

# Effectiveness of WhatsApp Group on Breastfeeding Practices

Wahidah Sukriani<sup>1</sup>, Greiny Arisani<sup>1</sup>

<sup>1</sup>Midwifery program, Poltekkes kemenkes Palangkaraya, Palangkaraya, Indonesia

## Abstract

**Background:** Breastmilk is the ideal food for newborn, but in the first days of birth are vulnerable for babies to be given prelactal food by mother and families. The Successful of exclusive breastfeeding related to various factors including media exposure. Mothers who are exposed to the media have more opportunities to give exclusive breastfeeding. WhatsApp in a new trend in communication method for giving information to the public.

**Objective:** This study aims to determine the Effectiveness of WhatsApp Group Towards Pregnant woman in The Practice of First Week Breastfeeding in Palangkaraya

**Methods:** This study is a quasi-experimental study with posttest only with control group design. Purposive sampling technique was used in this study, consisted 36 respondent who were divided into two groups. Analysis were performed by chi-square test.

**Result:** The results showed the average age of respondents was 26.94 years. Most of the respondents were housewives or unemployed (63.9%), had high and middle education (88.9%) and had high family income (77.7%). Based on statistical test results, WhatsApp Group is effectively used to improve breastfeeding behavior of mothers in the first week after birth ( $p < 0.05$ ).

**Conclusion:** Health workers are expected to be able to use WhatsApp Group as a health education media on breastfeeding to increase the scope of exclusive breast milk.

**Keywords :** Breastmilk, Exclusive breastfeeding; Pregnant woman; WhatsApp Group

## Introduction

Breastmilk is the ideal food for newborn. Breastmilk is safe, clean and contains antibodies that can protect children from many common illness. Exclusive breastfeeding is given breastmilk to the baby from birth until six months, without adding and/or replacing with other food or drinks (except drugs, vitamins, and minerals). Globally, 3 of 5 babies are not breastfed in the first hour of their life and nearly 2 of 3 infant not exclusively breastfed.<sup>1</sup>

In Indonesia, the babies who had received exclusive breast milk in 2016 was 29.5% of 80% exclusive breast milk targets.<sup>2</sup> In 2017, exclusive breast milk coverage was 61.33%. This coverage has exceeded the strategic plan target of exclusive breast milk that were 44% in 2017.<sup>3</sup> Exclusive breast milk coverages in Central Kalimantan Province in 2017 is only 11.1%.<sup>4</sup> This

coverage has decreased by almost 50% when compared to the 2016 coverage, and making Central Kalimantan Province one of the three provinces that did not reach the 2016 exclusive breast milk target. This decline occurred for two consecutive years after the previously exclusive breast milk coverage in 2015 were 27.58%.<sup>5</sup> Menteng Health Center is one of the health centers in Palangka Raya City with the second lowest exclusive breast milk achievement in 2017 with. The coverage is just 6,3% in 2017, this number is decreased from 2016, which was 9.5%. This coverage is under the exclusive breast milk coverage of Palangka Raya city.<sup>6</sup>

In the first days of birth, breast milk is usually not released. This period is a vulnerable period for babies to be given prelactal feeds by the mother, families and health workers. Prelactal feeding is a barrier for exclusive breastfeeding and increases neonatal morbidity and mortality.<sup>7,8</sup> Exclusive breastfeeding is also associated

to various factors such as education, employment, mother’s knowledge, mother’s attitude, the role of the officer, the role of the husband, the role of parents and media exposure.<sup>9-13</sup> Mothers who are exposed to the media have 9.64 times the opportunity to give exclusive breastfeeding.<sup>14</sup> Social media group also influence breastfeeding behavior as well as to longer duration of breastfeeding.<sup>9</sup>

Social media is a new trends in terms of increasingly intensive means of communication in utilizing technological advancements. All fields are indirectly forced to follow this trend if they do not want to be left behind, especially in the health sector which is mostly related to communication or giving information to the general public.<sup>15</sup> Previous studies identified different effect of social media use by patient for health related reasons. Social media can serve as an aid to patient.<sup>16</sup> Whatsapp is one of the social media under Facebook Inc., which was introduced in 2010. Some literature has published about Whatsapp Utilization in the health field.<sup>17</sup>

This study aims to determine the effectiveness of WhatsApp Group in Pregnant Women Toward Breastfeeding Practices in the First Week in Menteng Health Center, Palangka Raya.

**Method**

This is quasi-experimental study with post test only design with nonequivalent group.<sup>18</sup> This research was conducted in March-September 2019 at Menteng Health Center in Palangka Raya. The Population in this

study were all pregnant women in third trimester who performed antenatal care at the Menteng Public Health Center that met the inclusion and exclusion criteria. Purposive Sampling Technique was used in this study. Thirty Six pregnant woman were divided into two groups: the intervention group and the control group.

