



## **WHATSAPP GROUP CAN INFLUENCE PREGNANT WOMEN'S SELF EFFICACY IN UTILIZING ANTENATAL CARE**

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### **ABSTRACT**

Innovative efforts through the whatsapp group media in the era of the industrial revolution as a medium in educational activities and health promotion of pregnant women so as to increase and accelerate access and sharing of information. Information about the health aspects of pregnant women will be packaged more attractive and easy to access. This research was conducted with the aim of knowing the effectiveness of the WhatsApp group on the self-efficacy of pregnant women in utilizing antenatal care at the Lauwa Community Health Center, Gowa Regency. This type of research is a quantitative study with a quasi-experimental research design with the Pre Test and Post Test One Group designs. Sampling was carried out by Non Probability Sampling with a purposive sampling method during June-July 2020 with a sample size of 35 respondents. Methods of data analysis using Univariate and Bivariate analysis with T-Test using the SPSS Computer Program. There is an effect of whatsapp group media on the self-efficacy of pregnant women in utilizing antenatal care  $p < 0.005$ ). The results of the study suggest that midwives and health workers who work at Puskesmas Lauwa, Gowa Regency, provide support and education to pregnant women so that the effectiveness of the Whatsapp Group on the self-efficacy of pregnant women in utilizing antenatal care at Lauwa Puskesmas, Gowa Regency runs well.

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### **INTRODUCTION**

The high number of maternal deaths in several regions of the world reflects inequities in access to health services, and highlights the gap between rich and poor. Almost all maternal deaths (94%) occur in low and middle-low income countries, and nearly two thirds (65%) occur in the African Region. According to data from the World Health Organization (WHO) Maternal Mortality Rate (MMR) the ratio of maternal mortality in the country -developed countries at 415 per 100,000 births compared to Europe, North America, Australia and New Zealand at 12 per 100,000. There are large differences between countries, with 11 countries having the very high maternal mortality ratio of 600 per 100,000 live births. 1, 2

In Indonesia According to the Chair of the Scientific Committee of the International Conference on Indonesia Family Planning and Reproductive Health (ICIFPRH), Meiwita Budhiharsana, in 2019 Indonesia's MMR was still high, namely 305 per 100,000 live births. The Nairobi Summit in the context of the 25th ICPD (25th International Conference on Population and Development) which was held on 12-14 November 2019 stated that the high MMR was one of the challenges that Indonesia had to face so that it became one of the national priority commitments, namely ending maternal death during pregnancy and childbirth. In the Sustainable

Development Goals (SDGs), the MMR target is 70 per 100,000 live births by 2030. To achieve this target requires hard work, especially when compared to several ASEAN countries, MMR in Indonesia is still relatively high. MMR in ASEAN countries averaged 40-60 per 100,000 live births. In fact, MMR in Singapore is 2-3 per 100,000 live births. 3,4

MMR in South Sulawesi in 2017 was 115 maternal deaths (0.08%) out of 150,136 live births, while the target of the South Sulawesi provincial health office in 2017 was 105 maternal deaths and in 2018 increased again to 139 cases and in June 2019 the South Sulawesi Health Office recorded 75 cases of maternal mortality and childbirth. Based on data from the Health Office, there are 11 districts with high maternal and infant mortality rates, namely Gowa in first place. The highest distribution of maternal mortality in 2018 in Gowa Regency is in Somba Opu. 1,2,5,6,7,8,9,10,11,12

Maternal mortality is an international health care crisis although most of these deaths occur in the intrapartum period and immediately after delivery, evidence suggests that most maternal deaths are a consequence of poor quality preventive and progressive antenatal care, late or delayed diagnosis of pregnancy, or management of complications. Worse in pregnancy. 13,14,15,16

The government's efforts to reduce MMR from the Indonesian Ministry of Health made the National Action Plan for the Acceleration of Reducing Maternal Mortality Rate (RAN/PPAKI), one of which is an integrated Antenatal program. The lowest K1 coverage 2018 in Gowa Regency was at Lauwa Puskesmas at 82.18 and the lowest K4 coverage was at Lauwa Puskesmas at 74.67.17.

