Mothers' Medical-based Experience as the Most Sought-after Online Information by New Mothers During Pandemic COVID-19

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Abstract

In the past, new mothers were able to consult with their mothers about parenting and health issues. When they are married, many of them live not at home with their mothers. When they need information about childcare and health problems, they switch to using online information sources (Facebook, Instagram, the Health page, and WhatsApp group). This study explores how new mothers in Surabaya use online platforms to search for helpful information related to health during pandemic COVID-19. This study used a qualitative virtual ethnographic method by collecting data through interviews, FGDs, and participating in several online media platforms, including Facebook group Room for Children; id.theAsianparent.com; Instagram account @ruangmom, @kenapaharusvaksin, @obesitas, and WhatsApp "Kulwapp" group. The results reveal that new mothers prefer to enroll in Facebook private groups and only women members with open identities. While on Instagram, they prefer to communicate through questions and answer forums. The Health page that is the primary reference is id.theAsianparent.com. Meanwhile, involvement in the Kulwapp WhatsApp group is for convenience and safety to discuss issues surrounding sexual organs. The shifting information-seeking of new mothers to online platforms because of more theoretical and medically-based health information and experiences need.
Keywords: covid-19, health information, new mothers, virtual ethnography

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INTRODUCTION

The vast development of information and communication technology today has brought changes in ways of parenting's attitude (Pedersen and Smithson 2013; Zaslow 2012). One of the changes is the way of how people use communication media not only to exchange messages but also as a medium to seek information that useful for themselves and their family and relatives. New research in Europe and America show the women trend, especially women who has young children, they spent a lot of time online to seek health information (Bouche and Migeot 2008). This trend is also strengthened that parents today consume and collect huge information about parenthood through the Internet (Plantin and Daneback 2009).

The Internet provides a large amount of health-related information intended for parents. Health information is offered through a variety of platforms, such as commercial sites, health organisation sites, and government agencies site, social media, and other platforms. Thus, it is easy for everyone to access the information online, include for the mothers. Based on Indonesia Internet Service Provider Association (Asosiasi Penyelenggara Jasa Internet Indonesia [APJII]) survey, housewives were the eighth largest group who access Internet in Indonesia (APJII 2020:23). While the dominating age of Internet users was 20-34years old (APJII 2020).

This increasing trend of using mobile phone to access Internet among pregnant woman and millennial mothers in the age of 18-32, or they who were born between 1977 to 1997 (BabyCenter 2015; Hamzehei et al. 2018; The Interactive Advertising Bureau 2015).This is the generation who are get use to with the technology on their daily lives, and when they become mother, they still had close relationship with the technology and they maximizing the technology to become best version of mom they could be.

These millennial new mothers, are the parents of 50% of children now. They are different in lifestyle and hold graduate university degree. With so much information available online, they turn online for their daily needs and shopping habit (Keenan 2018). They use technology in the ways that the previous generation never thought of. Using fancy technology to facilitate baby care such as baby's heart rate monitor using apps that allow it to be shared with relatives, use social

networking applications to ask questions and discuss with hundreds or even thousands of other new mothers who experience the same problems. To empower themselves with useful information, so they can make a healthy and safe choices (Alamiyah 2020; Markiewicz 2017)(Alamiyah 2020; Markiewicz 2017).

This trend to access health information online is also increase in Indonesia (Gashya and Alamiyah 2019). Based on Daily Social Survey, most of Indonesian used Internet to access health information with mobile phones (Priambada 2016). APJII survey 2020 shows that health service is the seventh reason why Indonesian use Internet (APJII 2020). It is around 0,9% of 196,7 million Internet users in Indonesia, or 1,7 million people accessed Internet for health service. Furthermore, there are 6,8% or 13,3 million people of Internet users in Indonesia use social media to find health contents (APJII 2020). Also research by Arviani and Alamiyah (2019), which find that new mothers in Surabaya, use Internet to find information related with immunisation through Internet.

