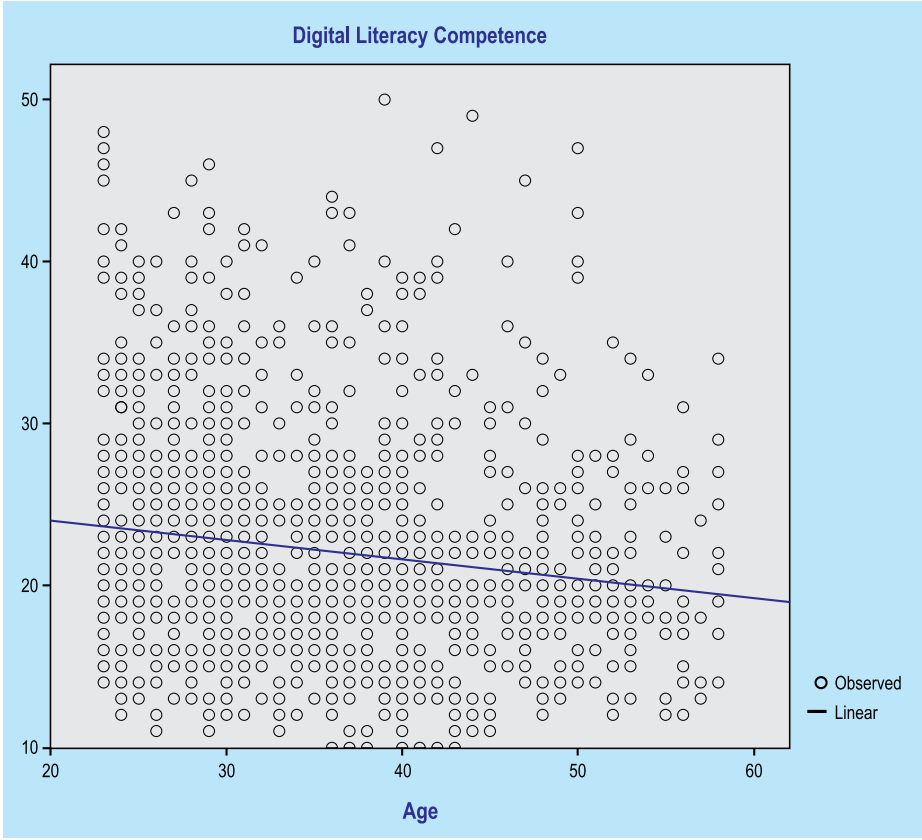
Hypothesis Testing

Age Correlates with Digital Literacy Competence

Based on Pearson single correlation test, age has a significant correlation with digital literacy competencies. However, the correlation is classified as weak with a coefficient correlation of –0.166 ($p < 0.01$). The negative correlation indicates that the younger the respondent, the more likely they were to have higher digital literacy competency. The following data shows the trend.

Based on single regression test, age has a significant influence on the level of digital literacy competency. The contribution of age on the level of digital literacy competency is relatively small at 2.7% ($R^2 = 0.027$; $p < 0.01$), which indicates the influence of other variables is quite large at 97.3%.

