



# Do Parents Use The Internet And Social Media To Child Health-Seeking Information?

## Apakah Orang Tua Menggunakan Internet dan Media Sosial dalam Pencarian Informasi Kesehatan Anak?

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### ABSTRACT

Parents in the digital era increasingly use the internet and social media to search for health information on their children, as well as provide opportunities to interact with other users to discuss children's health issues. The purposes of this study is to analyze the patterns of internet use and social media use by parents based on the age category of the child and the most of platform and health topic information that access by parents. This cross-sectional quantitative study with target group research was parents who have children aged < 5 to 12 years, have internet access, actively use gadgets, and agreed to be a participant. The technique of sampling used with accidental sampling. The data was taken by Google form application to 285 respondents. The results of this study were most of the parents were in urban areas (65.3%) and majority being housewives (79.6%). The use of the internet by parents to search for health information with a frequency of less than 2 times per week (47.4%) uses a smartphone (91.9%). There is a statistical difference in the use of Instagram social media for parents in searching for health and non-health (p-value: <0.001), and the use of Tik tok for non-health information (p-value: <0.001). The topics that are most reviewed by parents with children under the age of 5 are allergies, child nutrition, and the dangers of using gadgets in children (screen time). Parents for children aged 5-11 years and 12 years and over are also looking for information about child nutrition, screen time, and extras such as accidents, bullying, and reproductive health of adolescents.

### ABSTRAK

Orang tua di era digital semakin memanfaatkan internet dan media sosial untuk mencari informasi kesehatan pada anaknya, serta memberikan kesempatan untuk berinteraksi dengan pengguna lain untuk membahas masalah kesehatan anak. Tujuan penelitian adalah menganalisis pola penggunaan internet dan penggunaan media sosial oleh orang tua serta topik kesehatan yang paling banyak diakses oleh orang tua. Desain penelitian potong lintang dengan kelompok sasaran penelitian adalah orang tua yang memiliki anak usia <5 - 12 tahun, memiliki akses internet, aktif menggunakan gadget, dan bersedia berpartisipasi dalam penelitian ini. Teknik pengambilan sampel accidental sampling. Pengambilan data melalui Google form kepada 285 responden. Hasil penelitian ini, diketahui bahwa orang tua berada di wilayah perkotaan (65,3%) dan mayoritas ibu rumah tangga (79,6%). Frekuensi pencarian informasi kesehatan melalui internet kurang dari 2 kali per minggu (47,4%) dan menggunakan smartphone (91,9%). Ada perbedaan penggunaan media sosial Instagram pada orang tua dalam pencarian informasi kesehatan dan non kesehatan (p-value: <0.001), dan penggunaan Tiktok untuk informasi non kesehatan (p-value: <0.001). Topik yang paling banyak diulas oleh orang tua dengan anak di bawah usia 5 tahun adalah alergi, nutrisi anak, dan bahaya penggunaan gadget. Orang tua yang memiliki anak berusia 5-11 tahun dan 12 tahun ke atas juga mencari informasi tentang nutrisi anak, bahaya penggunaan gawai, dan kecelakaan, penindasan dan kesehatan reproduksi remaja.

**Keywords:** Social media, Internet, Child health

**Kata Kunci:** Internet, Kesehatan anak, Media sosial

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## INTRODUCTION

Digital media and online network accessibility are ubiquitous in the daily lives of people who are constantly looking for health-related information online to support their needs (Holmberg et al., 2019). This is supported by results of research conducted on digital intervention-based health literacy in Ethiopia, which explained that the background of urban parental and socio-demographic characteristics is the determining effects in receiving health messages through digital media and health literacy (Hassen et al., 2020). Parents in the digital era increasingly use the internet and social media to search for health information on their children, as well as provide opportunities to interact with other users to discuss children's health issues (Grajales et al., 2014; Maeve et al., 2015). In spite of the varying quality and health topics, few parents use social media and the internet in online child health care, they prefer to check their children's health at health providers (Antheunis et al., 2013). The previous studies regarding the use of the internet and social media in searching for health information focused on parents who have young children and adolescents (Davis et al., 2015; Lawrence et al., 2021).

