

Mothers' Behavior in using Smartphone to Find Child's Health Information in Pontianak City

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Abstract: Smartphones are the main choice in seeking information on children's health by mothers because of their ease and availability, the importance of knowing their behavior in seeking this information will help healthcare workers to provide services and information according to their needs. To describe the behavior of mothers in seeking information on children's health via smartphones in the Pontianak Central District. The study design was cross sectional, with a consecutive sampling method of 232 mothers who met inclusion and exclusion criteria. It was conducted using a questionnaire regarding the behavior of those mothers finding information on children's health in 4 primary health care Pontianak Central District, then a univariate analysis was performed using SPSS 22.0. Majority of mothers aged 26-30 years had 1-2 children ranging in age from 1 month to 6 years. 61.7% use smartphones as the main media to find & obtain child health information. 34.7% choose social media as a reading source, and 54.7% practice the information they get from smartphones. Smartphones are the main media for mothers for information on children's health using social media as the main informative outlet, practicing the information obtained through smartphones.

Keywords: Mother; Child's Health Information; Smartphone

Abstrak: Smartphone menjadi pilihan utama dalam mencari informasi kesehatan anak oleh ibu karena kemudahan serta ketersediaannya, pentingnya mengetahui perilaku ibu dalam mencari informasi kesehatan anak akan membantu dokter serta tenaga kesehatan lainnya untuk memberikan pelayanan dan menyediakan informasi yang sesuai dengan kebutuhan. Mendeskripsikan gambaran perilaku ibu dalam mencari informasi kesehatan anak melalui smartphone di Kecamatan Pontianak Kota. Desain penelitian adalah cross sectional dengan besar sampel secara consecutive sampling adalah 232 ibu yang memenuhi kriteria inklusi dan eksklusi. Penelitian dilakukan dengan menggunakan kuesioner mengenai perilaku ibu dalam menggunakan smartphone untuk mencari informasi kesehatan anak di 4 Puskesmas Kecamatan Pontianak Kota, kemudian dilakukan analisis univariat menggunakan SPSS 22.0. Mayoritas ibu berusia usia 26-30 tahun memiliki 1-2 anak dengan rentang usia anak 1 bulan – 6 tahun. Sebanyak 61,7% ibu menggunakan smartphone sebagai media elektronik utama mencari dan mendapatkan informasi kesehatan anak. Kemudian, sebanyak 34,7% ibu memilih media sosial sebagai sumber yang sering dibaca, dan 54,7% ibu mempraktekkan informasi yang didapat melalui smartphone. Smartphone merupakan media informasi utama bagi ibu dalam mencari informasi kesehatan anak, kemudian ibu menggunakan media sosial sebagai sumber informasi utama saat mencari informasi, serta ibu mempraktekkan informasi yang didapat melalui smartphone.

Kata kunci: Ibu; Informasi Kesehatan Anak; Smartphone

INTRODUCTION

Based on the survey that conducted by APJII (Asosiasi Penyelenggara Jasa Internet Indonesia), the internet user in Indonesia on 2016 are 132.7 million or equivalent to 51.7% of Indonesia's population of 256.2 million.^{1,2} Its increasing from 2014 which only reached 34.9% of the total population of Indonesia. The use of internet via *mobile phone* is the most widely accessed, with 98.2 million user (69.9%).² The second one is home internet, with 7.7 million users (13.3%) and office accessed is in the third place with 14.9 million (11.2%).⁴ The trend of internet access in cafes, although it is still low, is still being used by 1.2 million (0.9%). Regarding on the mobile phone, smartphones IS used by 63.1 million users, while the combination of the smartphones and laptops reaches 67.2 million. There are three main types of the internet content which were consumed by users: Social media 127.9 million, commercial 123.5 million, and public service 121.5 million.²

In other side, as the one of internet user in Indonesia, half of the housewives admit that internet is not too popular among them, because there is really no chance for them to learn, but most of them also know the benefit of the internet. Various information which are needed can be obtained on the internet. Internet can be enjoyed using a personal computer, laptop, and smartphone. In order to make their child happy, the mothers will find the right information to fulfill the best necessity of their child.³