There are plenty researches discussing the topic of health information seeking on Internet. As done by Jacobs, Amuta, and Jeon who explore how United States (US) adult's population search for health information. They associated the demographic characteristic with health information seeking behaviour. Their study highlighted that the predictors of Internet use for health information seeking were being younger, have higher socio-economic status and have more education and the predictor of the use of traditional media and health care provider for health information were being older, having low Internet skill, and being Hispanic. This study also found that people with lower economic status were still relying on print media for health information seeking.

They summarize that online access to and the use of health information have given advantage to increase the knowledge of people about health and could help in decision making related to health problem. However, this nationwide study found that there is a digital disparity among different population. Certain group of population may have challenges in having the advantages of online health information. The group that has benefit from the available health information were group of people that have more education, younger, have higher socio-economic status and have more Internet skills (Jacobs, Amuta, and Jeon 2017).

Research on health information seeking behaviour has been carried out in various fields of science, including library science, information systems or human

and computer interaction, as well as health science. Cline and Haynes on their comprehensive literature review stated the need for this health seeking behaviour to be discussing from communication perspective. Furthermore (Robinson et al. 1998) argue that online health seeking behaviour should be seen as an interactive health communication. Iinteractions of an individual with or using electronic device or communication technology to access or transmit health information or guidance and support related with health issue.

Cline and Haynes explain that to understand the online health seeking process we should frame them as communication process rather than see it through the information dissemination perspective or educational process. As they argue that Internet with all the features reflect the shifting paradigm with its interactivity and reciprocal influences. Thus, this health information seeking is a transactional process rather than one-way communication. How the Internet provides possibility and space for interaction, face to face and interpersonal needs fulfilment as empathy, validity, and self-disclosure, show the blend of interpersonal and mass communication.

However, in Indonesia researches discussing online health information from communication perspective are still rare (Arviani and Alamiyah 2019), the available research is limited to the topics of the application of online health information system in Hospital (Isnawati, Nugroho, and Lazuardi 2016; Susanto and Sukadi 2011). Therefore, the significant of this study is to provide evidence-based study describing how new mothers in Surabaya use Internet to seek health information online during Coronavirus disease (COVID-19) pandemic. As in the time of pandemic people are having difficulties to access health care resources, include limited access to Hospital for regular check-up and consultation, limited access to community health care system and private clinic (Pan et al. 2016), resulting increasing number of health information seeking through online platforms (Roselina, Asmiyanto, and Andriany 2021). In this study we choose new mother as they are the main decision makers related to health and child rearing. Thus, this study focuses on how their activities online related with health information seeking. Describing how new mothers in Surabaya use Internet to fulfil their needs of

information (motives), why and how they use and evaluate the information online media.

METHOD

The qualitative method in this research project, guided to explore and understand the interactions, process, and lived experience (O'Leary 2017), of new mothers in Surabaya while having virtual live and habit to use online platform media. One qualitative method which provide a flexible research procedure and give possibilities to dig a deeper and rich data is virtual ethnography (Achmad and Ida 2018; Angelone 2018; Hine 2015). Researchers enrolled in both real (offline observation) and virtual world (online oberservation). Collecting data from offline observations could determine specific information, limiting problems, and frame the analysis needed (Achmad 2020; Wimmer and Dominick 2014). By doing online observations, researchers can record and analyze data simultaneously and repeatedly (Achmad, Ida, and Mustain 2020; Kusuma et al. 2020). Activities of doing a data analysis simultaneously and repeatedly referred to as iteration or recursive (Achmad, Juwito, and Saud 2020). Moreover, combining data collection through observation and interviews (offline and online) can dig up more abundant and rich data (Achmad. 2019; Achmad and Ida 2019; Achmad, Juwito, et al. 2020).