Figure 34. The correlation of age and digital literacy competence

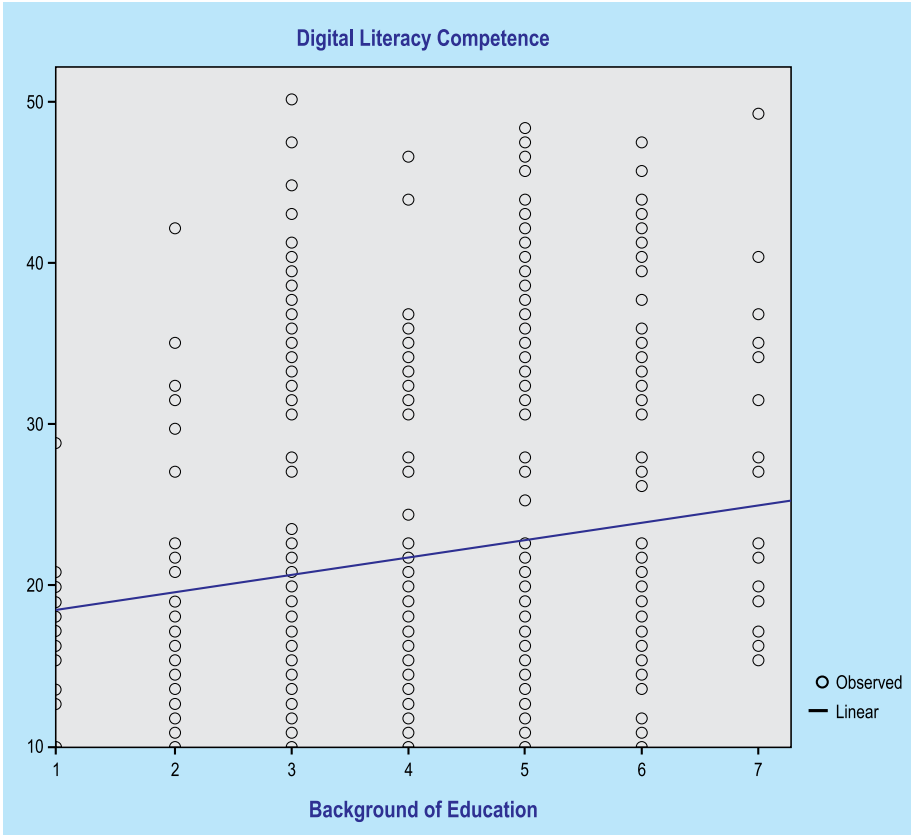


Educational Background Correlates with Digital Literacy Competence

Based on Pearson single correlation test, educational background has a positive correlation with the level of digital literacy. However, the correlation is classified as weak with a coefficient of correlation 0.211 ($p < 0.01$). This indicates the higher the education level, the more likely they were to have better digital literacy competence. The graph below shows this trend.

Based on single regression test, educational background has a significant effect on the level of digital literacy competence. The contribution of educational background to the level of digital literacy competence is relatively small at 4.4% ($R^2 = 0.044$; $p < 0.01$), which indicates the influence of other variables is quite large at 95.6%.

Figure 35. The correlation of educational background and digital literacy competence



Explanation:

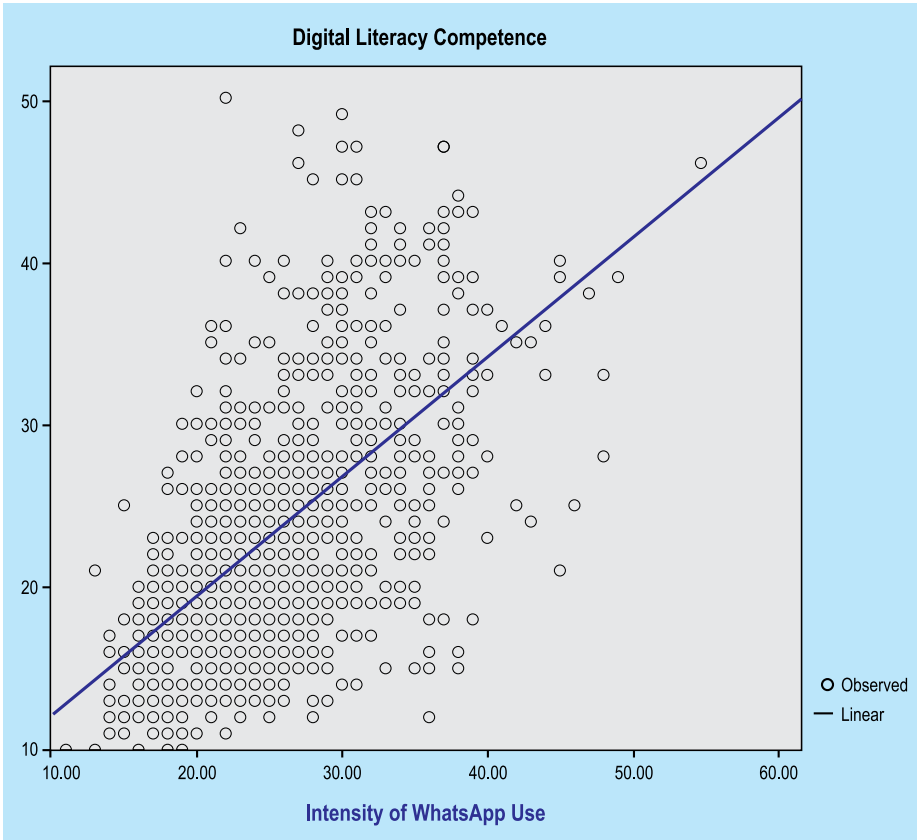
1 = Elementary School	3 = High School	5 = Undergraduate	7 = Doctorate
2 = Secondary School	4 = Vocational	6 = Graduate	