The seeking out of health information has been considered as an important facilitator to help promote, care for and restore public health, especially for children through the role of mothers who are actively seeking out health information for their children.⁴ Specifically, some research noted that the active role of mothers as health information seekers is due mothers have traditionally been more involved in managing the health of their family members.^{5,6} The seek out for children's health information, of course, is inseparable from the presence of health facilities as a place for mothers to visit and get information on children's health, other than through smartphones. Therefore, sufficient knowledge to use the internet and obtain child health information is needed by a mother, one of them through the use of smartphone.

Several studies have covered health information seeking/use behaviors among mothers.^{5,7} However, none have specifically examined child's health information seeking/use behaviors among mothers in Indonesia especially in primary health care scope. Based on the description above, the researcher would like to conduct the research about "The Overview of Mothers' Behavior in Utilize of Smartphone to Seeking Out Children's Health Information in Pontianak" to see how mother's behavior use the smartphone as first source of child's health information.

METHOD

The study was conducted from October to November 2018 in four primary health care in Pontianak Central District, there are: Aliyang, Kampung Bali, Pal 3, and Karya Mulia with cross sectional approach. The subjects of the study were 232 respondents, which were taken 58 respondents from each primary health care, who met inclusion (mothers who have at least 1 child; mothers who owns a smartphone) and exclusion (mother who has never accessed the internet through her smartphone; mothers who filled out the questionnaire were not filled in completely) criteria by consecutive sampling. The variable of this research is mother's behavior, which is defined as the response of the respondent in seeking health information

Data in this study were collected by questionnaire, that include mothers' characteristics, mothers' media to obtain the child's health information, mothers' in utilizing smartphone also in child's health information seeking purpose, & mothers' opinion about the useful of smartphone to help them find child's health information. There are some data processing stages; editing data, i.e. the activities of checking the completeness of questionnaire filling by the interviewer which are carried out immediately after the interview; coding data, i.e. coding activities on the data that has been collected; data entry, i.e. the activity of entering data from the questionnaire into a computer program; data cleaning, i.e. checking the data that has been entered again to find out whether there is an error data. Data analysis were performed by statistical program computer (SPSS V 22.00) descriptively.

The ethics in this study, namely having passed the research ethics review from the Medical Research Ethics Division of the Faculty of Medicine, University of Tanjungpura, then the researcher collected data using a questionnaire by first asking permission from the concerned primary health care to conduct the research and ensuring the confidentiality of research respondents whose data was taken as research material. Then, data collection was taken through informed consent to the research subjects.

RESULTS

Data on this study were identify of respondent's profile, mothers' media in obtaining child's health information, mothers' behavior in utilizing smartphone, mothers' behavior & opinion in utilizing smartphone for seeking out child's health information.

Table 1. Distribution of Respondent's Characteristics

Characteristics	N (232)	%
Mother's Age (Years)		
15-20	5	2.2
21-25	32	13.8
26-30	61	26.3
31-35	57	24.6
36-40	52	22.4
41-45	11	4.7
46-50	10	4.3
51-55	4	1.7
Latest Education		
Elementary School	11	4.7
Junior High School	28	12.1
Senior High School	120	51.7
Diploma	22	9.5
Bachelor	51	22
Vacancy		
Private Employee	46	19.8
Civil Servants	11	4.7
Housewife	175	75.4
Kind of Mother's Job		
Teacher	13	5.6
Entrepreneur	41	17.7
Health Workers	3	1.3
Government Instance	11	4.7
Housewife	163	70.3
Household Assistant	1	0.4
Income		
< 1,9 Millions	114	49.1
> 1,9 Millions	118	50.9
Working More Than 8 Hours		
Yes	46	19.8
No	186	80.2
Take Care of Children by Own		
Yes	197	84.9
No	35	15.1
Having Caregivers		
Yes	12	34.3
No	23	65.7
Cared by Family		
Yes	26	74.3
No	9	25.7
Number of Child		
1-2 Children	145	62.5
3-4 Children	70	30.2
5-6 Children	13	5.6
7-8 Children	4	1.7
Child's Age (N = 785)		
1 Month - 6 Years	644	82
7 - 12 Years	82	10.4
13 - 18 Years	59	7.5