Researchers used web survey through SurveyMonkey with 78 participants completed the open-ended questionnaire, in-depth interview, and Focus Group Discussion (FGD) with 18 participants. The data collection techniques aimed to explore the experiences of new mothers in Surabaya using online platform media to search for health information about baby-care, selfcare, mental health, and COVID-19 related articles. Moreover, the open-ended questionnaire with SurveyMonkey designed to enable participants to answer in narrative description about their opinion, perspective, and experiences through comment boxes. As the procedure in a virtual ethnography study, informants got information about the study in order to get their willingness to participate in the study voluntarily. They agreed to signed the informed-consent at the beginning of research. As participant, researchers posted an open invitation to fill a self-administered survey on the timeline of researcher's Instagram and Facebook accounts and broadcasted the web survey link through several WhatsApp groups. The survey had a validity period for one-month in July 2020 and got 76 participants with form of survey completion.

Figure 1.

Open invitation through Facebook for participating in research
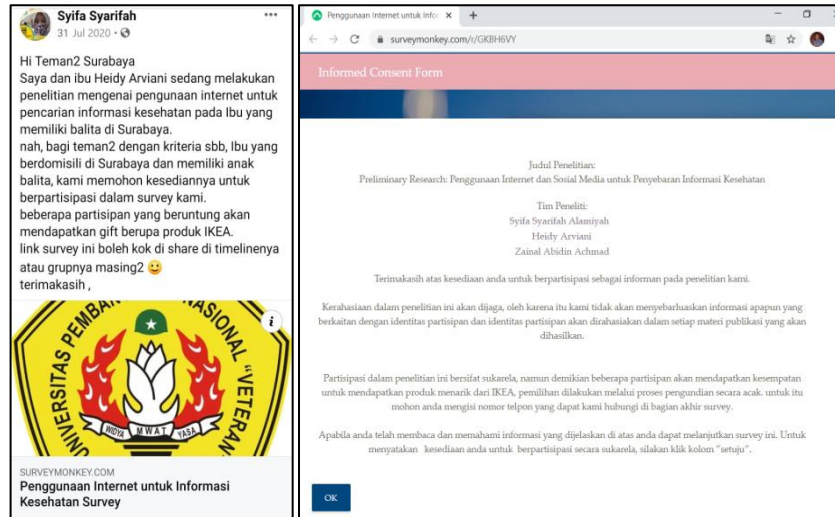
source:https://www.facebook.com/syifasa,
https://www.facebook.com/heidy.arviani) and web survey link through
SurveyMonkey

Researchers held an offline FGD in a representative, easy to access, and open window room for eighteen participants who agreed to join in FGD. By splitting participants into two small groups, researchers obey the health protocol COVID-19 with physical distancing. Discussion with a small group of people gave benefit in handling the discussion interactively and participants felt secure to describe their experiences (Fortune, Reid, and Miller 2013; Lamb 2013). Criteria for participants are new mothers in Surabaya who have first time experiences to take care a child. Some participants also identified themselves as stay at home moms, one as a paediatric resident who has a toddler, some were working mom, and some were local-health community volunteers.

RESULTS AND DISCUSSION

The use of Internet amongst new mothers in Surabaya to access health information is become common. Participants of this study include 18 FGD participants and 76 participants who filled the open-ended questioner. Most of the participants were aged 25 to 41 years old, one informant age under 25 years and several informant age more than 41. Most informant were housewives and some are working mom. New mothers with younger age hold academic degree while the previous generation mostly graduated from high school but two of them hold bachelor degree. Most of the informant have monthly family income above 5 million, some of them have family income around 3 million per month and a few of them said that they have monthly family income under 1,5 million. All of them have at least one mobile phone. Use it for average 2 to 4 hours per day and use the mobile phone application to support health management and parenting.

All participants stated that they use Internet to access health information. They use mobile phone to obtain the information, as it is a handy gadget. Whenever they need the information, they can use it directly. Include for new mothers who come from lower economic status. However, there is difference between younger age new mothers and new mothers of older age. For the youngers, they use mobile phone frequently, use various applications and platform for various needs, from texting, socializing, browsing, shopping, look for advice and look for health information or monitoring health through health-based application. While their previous generation have limited use of the Internet features and application due to the limited knowledge and skill on Internet. Particularly for housewives' participants that has low status economy and lower education level.