The inclusion criteria in this study are pregnant women who live in the Menteng Health Center area, have smartphones, do not have severe comorbidities during pregnancy, have no complications during pregnancy and are willing to participate in research by filling out informed consent. The exclusion criterion in this study was to have complications during delivery and stillbirths.

In the Intervention Group, respondents were given health education through WhatsApp Group while the control group was given through leaflets. After providing health education to both groups, respondents were followed up to seven days after birth to find out about the respondent’s breastfeeding behavior. The instruments used in this study were the filling sheet and observation. Data analysis was performed univariately to find out the characteristics of respondents and bivariate with chi square test to find out the Effectiveness of WhatsApp Group ASI.

**Results**

From total 36 respondents, the ages of respondents in Intervention group, maternal ages ( Mean ± SD) was 28,44 ± 4, 718, and in control group was 25,44 ± 3,959.

**Table 1. Ages of respondents**

Variable	n	Mean	Min-Max	SD
Age				
Control Group	18	25,44	21-38	3,959
Intervention Group	18	28,44	18-34	4,718

**Table 2. Mothers Education, Mothers Occupation and Family Income**

No	Variable	Group				Total	
		Control		Intervention		n	%
		n	%	n	%		
1.	a. Mothers Education Primary	3	8,3	1	2,8	4	11,1
	b. Middle and Higher	15	41,7	17	47,2	32	88,9
2.	a. Mother's Occupation Unemployed	12	33,3	11	30,6	23	63,9
	b. Employed	6	16,7	7	19,4	13	36,1
3.	a. Family Income <UMR	6	16,7	2	5,6	8	22,3
	b. ≥UMR	12	33,3	16	44,4	28	77,7

Table 2 showed that most of respondents both in the control and intervention groups were had middle and higher education level, unemployed and have good family income

**Table 3. Practice of First Week Breastfeeding**

Group	First Week Breastfeeding				p value	OR	CI (95%)
	Non Exclusive		Exclusive				
	n	%	n	%			
Control	13	36,1	5	13,9	0,019	5,200	1,253 – 21,572
Intervention	6	16,7	12	33,3			

Table 3 showed that were differences in mothers practices of first week breastfeeding ( $p < 0,05$ ). Mothers from intervention group had 5,2 times greater chance to breastfeed their babies.

## Discussion

Table 1 showed that both in intervention and control group, maternal ages mostly on 20-35 years old. There is no significant differences in maternal ages in both grup. Previous study mentioned that older mothers had a lower likelihood of breastfeeding their babies than younger mothers.<sup>19</sup> But in other studies found that there is no relationship between mothers age and exclusive breastfeeding practice.<sup>10,11</sup> At the education level, the

results of the study showed that most respondents in both groups had middle and higher education levels. High levels of education should have a positive relationship with breastfeeding because education can influence knowledge. Mothers who have higher education would probably breastfeed their babies exclusively.<sup>20</sup> However, several studies mentions that maternal education is not related to exclusive breastfeeding and related to failure of exclusive breastfeeding.<sup>10,11,13</sup>

Most of the mothers in both the intervention and control groups were housewives or unemployed. Work is one of the triggering factors that is often considered to prevent mothers from giving breast milk. Mothers who work find it difficult to give maximum milk to the baby, for various reasons such as the child does not want to suckle, breast milk is reduced, there are no nursing room facilities at work, and so forth. Raheel and Tharkarin their research concluded that working mothers who have information about the benefits of breastfeeding are lacking which is an obstacle to breastfeeding.<sup>21</sup> Another study by Al-Ruzaihan et al states that the mother's work is not a barrier for mothers to breastfeed but it will only affect the duration and frequency of breastfeeding every day.<sup>22</sup>

The results also showed that most mothers had family incomes above the UMR Central Kalimantan Province both in the intervention group and the control group. Based on the literature, income does not significantly influence the breastfeeding process.<sup>23,24</sup>

### **Effectiveness of Whatsapp Group in the Practice of First Week Breastfeeding**

Breastfeeding is an ideal way of feeding babies for optimal growth and development. Breastfeeding also has many health benefits for mother's health.<sup>25,26</sup> However, lack of guidance and support can result in women often stop breastfeeding in the early weeks when they face or see problems related to breastfeeding.<sup>27</sup> In this study, mothers who joined the WhatsApp Group (Intervention Group) gave more exclusive breastfeeding in the first week to their babies than mothers in the control group. It can be concluded that WhatsApp Group as a medium of health education and communication as well as breastfeeding counseling that were effective in improving the behavior of the mother to breastfeed her baby exclusively in the first week of baby's life.

