

Social media utilization and knowledge levels in exclusive breastfeeding among mothers in Indonesia

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Abstract

The utilization of social media for obtaining information on exclusive breastfeeding is driven by various user-friendly features that facilitate information retrieval. This study delves into understanding the correlation between mothers' engagement with social media for information and their knowledge levels regarding exclusive breastfeeding in Indonesia. Through a cross-sectional analysis involving 93 purposefully selected respondents, demographic factors such as age, education, occupation, social media usage for

breastfeeding information, and knowledge levels were evaluated using a validated questionnaire. Descriptive analysis was applied to the data, and significance testing was conducted using Chi-square tests. The questionnaire underwent validity and reliability tests, confirming its robustness. Results indicated a significant association ($p < 0.000$) between social media usage for breastfeeding information and the knowledge levels of mothers successfully practicing exclusive breastfeeding. Mothers who achieved exclusive breastfeeding demonstrated a discernible level of knowledge about utilizing social media as an information source for breastfeeding. This study highlights the escalating role of social media in shaping mothers' understanding of exclusive breastfeeding. The findings underscore the significance of targeted interventions and educational programs through social media platforms to enhance breastfeeding practices.

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Introduction

According to the Lancet report, optimal breastfeeding practices could save over 820,000 lives per year, constituting 13% of all deaths in children under the age of five.¹ Breastfeeding has the potential to reduce one-third of respiratory infections and approximately half of all diarrhea episodes in low- and middle-income countries.² In Indonesia, the projected percentage of women exclusively breastfeeding is 72.04% by 2022. Specifically in Jakarta Province, 67.22% of infants are exclusively breastfed as of 2022.³ Despite these figures, the percentage of women exclusively breastfeeding falls short of the 80% target set by the Ministry of Health of the Republic of Indonesia. According to the DKI Jakarta Central Bureau of Statistics (2022), East Jakarta holds the top position in Jakarta Province for population size. Cipayung District, with a population of 285,650, is ranked sixth. Within this population, there are 839 nursing mothers, all of whom have successfully practiced exclusive breastfeeding.⁴

Knowledge, successful early breastfeeding initiation, maternal employment, and spousal support are factors influencing exclusive breastfeeding.⁵ The sources of information on breastfeeding and related topics significantly contribute to mothers' knowledge.^{6,7} Information is disseminated through intermediary sources, encompassing mass media such as print, electronic media, social media, educational channels, and the surrounding environment. The ease of information access is facilitated by the prevalence of social media as a contemporary communication tool and the rapid advancement of technology.^{8,9}

There were 191.4 million social media users in Indonesia in 2022. This number has increased by 2.1 million (1% of users) from 2021, with women constituting 52.3% of this group.¹⁰ According to Kemp (2022)¹¹ mothers often utilize social media

sites, including Facebook, YouTube, Instagram, TikTok, and WhatsApp.¹² The province with the largest proportion of people using the internet is DKI Jakarta (85.55%), with women using it at a rate of 82.82%. East Jakarta has the second-highest rate of internet usage, with 87.78% of the female population using it. Social media is frequently employed to obtain health information, with a rate of 38.9%, as claimed by Rosini and Nurningsih (2018).¹³ Studies by Puspita and Edvra (2020)¹⁴ on social media communities that support and empower women via breastfeeding reveal that nursing moms in these groups support and understand one another, exchanging breastfeeding-related experiences. The researchers aimed to understand the relationship between the knowledge level of mothers who have succeeded in providing exclusive breastfeeding and the use of social media as a source of information about breastfeeding. They were motivated by the data above, indicating that social media is used for health information searching due to various facilities that make it easier.

The Indonesia Ministry of Health's Strategic Plan and the National Medium-Term Development Plan both set an exclusive breastfeeding rate goal of 80% for the years 2020–2024.¹⁵ However, this aim for exclusive breastfeeding has not yet been achieved.¹⁶ It is intended that freely available material from social media would help mothers learn more about breastfeeding and improve the success of exclusive breastfeeding in DKI Jakarta. Therefore, this study aimed to determine the relationship between the use of social media as a source of information and the level of knowledge among mothers who have succeeded in providing exclusive breastfeeding.

Materials and Methods

Research design

The approach of this study was a cross-sectional quantitative research design that employed correlation analysis to determine the extent to which women who successfully exclusively breastfed their infants were aware of using social media as a nursing resource.