When new mothers need information related to health, which source of information they would go first. Most new mothers indicated that they prefer to go to doctor or to go online as their first source of information. While others indicated that they would post question on social media, read health book, or journal, and ask for help to family. There is a difference pattern between younger participants and older participants. Participants who choose to go online and browse the Internet first, indicated themselves as aged from less than 25 years to 35, have bachelor or master degree, with mostly they have family income above 5 million per month and several informants indicate themselves to have family income lower than 5 million per month. While they who prefer go to doctor or other medical personnel when

they need health information mostly aged above 36. However, since the healthcare resources is limited during the pandemic, these mothers with different age and education, they turn to online to fulfil their information need.

Health information seeking is an effort to fulfil a certain health need. It is the need, which motivate people to do some action. Some of the motivation why these new mother use Internet to search for health information online were; first, information for self-care, mental health, and COVID-19 related articles. The main reason why new mothers look for information online, is that they need explanation when they experience a health symptom or when they were sick. They look for information of the symptoms, what to do and how to handle it. If this related to a serious condition they would consult with doctor.

Second, information related to children health; other need is information related to the childcare. Common theme is information about children growth, children care, treatment when children sick, some do's and don'ts. For example, how to handle cough and flu on babies, information about Iron-deficiency Anaemia, diapers use, baby rash, breast milk or when the children refuse to be fed or the side effect of immunisation. They consider that when they going online, they could find information easier and more efficient. Thus, they could make decision about what to do, and take action right away.

> "When my child got nose bleed, I don't know what to do, then I search right away, how to handle it, sometimes I need quick information, so I can make decision and do an action right away." (Vina 27 years old, stay-at-home parent)

Figure 2.

A private facebook group provides various content about children care

Source: https://www.facebook.com/groups/roomforchildren/
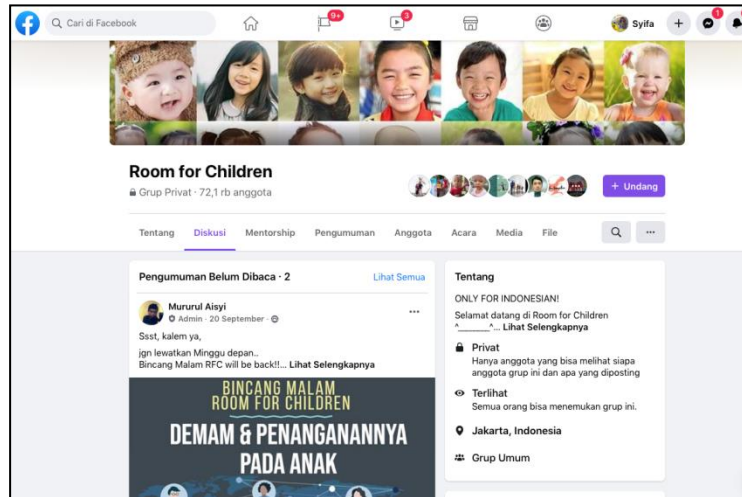
Figure 2 shows one of the platforms used by new mothers, the Facebook Group has several features such as discussion, mentorship, announcement, members, events, media and file. members of the group could find useful information from group admin posting about various topics and could access archived file. Thus, the member could easily find information they need. in addition, the member could receive interpersonal support from other member when they post their children condition on the group timeline.

The third motivation is to look for more detailed information. When informant consult with doctor and they did not satisfy with doctor explanation, they would find for more detailed information on Internet, as indicated by an informant that as she had a very short consultation time with doctor and she feel that she did not have enough explanation thus she chooses to find the information herself.