This study found that mothers who failed to give breast milk exclusively in the first week gave formula milk and some food like bananas to stop the baby crying because they thought the babies were hungry. These results are in line with research on the administration of prelactal intake as a failure factor for exclusive breast milk. Their research states that giving prelactal intake is given by the mother on the grounds of the baby's thirst, so that the baby stops crying and breastfeeding has not

come out but the mother does not know the adverse effects of giving prelactal care and the respondent is not aware if the intake of food is a failure factor in exclusive breastfeeding. The types of intake provided are coconut water, starch, honey, formula milk and bananas.<sup>28</sup>

Another study in the results of his study said that most babies (72%) get food / drink other than breast milk in the age range of 0-7 days. This is due to breast milk that has not come out in the early days after delivery, the habit of washing the baby's mouth with water and the suggestion of formula feeding by health workers.<sup>29</sup>

One obstacle to breastfeeding behavior is the lack of communication and lactation counseling services. Providing health education can increase the duration of exclusive breastfeeding.<sup>24</sup>

Mother's behavior in breastfeeding is the result of health knowledge, in this case, knowledge of exclusive breast milk. Currently, the method commonly used in providing health education about breastfeeding is by giving leaflets or direct counseling to patients. In the use of social media such as WhatsApp, exposure, feed back, connecting and sharing provided, it creates a big change for communication. The flow of information is no longer considered one-way but is an interactive process that allows the exchange of information at the same level between the recipient and the messenger, creating a long-lasting feedback communication process, and increasing the total involvement of the recipient of the message. In addition, the effectiveness of social media that is able to reach thousands and even millions of targets in a short time makes this media a new prima donna for every health promoter.<sup>15</sup>

Before using WhatsApp, research on the use of social media as a support group for breastfeeding was also carried out by Robinson et al. The results show that the use of Facebook as social support for nursing mothers is significantly associated with an increase in the duration of breastfeeding.

Research on the use of WhatsApp in health services was also conducted by Dewi and obtained results that are in line with this study. The study states that health promotion and the use of WhatsApp reminders can increase self efficacy in adherence to taking Fe tablets in pregnant women.<sup>30</sup>

## Conclusions and Recommendation

WhatsApp Group is considered effective in improving breastfeeding behavior in the first week of baby's birth. Health workers are expected to be able to use WhatsApp Group as a health education media on breastfeeding to increase the scope of exclusive breast milk and try to use another media social.

**Conflict of Interest :** Nil

**Etichal Clereance :** This Research has been approved by Poltekkes Palangkaraya Ethics Committee No. 06/2018

**Source of Fund :** Poltekkes Palangkaraya

## References

1. WHO. *Breastfeeding*. <https://www.who.int/health-topics/breastfeeding>. 2020
2. Ministry of Health. *Profil Kesehatan Indonesia Tahun 2016*. Jakarta; 2017.
3. Ministry of Health. *Profil Kesehatan Indonesia Tahun 2017*. Jakarta; 2018.
4. Health Office of Central Kalimantan. *Profil Kesehatan Provinsi Kalimantan Tengah Tahun 2017*. Palangka Raya; 2018.
5. Health Office of Central Kalimantan. *Profil Kesehatan Provinsi Kalimantan Tengah Tahun 2016*; 2017.
6. Health Office of Palangkaraya City. *Profil Kesehatan Kota Palangkaraya Tahun 2016*. Palangkaraya; 2017.
7. Chea N, Asefa A. Prolactin feeding and associated factors among newborns in rural Sidama, south Ethiopia: a community based cross-sectional survey. *Int Breastfeed J*. 2018;13(7):1-8. <https://doi.org/10.1186/s13006-018-0149-x>.
8. Amele EA, Demissie B, Desta KW, Woldemariam EB. Prolactin feeding practice and its associated factors among mothers of children age less than 24 months old in Southern Ethiopia. *Ital J Pediatr*. 2019;45(15):1-8. <https://doi.org/10.1186/s13052-019-0604-3>.
9. Skelton KR, Evans R, Lachenaye J, Amsbary J, Wingate M, Talbott L. Exploring Social Media Group Use Among Breastfeeding Mothers: Qualitative Analysis Corresponding Author. *JMIR Pediatr Parent*. 2018;1(2). doi:10.2196/11344
10. Ruan Y, Zhang Q, Li J, et al. Factors Associated with Exclusive Breastfeeding: A Cross-Sectional Survey in Kaiyuan, Yunnan, Southwest China. *PLoS One*. 2019;14(10):1-11. doi:10.1371/journal.pone.0223251
11. Setegn T, Belachew T, Gerbaba M, Deribe K, Deribew A, Biadgilign S. Factors Associated with Exclusive Breastfeeding Practices Among Mothers in Goba District, South East Ethiopia: A Cross-Sectional Study. *Int Breastfeed J*. 2012;7(17):1-8. <http://internationalbreastfeedingjournal.com/content/7/1/17>.
12. Liben ML, Gemechu YB, Adugnew M, et al. Factors Associated With Exclusive Breastfeeding Practices Among Mothers in Dubti Town, Afar Regional State, Northeast Ethiopia: A Community Based Cross-Sectional Study. *Int Breastfeed J*. 2016;11(4):1-6. doi:10.1186/s13006-016-0064-y
13. Purnamasari D, Mufdlilah. Factors Associated with Failure of Exclusive Breastfeeding Practice. *J Heal Technol Assesment Midwifery*. 2018;1(1):17-22. <http://dx.doi.org/10.31101/jhtam.443>.
14. Astuti I. Determinan Pemberian ASI Eksklusif Pada Ibu Menyusui. *J Heal Qual*. 2013;4(1):60-68.
15. Laksono AD. Efektivitas Media Sosial untuk Promosi Kesehatan. 2018;(July).
16. Rupert DJ, Moultrie RR, Read JG, et al. Perceived Healthcare Provider Reactions to Patient and Caregiver Use of Online Health Communities. *Patient Educ Couns*. 2014;96(3):320-326. doi:10.1016/j.pec.2014.05.015. Perceived
17. Boulos MNK, Giustini DM, Wheeler S. Instagram and WhatsApp in Health and Healthcare: An Overview. *Futur Internet*. 2016;8:1-14. doi:10.3390/fi8030037
18. Hariis A, McGregor J, Perencevich E, et al. The Use and Interpretation of Quasi-Experimental Studies in Medical Informatics. *J Am Med Informatics Assoc*. 2006;13(1):16-23. doi:10.1197/jamia.M1749. Background
19. Colombo L, Crippa BL, Id DC, et al. Breastfeeding Determinants in Healthy Term Newborns. *Nutrients*. 10(48):5-8. doi:10.3390/nu10010048
20. Hunegnaw MT, Gezie LD, Teferra AS. Exclusive breastfeeding and associated factors among mothers in Gozamin district, northwest Ethiopia: a community based cross-sectional study. *Int Breastfeed J*. 2017;12(30):1-8. doi:10.1186/