The Intensity of the Use of WhatsApp Correlates with Digital Literacy Competence

Based on Pearson single correlation test, the intensity of the use of WhatsApp has a positive correlation with the level of digital literacy competence. The correlation is quite strong with a coefficient of correlation 0.580 ($p < 0.01$). The findings show that the more intensive the use of WhatsApp, the more likely they were to have higher media literacy competence. The following table shows the trend.

Based on single regression test, the intensity of the use of WhatsApp has a significant effect on the level of digital literacy competence. The influence of the intensity of the use of WhatsApp to the level of digital literacy competence is quite large, namely 33.6% ($R^2 = 0.336$; $p < 0.01$). Nevertheless, the data also shows the influence of other variables of 66.4%.

Figure 36. Correlation of Intensity of WhatsApp use and digital literacy competence



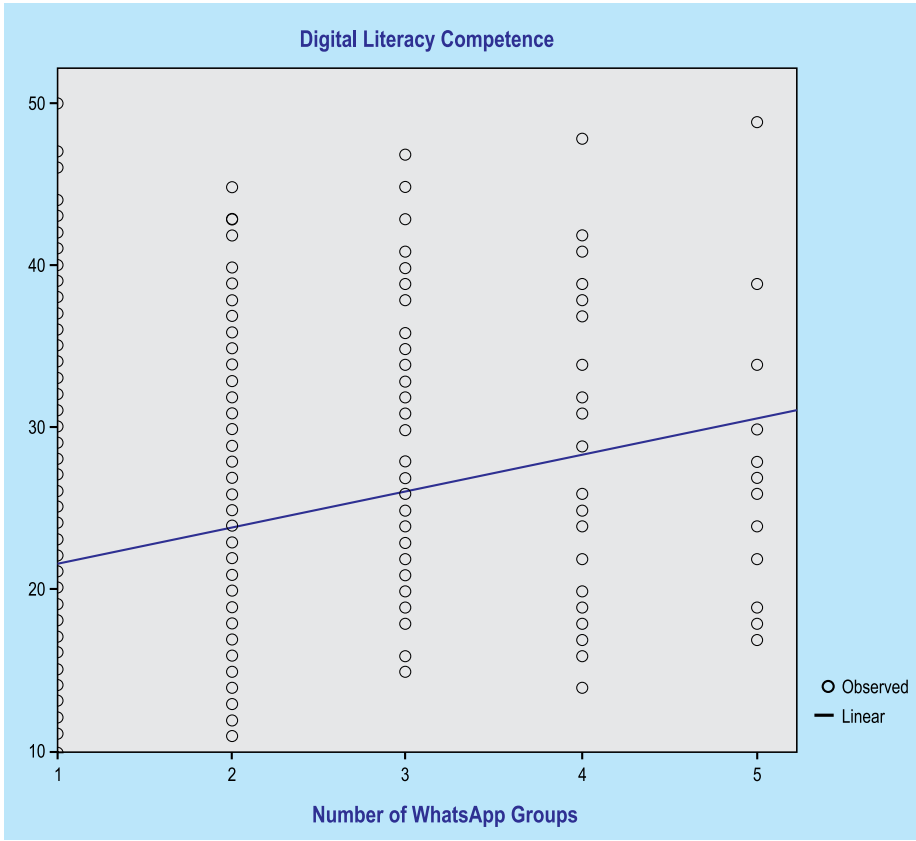
The Number of WhatsApp Groups Correlates with Digital Literacy Competence

Based on Pearson single correlation test, the number of WhatsApp groups has a positive correlation with the level of digital literacy competence. However, the

correlation is classified as weak with a coefficient correlation of 0.245 ($p < 0.01$). The positive correlation shows that the more the number of WhatsApp group, the more likely they were to have higher digital literacy competence. The following figure shows the trend.