> "When my daughter got anaemia, what makes my daughter anaemia so she needs blood transfusion twice, she didn't had bleeding or even no nosebleed, she is fine but why she need transfusion twice, I was surprised, also the doctor. I just don't understand, so I go online, to find maybe there's same case out there." (Natalia, 41 years, stay-at-home parent)

Fourth, to be spread to others. In addition to seek information for themselves and children, this information search is carried out to meet the information needs of those around. Several informants were local-health community volunteers called cadres of Local Integrated Health Center (Pos Pelayanan Terpadu [Posyandu]). That is a form of community health voluntary that serve baby, pregnant mom, and elder people, usually there are several Posyandu in each village. Posyandu cadres can provide health information to the community in their work environment at least once in a month. Usually they get direction from midwives or officers from Health Community Centre (Pusat Kesehatan Masyarakat [Puskesmas]). These cadres would deliver health information given from village midwives or from Puskesmas and socializing it to the community. Often when they prepare the health information to be given at the health socialisation, they get the information especially from Instagram when they did not understand what is being given at the information session (see figure 3).

Figure 3.

Two Instagram accounts as the information source

Source:https://www.instagram.com/ruangmom/,

https://www.instagram.com/kenapaharusvaksin/
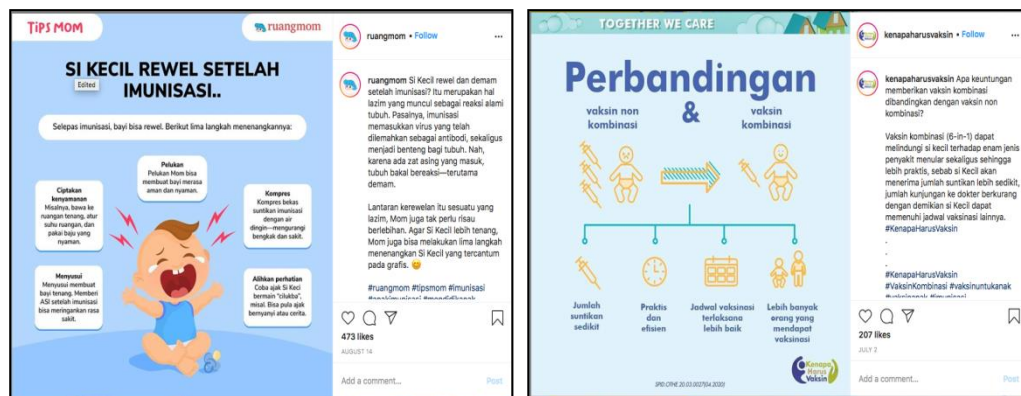
"Usually I am going online to find information to be shared in community socialisation program. I search in Instagram then deliver it to people. My duty is to give socialisation in several Posyandu's. I become a member in a task force to cover one area of village." (Dewi, 40 years, a Posyanducadre)

Fifth, information related to private topic. Several new mothers said that they usually going online when they have question related to private topic, they prefer to post question on private WhatsApp group. Figure 4 shows specific topics of discussion about women genital and sexual treatment among mothers in WhatsApp group.

Figure 4.

Limited WhatsApp Group for discussing specific topics
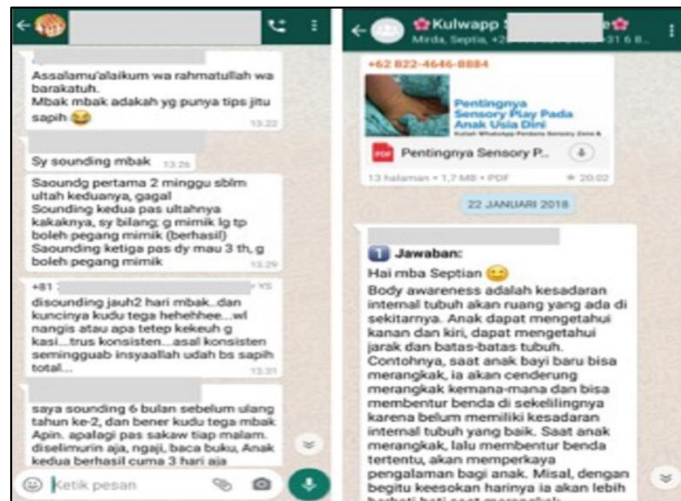
Source: Kulwap Sensory Zone, KulwapNgasuhBalita