The development of children is indeed a concern for parents, especially mothers (Masefield et al., 2022). Mother's high health knowledge regarding child growth and development is expected to reduce the number of failures to develop in children (Masefield et al., 2022; Permana et al., 2021). Previous studies found that there was a significant relationship between knowledge of growth and development and mother's education on the development of toddlers aged 1-3 years (Syahailatua & Kartini, 2020). Several studies have evaluated the quality of online information used by parents and medical personnel, that it is necessary to make adjustments between the health information needs needed and the accuracy and reliability of the information (Bryan et al., 2020; Wang et al., 2021).

This Decade, the use of social media and activities of using smartphone and screens time is

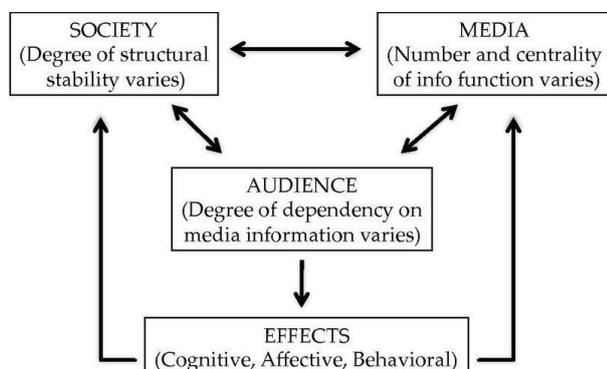
increasing (Liu et al., 2020; Watkins & Xie, 2014). The misuse of digital-based social media can increase the risk of problems for children and adolescent in a more serious direction in health, social aspects and health guidance.(Kiss et al., 2020) The link access to information through online media, parental skills in processing and interpretation of health messages into one of the foundations on which to improve functional health literacy (Holmberg et al., 2019; Manganello, 2008). Digital health literacy which people capacity to receive, understand, conclude and apply information to make health decisions including healthy behavior and family or self-care activities (Soroya et al., 2021). The level of health literacy can be influenced by accessibility to the health information provided, how they can choose the correct health information, use social media wisely and apply it in their lives (Nutbeam, 2000).

East Kalimantan is one of the provinces in Indonesia with diverse cultures (areas with various ethnicities) due to the large number of immigrants and consists of several urban and rural areas, some of which are still not covered by an adequate internet network (Central Bureau of Statistics of East Kalimantan, 2021). More in-depth studies is needed to obtain valid and accurate statistical assumptions so as to provide comprehensive information to describe the overview of the use of social media and the internet in searching for health information on parents. The objectives of this study are 1) Identifying respondent characteristics and patterns of internet use and social media use based on the age category of the child; 2) Identifying differences in the use of social media for health and non-health based on the age categories of children; 3) Identifying the topic of health information that is most frequently used in the community access by parents based on the characteristics of the respondents and the age category of the child.

## METHOD

The design study of this research was a cross-sectional quantitative study with a survey

approach. The research was conducted in January 2021. The target group research was parents who have children aged < 5 to 12 years, have internet access, actively use gadgets, and agreed to be a participant in this study. They were also domiciled in East Kalimantan, including in the municipality and regency. The technique of sampling used nonprobability sampling with accidental sampling. The data was taken by Google form application with the participants as many as 285 respondents. The theoretical framework adopted in this study is to use the theory of media dependency:



**Figure 1. Media dependency theory by Sandra Ball Rokeach and Malvin Deffler (1998)**  
 (Masefield et al., 2022; Rafiq, 2012)

Based on this theory, the audience or target of communication is very dependent on information and media to meet their needs, people believe that the greater their level of dependence on a food media, the greater the possibility that the media can influence the knowledge, attitudes, beliefs and even behavior of the audience. This theory also emphasizes the level of experience of media exposure to support public awareness regarding a problem (Patwardhan & Yang, 2003; Rafiq, 2012).