Self-efficacy is related to a mother's beliefs regarding her ability to take advantage of antenatal care (ANC) and to estimate whether the mother chooses to do ANC or not, how much effort is spent, the ability to improve or not, and how to respond emotionally to difficulties utilizing antenatal care. Self-efficacy affects individual responses in the form of thought patterns, emotional reactions, effort and persistence as well as decisions to be taken in utilizing antenatal care. Low self-efficacy in terms of utilizing antenatal care can lead to negative perceptions and motivations that hinder the use of antenatal care. The high self-efficacy of pregnant women shows a high sense of confidence in a mother in terms of using antenatal care. Compliance of a pregnant woman in checking her pregnancy is very necessary so that any complaints can be handled as early as possible and information that is important for pregnant women can be conveyed so that the maternal mortality rate can be reduced to a minimum. 18, 19,20,21,22

The development of technology is something that cannot be avoided. In fact, the presence of technology has a very big influence on human life, including in the health sector. Technological developments with applications have been made to facilitate service providers in providing midwifery care, especially in antenatal care. Whatsapp Group Media is a communication medium that can be installed on a Smartphone. Social media is used as a means of chat communication by sending text messages, pictures, videos and even telephone calls. This media can be active if the user's phone card has an internet data package. The existence of WhatsApp social media is one proof of technological development and communication that must be addressed positively. The use of social media can be realized with the motives for socializing, seeking information, social media users usually share knowledge and experiences that can be used as a reference for other users. Likewise, what is done by pregnant women, they usually seek information about pregnancy, socializing with other pregnant women. And share experiences during pregnancy. 23, 24, 25

The general objective of this research is to find out whatsapp group can affect the self-efficacy of pregnant women in utilizing Antenatal Care at Lauwa Puskesmas, Gowa Regency.

The specific objectives of this study are (1) To determine the description of whatsapp groups can affect the self-efficacy of pregnant women before using Antenatal Care at Lauwa Health Center, Gowa Regency. (2) To know the description of whatsapp group can affect the self-efficacy of pregnant women after using Antenatal Care at Lauwa Puskesmas, Gowa Regency. (3) To determine the effect of the WhatsApp group on the self-efficacy of pregnant women in utilizing Antenatal Care at Lauwa Health Center, Gowa Regency

**MATERIALS AND METHODS**

This type of research is a quantitative research with a type of quasi xperimental design with a Pre Test and Post Test One Group design which aims to examine the effect of the WhatsApp group on the self-efficacy of pregnant women in utilizing antenatal care. The subjects in this study were pregnant women who were obtained from the work area of Lauwa Community Health Center, Gowa Regency.

The population in this study were all pregnant women who had visited the Puskesmas Lawua, Gowa Regency, as many as 90 pregnant women. The sample in this study was taken from data obtained from the field when data collection was 90 pregnant women in the work area of Lauwa Community Health Center which consisted of Borimasunggu, Julukanaya, Berutallasa, and Lauwa. From the results of data collection, women who met the inclusion criteria were 35 pregnant women. The inclusion criteria in this research are willingness to be a respondent, domiciled in the work area of the Lawua Community Health Center, have a cellphone, have a WhatsApp application, can read and write. The exclusion criteria in this study were pregnant women suffering from serious illness, pregnant women experiencing decreased awareness. The drop out criteria are mothers moving to another place, refusing to continue being respondents, and pregnant women experiencing miscarriages. The data were collected using a structured pre-post test questionnaire and analyzed using the paired t-test because the data distribution was normally distributed.

**RESULTS & DISCUSSION**

Data analysis was done using manual or computer assistance. Data analysis conducted in this study is univariate analysis and bivariate analysis using paired t-test. Data presentation is stated in table and narrative form as follows::