> "There are many things that I cannot talk to people, because I am to embarrass, so I can discuss without feel embarrassed in limited WhatsApp group. For specific sexual organs, as vagina treatment after birth or sex after birth" (Meidy, 34 years, public sector worker)

The participants that indicate themselves have no preferred and specific site to search for health information, use engine search such as Google as a starting point. They use keyword search to find specific information. The keyword using could vary depending to the participant's knowledge and Internet skills. For example, they simply put the word "anaemia" or *why anaemia patients need a transfusion*". As consequences the choice of keyword term used by the participants would influence in what kind of websites emerges from the search engines as a result (LaValley, Kiviniemi, and Gage-Bouchard 2017). The advantage of using search engine is that the engine could provide the results in various different platforms include websites, documents, social media links and many others. The

list of results is listed based on popularity of search, previous search history, or commercial sponsorship.

Almost all respondents stated that they use search engine, especially Google to find health information. They preferred Google as it is considered to have varied information, complete and wide topic, so they could find what they need. The preferable link destination is health websites as it has ample of scientific article with credible source of information, clear source of information, authorship, and institution. While the most preferable information is article that written by health practitioner.

Table 1.

List of online platforms, sorted based on the most often mentioned

No	Platform	Form of information	Advantages
1	Google	List of links to articles in various platforms	Easy to use, easy to access, complete information
2	WhatsApp Group	Shared article, discussion, "Kulwap"	Used by many friends and relations
3	Health Based Applications	Article, doctor consultation	More reliable as managed by experts
4	Instagram	Picture, Graph, Infographic, video, and caption	Attractive yet simple format, lots of doctors' info sharing on IG
5	Facebook	Status of people (could be medical practitioner or common people), Facebook note, shared article, and link	Easy to search, more reliable
6	Facebook Group	Status of health practitioner, information posted on group, article, notes, discussion and comment from previous post or archived post	Provide interactive discussion through comments, with doctor or other moms

Source: author's analysis

Most of research participants mentioned Google, as shown on Table 1, as it is an easy to use platform, simple yet complete. They can browse any topics they want from Google. While WhatsApp is used when informant need answer of a question or need discussion. They can post question to the group or search from the archived documents in the group. "*Kulwap*" or *Kuliah WhatsApp* is online class deliver through WhatsApp application, usually organize by admin of existing group, where they invite an expert to give short presentation of certain specific topics on WhatsApp and continue with discussion, the time is limited for example one hour. This Kulwap can be a free discussion or paid. Depend on the speaker. Or an organizer organizes a Kulwap and invite people to join to a temporary group through broadcasted link. The group would be dismissed if the discussion were done. It could last for several hour or several days, which the speaker provides further consultation. This form of health information searching is preferred by the informant when they need a deep discussion or for further knowledge about certain topics for example stunting on children, how to success on breastfeeding e cetera. This form is having high credibility as they usually known the speaker as expert.

Turning to the health-based application, it used mostly by the younger mom, from consultation application such as *Alodoctor (https://play.google.com/store/apps /details?id=com.alodokter.android)* to health monitoring application as pregnancy or menstrual application. They use it to support their health journey. On Instagram, participants follow specific health practitioner account, personal or institution to get health information shared by them.

While on Facebook participants usually see post about health information unintentionally on their FB timeline, if they interested, they would go to the link. While when informant needs some information, they would go to the personal FB profile of popular health practitioner they know to see their post about certain health topic. Or they would go to the Facebook group for example, Breast-feeding mama group, children health group, homemade healthy baby food, et cetera. Where they could find archived documents wrote by expert, read note from group admin who are also a health practitioner, and other document posted on the group. They also stated that they gain information from reading the discussion on the group wall, other people question with same topics. They would read from the comment column

and learn from the practitioner, for example paediatric answer or from experience shared by other parents who encounter same experiences.