The following socioeconomic and demographic data were collected by indicator for socioeconomic status such as region of origin, gender, occupation, education level of parents (Nagy-p & Vincze, 2020). On the characteristics of parents' internet and social media usage measurements, a frequency distribution analysis was also conducted by identifying the frequency of online information use, types of devices, social

media use, duration of use, and access to children's health information (Bryan et al., 2020). In a more detailed component of the use of social media, the questions lead to the types of platforms that are used in general, the use of platforms that are used to search for health issues and not, and the types of information that are searched with high frequency (Bryan et al., 2020; Ifroh & Asrianti, 2020).

The dependent variable analyzed is a dichotomous variable, subgroup analyzes to identifying differences in the use of social media for health and non-health based on the age categories of children by using Kruskal–Wallis test. All analyzes were conducted by using statistical software. Approval of the ethics commission of the Faculty of Medicine, Mulawarman University with numbers 32/KEPK-FK/IX/2020 in the implementation of this study.

## RESULT

The results of this study have been completed by 285 parents as respondents. They were parents of children under 5 years old (30.2%), parents of children between 5 – 11 years old (34.7%) and also parent of children over 12 years old (35.1%). This research data was collected in East Kalimantan, regency and municipal areas.

There were 285 parents studied, with 86 parents of children under the age of five, 99 parents of children aged five to eleven, and 100 parents of children aged twelve or older. Nearly all parents (98.2%) used a social media platform in the past month (95.8%). In addition, 84.9% use social media to learn about their children's health, according to the study. A higher percentage of all parents with children under the age of five believe that accessing social media is beneficial to their children (100%). Almost every parent has a smartphone and uses it to access social media (91.9%). Parents access or seek health information via online media is less than twice a week on average (47.4%) (table 1). The second goal of this study was to identification the differences of used social media for health and

non-health information by parents with children under the age of five, parents of children between

the ages of five and eleven, and parents of children above the age of twelve (table 2):

**Table 1. Demographics and The Internet and Social Media Use by Child Age Categories**

Variables	All Parents n = 285, (%)	Parents of Children <5 Years n = 86, (%)	Parents of Children 5-11 Years n = 99, (%)	Parents of Children ≥12 Years n = 100, (%)
<b>Socio-demographic</b>				
Residence				
Regency	99 (34.7)	32 (37.2)	35 (35.4)	32 (32)
Municipality	186 (65.3)	54 (64.8)	64 (64.6)	68 (68)
Sex				
Male	58 (20.4)	14 (16.3)	13 (13.1)	31 (31)
Female	227 (79.6)	72 (83.7)	86 (86.9)	69 (69)
Profession				
Civil	40 (14.0)	9 (10.5)	19 (19.2)	12 (12)
Servant/Police/Army				
Private Employee	36 (12.6)	10 (11.6)	11 (11.1)	36 (12.6)
Entrepreneur	28 (9.8)	4 (4.7)	7 (7.1)	28 (9.8)
Housewife	154 (54)	53 (61.6)	58 (58.6)	154 (54)
Etc.	27 (9.5)	10 (11.6)	4 (4)	27 (9.5)
Education				
Primary School	14 (4.9)	3 (3.5)	4 (4)	7 (7)
Junior High School	29 (10.2)	6 (7.0)	12 (12.1)	11 (11)
Senior High School	147 (51.6)	45 (52.3)	46 (46.5)	56 (56)
College	95 (33.3)	32 (37.2)	37 (37.4)	26 (26)
<b>Internet Use</b>				
Use of online health information				
Yes	264 (92.6)	84 (97.7)	93 (93.3)	87 (87)
No	21 (7.4)	2 (2.3)	6 (6.1)	13 (13)
Frequency of use of online health information				
Never	21 (7.4)	2 (2.3)	6 (6.1)	13 (13)
< 2 times/week	135 (47.4)	35 (40.7)	52 (52.5)	48 (48)
≥ 3 – 4 times/week	108 (37.9)	41 (47.7)	33 (33.3)	34 (34)
Everyday	21 (7.4)	8 (9.3)	8 (8.1)	5 (5)
Type of device used most frequently				
Don't have	15 (5.3)	1 (1.2)	4 (4.0)	10 (10)
Desktop	1 (0.4)	0 (0)	1 (1.0)	0 (0)
Smartphone	263 (91.9)	84 (97.7)	91 (91.9)	87 (87)
Tab	1 (0.4)	0 (0)	1 (1.0)	0 (0)
Etc.	6 (2.1)	1 (1.2)	2 (2.0)	3 (3)
<b>Social Media Use</b>				
Use Social media	280 (98.2)	86 (100)	98 (99.0)	96 (96.0)
How long use social media				
Don't use	3 (1.1)	0 (0)	1 (1)	2 (2)
< 1 month	9 (3.2)	1 (1.2)	1 (1)	7 (7)
≥ 1 month	273 (95.8)	85 (98.8)	97 (98)	91 (91)
Use social media to access about child health	242 (84.9)	81 (94.2)	89 (89.9)	72 (72)