**Table 1** Distribution of Characteristics of Pregnant Women and Husbands and Self Efficacy in Using Antenatal Care

Variabel	(n=35)	
	N	%
Age (Year)		
< 20	7	20
≥ 20	28	80
Education		
Low	3	8,6
Middle	32	91,4
High	0	0,0
Job		
Honorary	0	0,0
Housewife	31	88,6
Traders	2	5,7
Farmer	2	5,7
Civil servants	0	0,0
Staff	0	0,0
Income		
< Regional Minimum Wage (Rp.3.103.800)	33	94,3
≥ Regional Minimum Wage (Pp.3.103.800)	2	5,7
Gravid		
1	11	31,4
2 – 3	21	60,0
> 3	3	8,6
Parity		
Nullipara	12	34,3
Primipara	15	42,9
Multipara	8	22,9
Abortus		
0	33	94,3
1	2	5,7
Pregnancy Distance (years)		
< 2	12	34,3
≥ 2	23	65,7
The last type of maternal delivery		
With Action	5	14,3
Spontaneous	30	85,7
Take advantage of antenatal care because you get experience from other people		
Not	11	31,4
Yes	24	28,6
Checking the pregnancy to a traditional birth attendant		
Not	12	34,3%

Have the desire / motivation to take advantage of antenatal care	Yes	23	65,7%
	Not	1	2,9
	Yes	34	97,1

Based on table 1, it is found that from the results of the variable age of the respondents aged <20 years 7 (20%), respondents with an age of ≥ 20 years are 28 (80%). The education variable was dominated by the medium category 32 (91.4%). Respondent occupation variable category IRT 31 (88,6%). The variable of family income with respondents in the category <UMR is 33 (94.3%), and ≥ UMR 2 (5.7%). The variable of gestational age with respondents in the category of 4-6 months 14 (40.0%), and 1-3 months, namely 10 (28.6%). The child variable is the number of biological mothers currently in the intervention group with the first child category respondent, namely 26 (74.3%), and the third child, namely 3 (8.6%), while the control group with the category of children 2-3 is 21 (60.0%), and children to> 3 namely 3 (8.6%). The Gravid variable with respondents in the 2-3 category is 21 (60.0%), and> 3, namely 3 (8.6%). Variable Parity with respondents category primiparous 15 (42.9%), and multiparous 8 (22.9%). Abortion variable with respondents category 0, namely 33 (94.3%), and 1, namely 2 (5.7%). Variable Distance between pregnancy and respondents category <2 years, namely 12 (34.3%), and>= 2 years as many as 23 (65.7%).

The variable whether mothers use antenatal care because they get experience from other people with the respondent category No, namely 11 (31.4%), and Yes, namely 24 (28.6%). The variable whether the mother has ever had a pregnancy check-up with a traditional birth attendant in the No category is 12 (34.3%) and Yes 23 (65.7%). The variable whether the mother has the desire / motivation to take advantage of antenatal care with the respondent category No is 1 (2.9%), and Yes, namely 34 (97.1%).

**Table 2** Differences in Self Efficacy in Using Antenatal Care Before and After Treatment at Lauwa Health Center, Gowa Regency

Self Efficacy	Pre		Post	
	n	%	n	%
Low	1	2,9	0	0
Middle	30	85,7	7	20,0
High	4	2,9	28	80,0

Based on table 2, it was found that the majority of mothers had self-efficacy in utilizing moderate category antenatal care before treatment (85.7%) at Lauwa Puskesmas, Gowa Regency. Meanwhile, after the treatment, the majority of pregnant women had self-efficacy in utilizing high category antenatal care after treatment (80.0%) at Lauwa Puskesmas, Gowa Regency.

**Table 3** The Effect of Whatsapp Group Education on Self Efficacy of Pregnant Women in Using Antenatal Care

Variabel	Skor of Self-efficacy	Mean ±SD	Std. error mean	p-value
Group Whatsapp	Skor of pre-test	109,31 -12,438	2,102	0,000
	Skor of post-test	136,37 - 10,746	1,816	
	Change	27.06 – 14.701	2.485	

Based on table 3 shows that the self-efficacy score of pregnant women at pretest has an average value (mean) of 109.31 from 35 data. The data distribution (std. Deviation) obtained was 12.438 with a standard error of 2.102, while the results of the posttest had an average value (mean) of

136.37 from 35 data where the data distribution (std. Deviation) was 10.746 with a standard error of 1.816. The significance value (2-tailed) is 0.000 (p> 0.05), so it shows that there is an effect of Whatsapp Group education on the self-efficacy of pregnant women in utilizing ANC.