Table 2. Mother's Media in Obtaining Child's Health Information

	Frequency	%
From Where do The Mother Usually Getting Child's Health Information*		
Electronic Media (Device)	180	46.6
Printed Media	40	10.4
Health Workers	166	43
Kind of Printed Media which Used for Seeking out Child's Health Information *		
Health Magazine/News Paper	65	22.6
KIA	139	48.4
Leaflet	83	28.9
Electronic Device Which Used for Seeking Out Child's Health Information*		
Television/radio	103	30.1
Laptop/Computer	28	8.2
Smartphone	211	61.7

*Respondent can choose > 1 answer

Table 3. Mothers' Behavior in Utilizing Smartphone

	Frequency	%
Duration of Smartphone Usage		
More than an hour a day	63	27.2
1 - 3.5 hours/day	103	44.4
More than 3.5 hours/day	66	28.4
Frequency in Checking Smartphone		
Seldom	125	53.9
Moderate	96	41.4
Often	11	4.7
Lent the Smartphone to their Child		
Yes	159	74.6
No	73	25.4
Usability of Smartphone*		
Social Media	188	27.2
Communication	192	27.7
Seeking Out Health Information	184	26.6
Entertainment	128	18.5

Table 2 explain more about what kind of media that mothers use to get child's health information. There are 3 questions provided, and mothers can choose more than 1 answer (up to 3 answers) in each question, therefore the number of answer is more than the subject number. Table 2 shows that mother usually get the child information from electronic media (46.6%) especially smartphone (61.7%).

Table 3 explain more about mothers' Behavior in using smartphone. There are 4 questions provided, with 3 questions where the mothers can only choose 1 answer, and there is one question about usability of smartphones where mothers can choose more than 1 answer (up to 4 answers), therefore the number of answer is more than the subject number. Table 3 shows that majority of mothers use smartphone within 1-3.5 hours/day (44.4%), rarely check smartphones (53.96%), and land smartphones to their children (74.6%).

Table 4. Mothers' Behavior in Utilizing Smartphone for Seeking Out Child's Health Behavior

	Frequency	%
Type of Online Media		
Blog	141	31
Official Site	60	13.2
Journal	14	3.1
Online News Site	82	18
Social Media	158	34.7
Browsing Duration		
15 - 30 minutes	176	75.9
30 - 60 minutes	46	19.8
> 60 minutes	10	4.3
Put into practice the information obtained		
Yes	127	54.7
No	105	45.3

Table 5. Mothers' Opinion in Utilizing Smartphone for Seeking Out Child's Health Information

	Frequency	%
Mothers' perceive that smartphone help them for seeking out child's health information		
Very Helpful	75	32.3
Quite Helpful	149	64.2
Not Helpful	8	3.4
The information which obtained from smartphone has given some knowledge		
Yes	130	56.0
Sometimes	93	40.1
No	9	3.9
Smartphone will be the first choice to seek child's health information		
Yes	179	77.2
No	53	22.8

*Respondents can choose > 1 answers

Table 4 explain more about how are mothers' behavior in using smartphones for seeking out child's health information. There are 3 questions provided, with 2 questions where mothers can only choose 1 answer, and there is one question about child's health information which is read by the mothers when utilizing that they can choose more than 1 answer (up to 5 answers), therefore the number of answer is more than the subject number. Table 4 shows that the majority of mothers chose social media as a source of information on children's health (34.7%) with a search duration of 15-30 minutes (75.9%) and practicing the information obtained (54.7%).

Table 5 shows that the majority of mothers think that smartphones are quite helpful in finding information about children's health (64.2%). The information obtained adds to knowledge (56%), and will be the first choice in seeking health information (77.2%).