s13006-017-0121-1

21. Raheel H, Tharkar S. Why mothers are not exclusively breast feeding their babies till 6 months of age ? Knowledge and practices data from two large cities of the Kingdom of Saudi Arabia. *Sudan J Paediatr*. 2018;18(1):28-38. <https://doi.org/10.24911/SJP.2018.1.5>.
22. Al-ruzaihan SA, Al-ghanim AA, Bu-haimed BM, et al. Effect of maternal occupation on breast feeding among females in Al-Hassa , southeastern region of KSA. *J Taibah Univ Med Sci*. 2017;12(3):235-240. doi:10.1016/j.jtumed.2016.08.013
23. Wiener RC, Sambamoorthi U, Hayes SE, Chertok IRA. Association of Breastfeeding and the Federal Poverty Level : National Survey of Family Growth , 2011 – 2013. *Epidemiol Res Int*. 2016;2016. doi:<http://dx.doi.org/10.1155/2016/9783704>
24. Lutter CK, Morrow AL. Protection, Promotion, and Support and Global Trends in Breastfeeding 1 – 3. *Rev FROM ASN EB 2012 Symp*. 2013;(3):213-219. doi:10.3945/an.112.003111.Promotion
25. SI Kailaku, Bakhtiary I, Umar N, Aritonang A. Kesadaran Dan Pemahaman Tenaga Kesehatan Mengenai Kebijakan Terkait Menyusui Di Indonesia. [www. perinasia.com](http://www.perinasia.com). Published 2013. Accessed January 29, 2019.
26. Dieterich CM, Felice JP, O’Sullivan E, Rasmussen KM. Breastfeeding and Health Outcomes for the Mother-Infant Dyad. *Pediatr Clin North Am*. 2013;60(1):31-48. doi:10.1016/j.pcl.2012.09.010. Breastfeeding
27. Lopes S da S, Laignier MR, Primo CC, Leite FMC. Baby-Friendly Hospital Initiative : evaluation of the Ten Steps to Successful Breastfeeding. *Rev Paul Pediatr*. 2013;31(4):488-493.
28. Davies-Adetugbo. Sociocultural factors and the promotion of exclusive breastfeeding in rural Yoruba communities of Osun State, Nigeria. *Social science & medicine*,2013: 45(1), pp.113-125.
29. Clark A, Anderson J, Adams E, Baker S. Assessing the knowledge, attitudes, behaviors and training needs related to infant feeding, specifically breastfeeding, of child care providers. *Maternal and Child Health Journal*. 2008 Jan 1;12(1):128-35.
30. Dewi, N. W. E. P., Sawitri, A. A. S., & Muliawan, P. The effectiveness of WhatsApp video to increase knowledge of pneumonia early detection among mothers of children under five years.2020