Information credibility is important, wrong information would lead to wrong knowledge, wrong decision-making. Almost all participants were aware that information on the Internet might not be true, they aware the possibility of hoaxes and not credible information. Moreover, the mother stated that they always cross checking the information with many sources and compare to other platform or ask the doctor to check the credibility of information. Most of participants stated their satisfaction with the availability of information available on the Internet. They feel that the information can help them deal with the problems that occur related to health and help them in making decisions and take actions, particularly when there is a critical situation or when there is family member who get sick.

Turning to the credibility of information, the research participants develop several strategies to check the credibility and reliability of the information. The strategy mentioned by the respondents were sources cross-checking, author profile checking, websites checking, post question on social media and ask health practitioner. They explained that they usually compare one article to another. These mothers would open multiple tabs on Google to see how different site or article said about one topic. Furthermore, these mothers used to see who publish the article, whether it is a government official site, non-profit institution, personal site, or commercial sites. Besides that, the informants do profile checking of the author, whether they are journalist or health practitioner. The close the author to the medical field the more the informant trusts the article. The other strategy is to discuss with friends, family, and health practitioner such as doctor, nurse, or Posyandu cadre.

> "I used to check whether the site is reliable or no, crosschecking the information in several reliable sites, see who were the writer whether a journalist from credible mass media or just blog, not every blog has a valid and true information and the one that responsible of the blog is an individual, not an official site of a company or an organisation". *(*Risa, 30 years, stay-at-home parent)

When people going online, beside the information they would see what is attractive to them, this group of mothers express what attracted them in term of health information on the Internet. There are four things mentioned by the

informant, language, sources format and content as shown on Figure 5. Besides that, informant stated that they avoided content with advertising intention.

Figure 5.

Types of attractive health information through online platform for new mothers
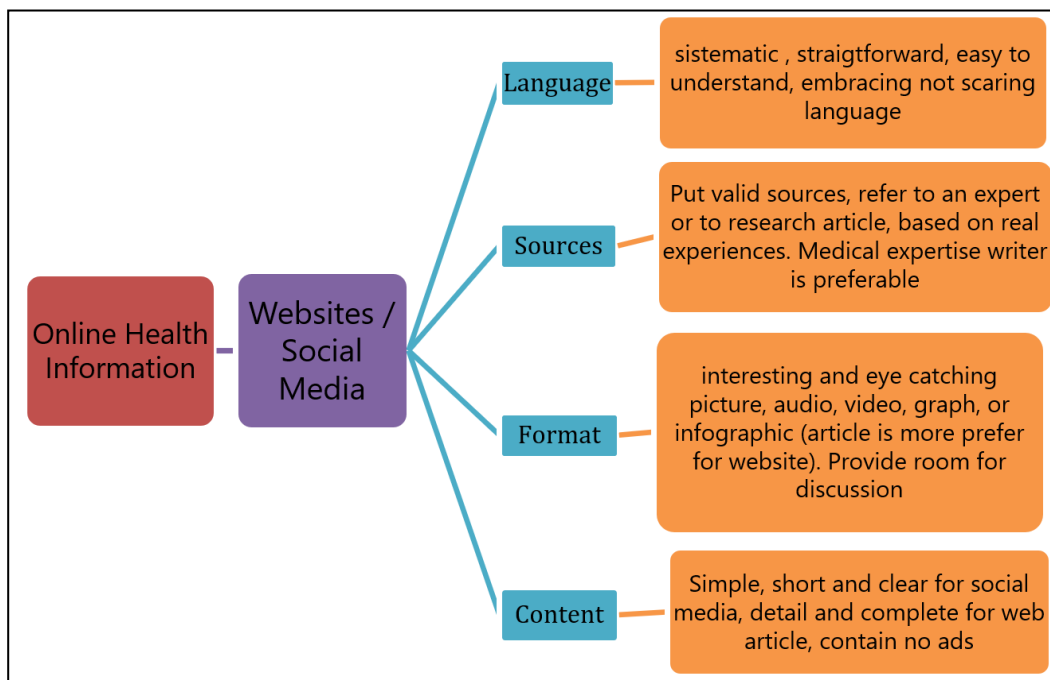
Source: authors' analysis