DISCUSSION

Characteristics of Study's Respondents

Most of mothers who visited the primary health care based on this study were around 26-30 years old (26.3%), and had the largest percentage of children 1-2 (62.5%) with the largest age range for children from 1 month to 6 years old. Compared to other studies^{5,7} with similar information, where majority of the mothers were in their 30s, and majority of Reyes's study research mothers also has 1-2 children to take care in home.⁷ The age of the child is also an important factor influencing mothers' health information needs for their children. Lee (2017)⁵ studies found that mothers tend to seek more information for their child between the ages of newborn to ten. Around 51.7% of mothers

had the senior high school as their last degree, and most of them are housewives (75.4% & 70.3%). Interestingly, Lee (2017)⁵ found that the education level of the sample was considerably high with 50% having either masters or doctoral degrees, only 2.2% of the participants had no college degree. Since this sample was recruited in a university town that is dominated by its university population may have influenced the results. Meanwhile in Reyes (2016)⁷ study, most of the mothers had bachelor degrees. The difference of education level may be different to the conditions of education in developed and developing countries, where the education level, especially mother's education level affect the degree of health in taking care of their children.⁸

Amount of the income for 50.9% of the mothers is > 1.9 million which is categorized as high income, and only 0.9% difference with low income category. This is different from the other research that demonstrate that low income women use internet as the primary source of the information^{5,7} where smartphones are the main point of access the internet itself.⁷ The findings, however, may be mainly due to the unique characteristics of the sample, since the cut off point for the income only limited to 1.9 million, the variation range of income amount should be more diverse (low, moderate, and high income) to see in more details, so this may have influenced the results. Around 80.2% of mothers do not work more than 8 hours, it can be mean as the mothers don't do anything or their working hour is less than 8 hours a day. There were 84.9% of mothers care for their own (34.3%) or cared by their family such as grandmothers/aunts/in-laws /sisters (74.3%).

The Mothers' Media in Obtaining Child's Health Information

Result of this study shows that the most sources of mother's information in seeking out and obtaining of child's health information is electronic device according to Table 2, such as smartphone, television and laptop/personal computer, and smartphone used as the first source by mothers. This research is similar to another in terms of the types of resources used. The internet was the most commonly and primarily utilized resources to find child's health information,^{5,7} which they searched the internet by using their smartphones.⁷ Whereas, for the printed media, most of them seeking out and finding the information by KIA (*Kartu Kesehatan Ibu dan Anak*). The mothers said, this is because the mother mostly have electronic device by their own, then it is easy to find the information on the devices.

The source of information related to health can be divided into two main groups, interpersonal and mass media. Interpersonal resources include doctors, nurses, family and friends, health groups, volunteer organizations, and other health-related professions. This type of information's source is face to face. It provides a lot of information and requires skills to communicate each other. Information's sources which coming from mass media are television, radio, posters, book, magazine, newspapers, videos, and internet. This kind of sources has broad scope to communicate a message with a larger target of audience, prompt, and often done.⁹

Particularly, some research noted that the active role of the mothers as healthcare information seekers by reason of they have traditionally been more involved in managing family's wellbeing.^{5,6} The right health information plays important role in guiding mothers to make the best decision to maintain their own and children wellbeing. So many kind of information those are needed can be retrieved from internet. Internet can be enjoyed using personal computer, laptop and smartphone. Smartphone is the main device that is usually utilized by the low income's mothers for accessing internet.⁷ As the way for make their children happy, the mothers will seek out the right information for fulfilling their child necessity.