Study participants

The population for this study consisted of 839 nursing moms. The sample included 93 nursing moms who visited the *Posyandu* (Integrated Health Post) in Cipayang District, Indonesia between March and May of 2023. Purposive sampling was employed as the sample strategy, and the inclusion criteria involved breastfeeding moms who were able to successfully breastfeed their children exclusively, had children between the ages of 6 and 24 months, were registered residents of the Cipayang district, and utilized social media platforms such as Facebook, WhatsApp, TikTok, YouTube, and Instagram.

Variable, instrument and data collection

Developed from the Kinasih research questionnaire (2017),¹⁷ there were ten questions in this survey; a “yes” response was assigned a value of 1, and a “no” response was assigned a value of 0. It could be inferred that the respondent was not effective in delivering exclusive breastfeeding if they selected “no” for any of the items. Questionnaire i) on the success of exclusive breastfeeding was the instrument utilized in this study; ii) The features of nursing moms, such as the mother's age, her most recent educational attainment, and her line of work, were included in the questionnaire on the characteristics of the respondents; iii) Social

Media Use Questionnaire: This survey asked respondents about their use of social media and their motivations. Researchers adapted the Questionnaire on Mother's Knowledge Level on Breastfeeding, which was produced by researchers from Endang Suprihatin (2018),¹⁸ based on the notion of Use and Gratification provided by Whiting and Williams (2013).¹⁹

There were ten multiple-choice questions about nursing in the knowledge questionnaire; the correct answer counted as one, and the incorrect answer was scored zero. A response below 7 fell into the poor category, while those with a total score over 7 were considered good. Thirteen questions with a “yes” response worth one and a “no” answer worth zero made up the social media use questionnaire. A total score of >11 placed the responder in the high category of social media use, while a score of <11 placed them in the low group.

The questionnaire's validity was tested on 30 respondents, yielding *r* tables of 0.36, with *r* count > *r* table indicating that all question items were valid. Cronbach's Alpha of 0.826 indicated that the questionnaire was trustworthy as a research tool.

Data analysis

The data were analyzed using univariate and bivariate techniques, and chi-square correlation analysis was employed to investigate if there was a relationship between the independent variable, the use of social media as a source of breastfeeding information, and the dependent variable, the level of knowledge of mothers who were successful in exclusive breastfeeding.

Ethical clearance

Based on ethical certificate IB 02.02/04328/2023, the research was approved by the Health Research Ethics Commission of the Poltekkes Kemenkes Jakarta III KEPK. Throughout the research, the researcher was mindful of the ethical principles of informed consent, respect for human rights, beneficence, and nonmaleficence.

Results

Table 1 summarizes the characteristics of the research respondents. Among them, 60.2% are between the ages of 20 and 35, 53.8% have a higher education background, 52.7% do not work, and 55.9% utilize social media at a high level. WhatsApp has the highest number of social media subscribers (94.6%). The majority of nursing moms use social media to obtain information (86%), and the majority of breastfeeding mothers have a strong knowledge level (57%).

Table 2 presents the findings of the chi-square test bivariate analysis. The age variable has a *p*-value of 0.268 (>0.05) and an odds ratio of 1.76, suggesting no significant link between age and the knowledge level of successful women in exclusive breastfeeding. The data analysis also indicates that nursing women aged 20–35 had 1.76 times the chance of having a good level of knowledge compared to breastfeeding mothers aged > 35 years. On the other hand, the variables of work, education, and social media use showed a *p*-value of 0.035 (<0.05), indicating a significant relationship with the knowledge level of breastfeeding mothers, with an odds ratio of 2.68. The mother's employment status is significantly related to an increase in maternal knowledge, with a *p*-value of 0.019 and an odds ratio of 2.68, respectively.

Discussion

The findings of this study suggest that the age of nursing mothers is not associated with their level of understanding when it comes to providing exclusive breastfeeding. Knowledge is essentially described as an understanding that one or more people have acquired from experience and study.²⁰⁻²² Therefore, a mother's age may correlate with her nursing experience and wisdom.²¹ The majority of nursing women in this study were between the ages of 20 and 35, and they were among the most active social media users in the study. Age groups may have easier access to health-related information. The results of a survey in 2021 stated that the use of social media by women in Indonesia aged 18-34 years is higher

than those aged > 35 years.²³ Thus, breastfeeding mothers in the age group of 20-35 years have the potential to be empowered in disseminating information about breastfeeding through social media. This study is consistent with some previous studies that stated a relationship between education and mothers' knowledge about exclusive breastfeeding. The learning process is influenced by education in the sense that the higher a person's education, the easier it is for that person to acquire information, resulting in more knowledge.^{21,24,25} Education and health are also related, with higher levels of education making it easier to accept the concept of healthy living on one's own.²⁶ Consequently, nursing women pursuing higher education have a 2.68-fold increased likelihood of attaining a good level of knowledge in this context.