This study shows that the use of online platform to access health information is become common among mothers in Surabaya. The participants are going online to search online information to get more detailed information, to get useful information for their selves and significant others and also to empower other women. Furthermore, new mothers not only searching information but also learn to empower themselves and other people. With the knowledge they have the can made better-informed decision-making and they deliver the knowledge to their community. Another thing is that some informant mentioned that they prefer to go online to find information related to private topic. As when people going online, they can browse and interact online anonymously.

There is a difference pattern of Internet use among younger new mothers and previous generation. The young mother with the characteristic as having academic degree, some work in public area and some are housewives, having good

Internet skills and have close relationship with digital technology on their daily lives. They rely medium to heavy on Internet and digital media. They use it to search health information and also to use various health-based applications. While the previous generations, they have limited use of Internet due to the limited knowledge and skill related to the digital technology. Thus, how new mothers benefiting from the Internet is depend on the Internet skills and it has relation with the age, education level and economy status (Jacobs et al. 2017). This different group age also shows the difference level of trust and satisfaction. Younger new mothers have moderate trust level while older mothers have higher trust level of information (Doty, Dworkin, and Connell 2012; Suarez, Rodrigo, and Muneton 2016).

While in Indonesia, women today have not been maximizing the communication technology to make their life easier or to empower themselves (Lestari and Sunarto 2018). Contrast with that finding, when it comes to the use of Internet to access health information online, it shows different result. All the research participant aged 19 to 46 stated that they used mobile phone and have ever access internet to search for health information to fulfil their needs. To find out what happen to themselves and to find solutions for health problems they experience, and even to consult with doctor.

Surely that way of technology use could enhance the knowledge of new mothers and also increasing their awareness that will also increasing the health literacy of new mothers (Jacobs et al. 2017). Even though the health literacy could bridge the social status and health, thus the changing pattern of health information could lead to the reduce of the social gap on health. The use of Internet provides possibility for these women to empower themselves and also involving the new mother in the empowerment process in their environment. As have been done by the Integrated Healthcare Centre (*Posyandu*) cadre that they search from health information material online and then they inform it to the members of *Posyandu,* to be disseminate to the community. The community itself has a good perception of *Posyandu* cadre credibility level, thus the cadre should ensure that they give reliable health information (Dewi and Anisa 2018).

Another form of women empowerment through Internet is when one of the new mothers who is also a resident of paediatric made an Instagram account compiling and creating health information content post it regularly aims to provide valid and quality of health information, trying to straighten the wrong information and hoax which is scatter out in the community. The Instagram account itself has a significant number of followers. The increasing use of internet to access health information in among new mothers in Surabaya is become more popular. New mothers prefer to use mobile phone to access the information to fulfil various needs. New mothers in Surabaya could harness the digital device to improve their quality of life and also to empower the community.

Yet the difference demographic factor as age, education level, and family income influence the pattern of new mothers use of Internet. Even though that factor could not apply for the entire informant. Hence this study provides description of how new mothers harnessing digital technology for the ease of their life.

CONCLUSION

The new mothers in Surabaya need to increase the level of health literacy and improve the ability make decision concerning their health. So that social media should provide health information to increase the level of public knowledge. This study insists that the government and stakeholders in the health sectors provide valid health information. In addition, the government must provide literacy in the form of basic skills for mothers to obtain useful health information in social media, in order to distinguish positive and negative contents.

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