**Table 2. The Use of Parental Social Media Platforms Based on the Child's Age**

Social Media Platforms	Health Information			Non Health Information		
	Yes n (%)	No n (%)	p-value	Yes n (%)	No n (%)	p-value
<b>Twitter</b>						
<5 Years	3 (37.5)	83 (30)	0.826	8 (42.1)	78 (29.3)	0.352
5-11 Years	2 (25)	97 (35)		7 (36.8)	92 (34.6)	
≥12 Years	3 (37.5)	97 (35)		4 (21.1)	96 (36.1)	
<b>Facebook</b>						
<5 Years	65 (30)	21 (30.9)	0.200	82 (31.5)	4 (16)	0.222
5-11 Years	79 (36.4)	20 (29.4)		89 (34.2)	10 (40)	
≥12 Years	73 (33.6)	27 (39.7)		89 (34.2)	11 (44)	
<b>Instagram</b>						
<5 Years	43 (38.4)	43 (24.9)	<0.001*	60 (36.4)	26 (21.7)	<0.001*
5-11 Years	44 (39.3)	55 (31.8)		58 (35.2)	41 (34.2)	
≥12 Years	25 (22.3)	75 (43.4)		47 (28.5)	53 (44.2)	
<b>Youtube</b>						
<5 Years	72 (32)	14 (23.3)	0.538	80 (31)	6 (22.2)	0.654
5-11 Years	77 (34.2)	22 (36.7)		90 (34.9)	9 (33.3)	
≥12 Years	76 (33.8)	24 (40)		88 (34.1)	12 (44.4)	
<b>LinkedIn</b>						
<5 Years	0 (0)	86 (30.6)	0.417	2 (16.7)	84 (30.8)	0.449
5-11 Years	2 (50)	97 (34.5)		6 (50)	93 (34.1)	
≥12 Years	2 (50)	98 (34.9)		4 (33.3)	96 (35.2)	
<b>Whatsapp</b>						
<5 Years	63 (34.8)	23 (22.1)	0.07	81 (30)	5 (33.3)	0.537
5-11 Years	61 (33.7)	38 (36.5)		95 (35.2)	4 (26.7)	
≥12 Years	57 (31.5)	43 (41.3)		94 (34.8)	6 (40)	
<b>Telegram</b>						
<5 Years	5 (45.5)	81 (29.6)	0.417	28 (42.4)	58 (26.5)	0.025*
5-11 Years	4 (36.4)	95 (34.7)		23 (34.8)	76 (34.7)	
≥12 Years	2 (18.2)	98 (35.8)		15 (22.7)	85 (38.8)	
<b>Tiktok</b>						
<5 Years	16 (40)	70 (28.6)	0.213	34 (49.3)	52 (24.1)	<0.001*
5-11 Years	13 (32.5)	86 (35.1)		22 (31.9)	77 (35.6)	
≥12 Years	11 (27.5)	89 (36.3)		13 (18.8)	87 (40.3)	
<b>Halodoc</b>						
<5 Years	48 (33.8)	38 (26.6)	0.161	-	-	-
5-11 Years	44 (31)	55 (38.5)		-	-	
≥12 Years	50 (35.2)	50 (35)		-	-	
<b>Lainnya</b>						
<5 Years	75 (31.9)	11 (22)	0.114	8 (27.6)	78 (30.5)	0.914
5-11 Years	81 (34.5)	18 (36)		11 (37.9)	88 (34.4)	
≥12 Years	79 (33.6)	21 (42)		10 (34.5)	90 (35.2)	