**Table 4** Differences in Self Efficacy Changes for Pregnant Women in Using Antenatal Care between Before and After the Whatsapp Group Educational Intervention

Self Efficacy Change	(n=35)		P value
	n	%	
Not Increasing	9	25,7	0,000
To increase	26	74,3	

Based on table 4, the data obtained from the chi square statistical test P value = 0.000; The P value obtained is smaller than the alpha value (α) = 5% or 0.05. Changes in self-efficacy did not increase by 9 people or 25.7% of the total sample of 35 people, while changes in self-efficacy increased by 26 people or 74.3% of the total sample of 35 people. This shows that there are differences in changes in the self-efficacy of pregnant women in utilizing antenatal care between before the intervention and after the intervention.

This study shows that there is an effect of the Whatsapp Group on the self-efficacy of pregnant women in utilizing antenatal care. The use of an antenatal care handbook by mothers is one of the interventions to increase information. Whatsapp groups are very supportive of increasing mother's knowledge about personal health and children's health. Research The results of statistical tests using the Spearman test obtained a value of p = 0.000, which means that there is a relationship between Self Efficacy not increasing and increasing in the use of antenatal care through Whatsapp Group education. Researchers argue that changes in maternal self-efficacy are very good in utilizing antenatal care during her pregnancy and conducting pregnancy visits and examinations according to the visit schedule and the mother knows how important it is to have her pregnancy checked when her pregnancy is abnormal.

This study also found that there are mothers who have Whatsapp groups but their self-efficacy does not increase, this is because mothers have an educational level and have a low economic level. At a good level of education, mothers will understand a lot about Whatsapp Groups. The various KIA health media are also increasingly reaching the community so that the level of knowledge obtained through the Whatsapp Group will further increase the understanding of mothers about maternal and child health information.

The older a person is, the more their perceptive power and mindset will be developed so that the knowledge gained is getting better. Most of the respondents in this study were in the age range> 20 years. This is the basis for many respondents belonging to the productive age which have an impact on the memory of the information obtained so that knowledge is also good.

Judging from the socio-economic characteristics, the area of Puskesmas Lawua is far from the city center. Most of the socio-economic activities in the community are still centered on trade and agriculture. Judging from the rural characteristics that are still inherent, in the Puskesmas

Lauwa area, the income characteristics of most respondents have an income level below the UMK in Gowa Regency. The results showed that the self-efficacy of pregnant women experienced changes between before and after education through the Whatsapp Group, this happened because when doing pregnancy checks, the mother had received previous information through the Whatsapp Group, and applied the messages contained in the Whatsapp Group. Whatsapp group is a media for maternal and child health which includes health information during pregnancy up to six years of age. The Whatsapp group has a function as an information medium that is very easy to access by pregnant women which contains maternal and child health. Minimum use of Whatsapp Groups by mothers/caregivers if they are actively opening and reading Whatsapp Groups, while the maximum function is to understand and be able to apply the contents of information in Whatsapp Groups for pregnancy care and children under five. 26, 27, 28

Another function of the Whatsapp Group is as the main media for Educational Information Communication (IEC) during pregnancy care. The Whatsapp group contains information about standard examinations in pregnancy, daily care for pregnant women, things that pregnant women should avoid, nutrition for pregnant women, preparation for delivery, danger signs for pregnant women, problems in pregnancy, signs of labor, labor processes, postpartum care to information related to various contraceptive methods. 29,30,31

## **CONCLUSIONS**

The conclusion of the study showed that the majority of mothers had self-efficacy in the moderate category of antenatal care before treatment (85.7%) at Lauwa Puskesmas, Gowa Regency. After treatment the majority of pregnant women have self-efficacy in utilizing high category antenatal care after treatment (80.0%). There is the influence of Whatsapp Group media on the self-efficacy of pregnant women in utilizing antenatal care at Lauwa Puskesmas, Gowa Regency. It is hoped that all related parties can work together to increase the self-efficacy of pregnant women in utilizing antenatal care, and make the WhatsApp group an easy source of information media for pregnant women and health workers to communicate.

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