Based on single regression test, the number of WhatsApp group has a significant effect on the level of digital literacy competence. The data shows that the influence of the number of WhatsApp groups on the level of digital literacy is relatively small, namely 6% ($R^2 = 0.060$; $p > 0.01$). Nevertheless, the data also shows the influence of other variables of 94%.

Figure 37. The correlation of the number of WhatsApp group and digital literacy competence



CONCLUSION

This study found that the Indonesian women's motivation for using WhatsApp is mainly to support their existing social relationship such as to strengthen their family bond/relationship and to connect with their social environment. The finding is also supported by the fact that they have more personal WhatsApp groups rather than professional WhatsApp groups. Moreover, the most popular type of personal WhatsApp group among them is friends/school alumni group, which is also the number one source of misinformation and hate speech for them.

Politics is the type of misinformation mostly received by respondents, and this is inseparable from the "information disorder" during the 2018–2019 political years. It is also related with religion/belief/faith as the most encountered category of hate speech, as religion issues are used frequently to gain political objectives in national and regional politics. One striking example is when President Joko Widodo was attacked by negative campaign claiming that he is anti Islam during the 2019 presidential campaign—this misinformation was widely spread on WhatsApp group.

Each respondent responds to misinformation and hate speech in numerous ways, depending on the context. In most cases, respondents tend to ignore misinformation, while regarding hate speech they take a more active role, mostly by recommending verification. It is important to note that in the Indonesian context, the circulation of hate speech is inseparable from misinformation and politics.

This study draws on the work of Tzu-Bin Lin et al. (2013, p.162) and Japelidi (Kurnia et al. 2018:7–20) to quantify the score of digital literacy competence among Indonesian women's use of WhatsApp.

In general, respondents have moderate score for 10 different skills of digital literacy. It is found that their functional skills are higher than their critical skills, while they have stronger consuming skills than prosuming skills.

This study also found that the intensity of the use of WhatsApp is the strongest factor in influencing digital literacy competence, followed by the number of WhatsApp groups, educational background, and age. In other words, the more active use of WhatsApp predicts the higher score of digital literacy competence and the correlation is quite strong. Meanwhile, the number of WhatsApp groups,

educational background, and age have weak correlations with digital literacy competence.

In addition, based on the four quandrants offered by this study, the first quadrant, which is the functional-consuming digital literacy (to understand, to select, and to access), has the highest score, followed by the second quadrant, which is the prosuming-functional digital literacy (to distribute and to produce). The third highest score is on the the third quadrant, which is the consuming-critical digital literacy (to analyze, to evaluate, and to verify), while the lowest score is on the fourth quadrant that is the prosuming-critical media literacy (to collaborate and to participate).

Based on the finding, this study suggests the need of digital literacy programs for Indonesian women that emphasize more on critical skills rather than functional skills, and more prosuming rather than consuming skills.

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WHATSAPP GROUP AND DIGITAL LITERACY AMONG INDONESIAN WOMEN

WhatsApp is now the most popular mobile application in Indonesia, used by more than 52 million active weekly users, surpassing YouTube, Instagram, Line, and Facebook (2018).

Indonesians are very active on WhatsApp, as they are engaging in a continuous conversation with multiple users in a chat group. As an illustration, an average Indonesian adult would typically have various chat groups dedicated to their work, close friends, elementary family, extended family, hobbies, friends from high school, friends from college, and so forth.

For women in particular, as Indonesian women are moving away from the traditional role as solely wives and mothers to a more active role in public life, the use of WhatsApp group represents how women navigate their domestic and professional roles.

This research project elaborated on how Indonesian women navigate information, including misinformation, within multiple WhatsApp groups and direct messages simultaneously.

This study found that the Indonesian women's motivation for using WhatsApp is mainly to support their existing social relationship such as to strengthen their family bond and to connect with their social environment. And the most popular type of personal WhatsApp group is friends/school alumni group, which is also the number one source of misinformation and hate speech for them.

In addition, politics is the type of misinformation mostly received by them, and this is inseparable from the "information disorder" during the 2018–2019 political years. It is also related with religion/belief/faith as the most encountered category of hate speech, as religion issues are used frequently to gain political objectives in national and regional politics.

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