\* p-value <0.05

Only a few show significant differences between the use of social media and the age of the child, as seen in the table above. There are significant differences in the search for health and non-health material on Instagram between parents with children of that age group. There is no difference between parents in the child's age

group to accessing health information through the media. However, significant differences were found in the search for non-health information, specifically on Telegram and *Tiktok*. This means that many parents use the two media to find information that isn't related to their children's health. Identify the topic of health information

that parents most frequently access based on the characteristics of the respondents and the child's age group is the third purpose of this study. Table

3 illustrates that children's nutrition is available to all parents (76.1%) and has been described in the following table:

**Table 3. Children's Health Topics Most Frequently Searched By Parents**

All Parents n = 285, (%)	Parents of Children <5 Years n = 86, (%)	Parents of Children 5-11 Years n = 99, (%)	Parents of Children ≥12 Years n = 100, (%)
Child Nutrition (217, 76.1)	skin health and allergies (74, 86)	Child Nutrition (79, 79.8)	Screen time dangerous (70, 70)
Screen time dangerous (213, 74.7)	Child Nutrition (73, 84.9)	Screen time dangerous (79, 79.8)	Child Nutrition (65, 65)
Skin health and allergies (206, 72.3)	Screen time dangerous (64, 74.4)	Skin health and allergies (75, 75.8)	Accidents and injuries (58, 58)
Accidents and injuries (179, 62.8)	Vaccine (56, 65.1)	Accidents and injuries (67, 67.7)	Skin health and allergies (57, 57)
Reproductive health & sexuality (163, 57.2)	Accidents and injuries (54, 62.8)	Vaccine (58, 58.6)	Reproductive health and sexuality (55, 55)
Vaccine (160, 56.1)	Reproductive health and sexuality (53, 61.6)	Reproductive health and sexuality (55, 55.6)	Mental health (47, 47)
Mental health (137, 48.1)	Mental health (41, 47.7)	Mental health (49, 49.5)	Smoking dangerous (47, 47)
Bullying (115, 40.4)	Lactation (40, 46.5)	Smoking dangerous (46, 46.5)	Vaccine (46, 46)
Smoking dangerous (123, 43.2)	Bullying (31, 36)	Bullying (44, 44.4)	Bullying (40, 40)
Lactation (95, 33.3)	Smoking dangerous (30, 34.9)	Lactation (35, 35.4)	Etc. (25, 25)
Etc. (67, 23.5)	Etc. (15, 17.4)	Etc. (27, 27.3)	Lactation (20, 20)

## DISCUSSION

The use of social media to browse and share parenting advice during the growth and development phase, this is also a place for them to share their feelings and experiences in parenting. Share photos and advice on helping distant relatives or family members feel close in the parenting process and not feel isolated (Davis et al., 2015). The reason behind the search for information on groups of parents who have children and adolescents is as a way to increase alertness and prevention in the event of an emergency condition in their child (Wisniewski et al., 2015). The concept of using social media by parents is one of the potential prevention and protection measures to reach children's activities in social media and protect their children both at school age regarding exposure to online dangers or potential cyber bullying in the school environment (Mesch, 2009). Based on previous

study (Saari & Downing, 2022) that the use of the internet in children's learning processes is currently also the responsibility of parents to monitor children's academic achievements, in addition, parental involvement in ownership and being connected to children's social media is an effort to maintain good relations between children and parents and directly monitor children's activities.

Based on the analysis of the use of social media above (table 2), it is known that Facebook is one of the platforms used to access both health and non-health information. Based on previous studies (Pretorius et al., 2019; Wisniewski et al., 2015), it is known that Facebook is effective and easy to use based on broader racial/ethnic characteristics, besides that the health topics identified are the concept of parental support which can be seen through social media, adolescent nutrition health issues and forms of

implementation of health practices in children (Pretorius et al., 2019). In this study, YouTube is also one of the social media platforms used in terms of finding children's health information, based on previous studies that the most common issue which parents utilized on the internet and social media was talking about breastfeeding to infant practice, and *Youtube* also helped them to explain the specific steps of parenting such as baby bathing techniques, baby massage and others (Henshaw et al., 2018).