Mothers' Behavior in Utilizing Smartphones

Based on this study result, the highest duration and average in using smartphone in a day is 1 - 3.5 hours. This duration is included in the category of moderate smartphone usage, while for the category of smartphone use briefly has a duration of less than 1 hour/day, and for very long smartphone use it has a duration of more than 3.5 hours/day. The highest average of frequency mothers checking smartphones every day is less than 10 times/day, this is categorized as the rarely, while for the frequency category of smartphone usage quite often has the frequency of checking smartphones 10-50 times/day, and for the frequency of using a smartphone often has the frequency of checking a smartphone more than 50 times/day.¹⁰

Furthermore, based on Table 3, it was found that more than 50% of mothers lent their smartphone to their children, and this affects mother's smartphone usage that reflects by the results in the duration of 1 - 3.5 hours according to this study. Based on a survey conducted by The Asian Parent Insights in the Southeast Asian region in 5 countries (Philippines, Malaysia, Singapore, Thailand and Indonesia), there are 2,417 parents who have smartphones. The results of this study reveal that 98% of children aged 3-8 years have used gadgets, 67% of them use parent's property, 18% belong to relatives or family, and 14% belong to their own.¹¹ It is not surprising, because women use digital medical devices more many than men to access and share information to help manage their own health or care for others. In addition, women make up nearly 80 percent of health care decisions for their families,¹² nearly two-thirds of caregivers are women, and women basically have more health needs than men.¹²

There are so many ways for someone to get the information they need at the present time. Without having to wait for a friend or an expert who understands the information needed, they can search for it online where there are thousands of information from various parties.¹³ The seek for health information has been considered as an important facilitator to help promote, maintain and restore public health, especially for people mother in monitoring the health of her child.⁴ The importance of paying attention to women's motivation in seeking health information is important, because it can facilitate fact-based policy making to improve the family's health status, the realization of public health understanding and achieve optimum health results.¹⁴

Mothers' Behavior in Utilizing Smartphones for Seeking Out Their Child's Health Information

The sources for seeking out and finding information about child's health information using smartphone are Social Media (as the first place by 34.7%) and Blog as the second place (31%), according to Table 4. It shows that social media becomes one of the most trusted by mothers because they use it closely & it is easy to access, especially in getting child's health information, for example WhatsApp, Facebook statuses, or links that directing to another sites. Egan (2015)¹⁵ observed that social media contribute for health and well-being by facilitating social interaction, building communities normalizing behavior seeking help, inspiring healthy lifestyle transformation and helping medical research. Centola (2015)¹⁶ also highlighted the potential benefits, noting that homophily on social networks increased likelihood of participants adopting new healthy behavior. David (2016)¹⁷ states, with the decline of the traditionally existing traditional mother community, social media as the ability to fill the necessary information strongly and provide important mother-to-mother support in a process of women becoming a mother.

The duration that needed by 75.9 % mothers for browsing to find the information which needed through a smartphone to get the most appropriate information is between 15-30 minutes. Its according to the mother that the information needed is not difficult to find, but for some of the mothers who spent 30-60 minutes or even more than 60 minutes have the reason that sometimes the internet connection is slow or they must read carefully and read another source more. Amin (2014)¹⁸ states that the duration of each browsing session increases with experience. Experienced users tend to have longer browser usage sessions compared to novice users.

In another results, most of the mothers (54.7%) practiced some of the information they got on the internet, both in handling when the child was sick and for children's nutritional intake through food. Furthermore, the majority of mothers stated that their smartphone was quite helpful in finding information on children's health (64.2%) and had given enough knowledge to mothers (56%) about the picture of their children's health. In addition, 77% of mothers agreed that the dissemination of child health information through smartphone technology would be the first choice source of information compared to printed media.

However, it is necessary to do in-depth education for mothers, the majority of whom use social media as a reference for finding information on their children's health. Because, the most hoax information category is health information, 90% of health information has sources that are unclear and cannot be accounted for.¹⁹ Therefore, based on the results of this study, the role of health personnel and related health institutions is needed to help become the main provider of credible health information, especially in child health information to help mothers maintain the health of their children.

CONCLUSION

The conclusion is conclude that most of the mothers utilizing smartphones as the first source to find their child's health information. Mostly, they are moderate users in using duration and less common in frequent phone checking with reading source information preferred to social media. Mothers felt that their smartphones were sufficient to help in finding information on children's health and also felt that the information obtained had provided sufficient knowledge.

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