Table 1. Respondent characteristics (n=93).

Variable	Category	Frequency (n)	Percentage (%)
Age	20-35 years	56	60.2
	>35 years	37	39.8
Education	High	50	53.8
	Low	43	46.2
Work	Work	44	47.3
	Does not work	49	52.7
Use social media	High	52	55.9
	Low	41	44.1
The most frequently used social media platform*	Facebook	57	61.3
	WhatsApp	88	94.6
	TikTok	38	40.9
	YouTube	56	60.2
	Instagram	62	66.7
Reason for use Social media*	Social interaction	77	82.8
	Access information about breastfeeding	80	86
	Fill the free time	77	82.8
	Discuss	72	77.4
	Breastfeed	78	83.9
Knowledge level	Good	53	57
	Poor	40	43

*Respondent can choose more than 1 answer.

Table 2. Correlation of mother characteristics with breastfeeding knowledge levels (n=93)

Variable	Knowledge level				Total	p	OR		
	Poor		Good						
	n	%	n	%	n	%			
Age	>35 years	19	51.4	18	48.6	37	100	0.268	1.76
	20-35 years	21	37.5	35	62.5	56	100		
Education	Low	24	55.8	19	44.2	43	100	0.035	2.68
	High	16	32	34	68	50	100		
Work	Work	25	56.8	19	43.2	44	100	0.019	2.98
	Does not work	15	30.6	34	69.4	49	100		
Use of social media as a source of breastfeeding information	Low	23	56.1	18	43.9	41	100	0.040	2.63
	High	17	32.7	35	67.3	52	100		

OR, odds ratio.

According to the study's findings, the employment status of mothers is related to the knowledge level of breastfeeding mothers who efficiently provide exclusive breastfeeding. Breastfeeding mothers who have a job but are not currently working demonstrate a high level of expertise. This study's results, in conjunction with those of another study,²⁷ suggest a relationship between work and a mother's understanding of exclusive breastfeeding. If their workplace lacks a dedicated breastfeeding room, working mothers require more time and space to directly nurse their babies.²⁸ Working women encounter challenges in providing exclusive breastfeeding since their leave period is too short compared to the nursing period; hence, formula milk becomes the preferred option when mothers return to work.^{29,30} This situation has led to an increase in non-working nursing mothers. Working mothers encounter difficulties in giving exclusive breastfeeding, particularly when their workplace does not offer a designated breastfeeding room.²⁸ Consequently, the prevalence of non-working nursing mothers is increasing. This underscores the importance of providing working mothers with adequate time and suitable spaces to directly nurse their babies. The majority of nursing women who use WhatsApp as a social media platform exhibit a high level of understanding, primarily due to the accessibility of information. The findings of this investigation align with those of previous studies. According to this study, a significant relationship exists between using social media as a source of breastfeeding guidance and the knowledge level of mothers who have successfully practiced exclusive breastfeeding. Breastfeeding mothers in the high category of social media use for breastfeeding information have a 2.63 times higher likelihood of being knowledgeable compared to those in the low category. The utilization of social media for disseminating breastfeeding information proves to be beneficial.

The majority of nursing women who use WhatsApp for social media exhibit a good degree of understanding, with information availability being a key factor. The findings of this investigation align with previous studies, indicating that social media can positively influence breastfeeding-related attitudes, knowledge, and behaviors.^{31,32} According to this study, a significant relationship exists between using social media as a source of breastfeeding guidance and the knowledge level of parents who have successfully practiced exclusive breastfeeding. Breastfeeding mothers who use social media as a source of breastfeeding information in the high category have a 2.63 times higher likelihood of being knowledgeable than mothers who use social media as a source of breastfeeding information in the low category. The use of social media to provide breastfeeding information can be beneficial.

Conclusions

Breastfeeding success is notably high among mothers extensively using breastfeeding information, especially those with higher education and non-working status. Conversely, young, employed, and less-educated breastfeeding women face challenges in providing exclusive breastfeeding. This specific group requires targeted attention to ensure the success of exclusive breastfeeding programs. The study underscores the impact of information technology and social media on shaping individuals' beliefs, emphasizing the role of new information in enhancing breastfeeding knowledge. These findings guide interventions to help social media users access reliable breastfeeding information, enabling health professionals to educate the public about nursing experiences via these platforms.

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