This study also shows that Instagram has different uses between parents who have children, based on several studies it is known that Instagram is one of the effective media in providing information briefly and clearly through short videos, short messages or health expert quotes (Ashfield & Donelle, 2020). The previous research about internet-based interventions have been developed and it has advantages over face-to-face interventions (cost-effectiveness, personal and need suitability, interesting, and accessibility) (Fischer et al., 2021). Previously, digital-based health campaigns had been carried out and were effective in increasing the understanding and behavior of people with affective topics such as desalter health behavior or high risk behavior (Hirvonen et al., 2021; Stead et al., 2019).

According to research conducted by (Hart et al., 2015) it was found that parents, especially in early adolescence, are concerned about their children's body image, therefore they seek information about child nutrition. However, this knowledge about children's nutrition is important because there are still many cases of malnutrition, particularly among toddlers. According to RISKESDAS data from 2018, children under the age of five still had 3.9 percent cases of severe malnutrition and 13.8 percent cases of moderate malnutrition (Badan Penelitian dan Pengembangan kesehatan Kementerian Kesehatan RI, 2018). This suggests that parents want their children to grow up with adequate nutrition so that they do not become underweight. Another finding was that elderly under the age of 5 years old were more likely to look for information on

skin health and allergies. This is because that age group is more susceptible to skin problems, and because babies' skin is so sensitive, they must have depth understanding of how to treat them. In this situation, allergies can affect a child's growth and development, potentially resulting in malnutrition (Ayu Rini, 2015). In other problems, many other parents are looking for information regarding the dangers of using gadgets or screen time, especially for those who have children over 5 years old. Even parents with children aged 12 and up have the most access to information about this. Over 13% of 5 year olds are exposed to more than 2 hours of screen time per day, which should not be more than 1 hour of screen time per day (Tamana et al., 2019).

Based on previous studies, it is known that parents who spend most of their time using the internet and social media, have been shown to hinder positive communication and interaction opportunities with their children (Dennis et al., 2022). In addition, the role of parents is not only to provide supervision on the use of the internet and social media by their children but how they can process and choose the right health information and from official sources or institutions so that the information read is valid and has trustworthiness (Maeve et al., 2015; Putri et al., 2022). Based on the results of this study and supported by related literacy, parents need internet skills, digital literacy skills, internet usage experience, and attitudes in receiving information on the internet and social media based on the nature and type of anxiety and level of concern that parents have (Sorbring, 2014; Yaman et al., 2021).

The limitations of this study are that the sample selection process was conducted incidentally and could not be classified based on geographical boundaries in East Kalimantan or based on other clusters. In addition, this study has limitations in the form of response bias from respondents. Information provided by respondents through online questionnaires sometimes does not show the true opinion of respondents. This may be due to the respondent's inability to understand the

content of the question and the respondent's dishonesty in answering questions and the timing of filling out the questionnaire was not appropriate.

## CONCLUSION

The conclusion of the study is that the majority of parents are in the municipality and are women or mothers, with the work background of mostly housewives. Parents' use of the internet to search for health information is high with a frequency of 2-4 times per week using smartphones. The majority of social media use is more than one month with the highest frequency of platforms such as YouTube, Facebook, and Instagram. In the analysis of differences in the use of social media for health and non-health based on the age categories of children, it is known that the platform has statistical differences in use of Instagram. Instagram is attractive to parents in accessing short videos, images containing health quotes, and expert information. The topics that are most reviewed by parents with children under the age of 5 are allergies, child nutrition, and the dangers of using gadgets in children (screen time).

Parents who have children aged 5-11 years and 12 years and over are also looking for information about child nutrition, screen time, and extras such as accidents, bullying, and reproductive health. Suggestions that can be given based on the results of the study are that parents are expected to increase their knowledge and skills in digital literacy, especially in filtering correct information regarding children's physical and mental health. Parents need to increase wisdom, attitudes and positive affirmations in using the internet and social media and actively translate the information obtained so that it can be used to support children's growth and development.

## CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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