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Jurnal Ekonomi, Volume 12, No 02, 2023
ISSN: 2301-6280 (print) ISSN: 2721-9879 (online)

OVERVIEW OF KNOWLEDGE, GESTATIONAL AGE, EDUCATION, ATTITUDES, AND SOURCES OF INFORMATION FOR PREGNANT WOMEN IN PREPAREDNESS TO FACE FLOOD DISASTERS IN THE WORK AREA OF PUSKESMAS BLANG MANGAT SUB-DISTRICT BLANG MANGAT LHOKSEUMAWE CITY

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ARTICLEINFO

Keywords :
knowledge,
gestational age,
education,
attitude,
preparedness,
encana.

ABSTRACT

This study aims to determine the picture of knowledge, gestational age, education, attitudes, sources of information for pregnant women in preparedness to face flood disasters in the puskesmas work area Blang Mangat. The design of this study is an analytical research with a cross sectional approach. Hasil this study states that, firstly, there is a meaningful relationship between the knowledge of pregnant women and preparedness after the flood disaster at the Blang Mangat Health Center, Lhokseumawe City in 2022. Second, there is no meaningful relationship between gestational age and preparedness during flood disasters at the Blang Mangat Health Center in Lhokseumawe City in 2022. Third, there is a meaningful relationship between pregnant women's education and preparedness during flood disasters at the Blang Mangat Health Center in Lhokseumawe City in 2022. Fourth, there is no meaningful relationship between the attitudes of pregnant women and preparedness after the flood disaster at the Blang Mangat Health Center, Lhokseumawe City, in 2022. And finally, there is no meaningful relationship with disaster preparedness with flood information at the Blang Mangat Health Center in Lhokseumawe City in 2022.

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1. INTRODUCTION

In Indonesia, disaster management policies have been regulated by Law of the Republic of Indonesia Number 4 of 2007 concerning disaster management, Presidential Regulation Number 8 of 2008 concerning Bencan Management Agency. Indonesia is a country that is vulnerable to disasters due to its geographical, geological, hydrological and demographic conditions due to the locationin the *passive ring of fire*. Indonesia is often exposed to disasters including earthquakes, tsunamis, volcanic eruptions, floods, landslides and forest fires that can causeenvironmental damage, property (economic) losses, even casualties, decreased quality of life for pregnant women and quality of health (Nurtyas, 2019).

Disasters can also cause health crises that cause injuries, psychological impacts, deaths, nutritional problems, clean water crisis problems, environmental sanitation problems, infectious disease problems, psychiatric disorders and other problems. If a very large disaster occurs, it can cause health service problems including maternal and child health and reproductive health and can even cause paralysis of the health system in places affected by the disaster (Nurtyas, 2019).

Flooding is an event of rising water that inundates an area that is usually not inundated with water for a certain period of time. Flooding is caused by natural conditions such as heavy rainfall, subsidence and buffering of rivers and human activities. Indonesia currently has a shorter rainfall pattern but high intensity, this results in an increased risk of flooding during the rainy season. The magnitude of the health impacts caused by flood disasters requires the preparedness of many aspects and parties involved, including health services including the community. General strategies can be applied in the implementation of disaster management including pre-disaster stage activities, during emergency and post-disaster response (Reski and Zahtamal, 2021).

Pregnant women are one of the vulnerable groups in the plan. Pregnant women are very at risk before, during and after a disaster. The importance of handling disaster victims appropriately and quickly

provides an extension to minimize the number of victims due to delays in community rescue actions, especially in vulnerable groups. In this case, the preparedness of pregnant women needs to be considered as an important effort to save themselves by pregnant women. Vulnerable groups need special treatment and protection in order to survive in post-disaster situations. Overcrowded conditions without tents and inadequate facilities coupled with trauma and bad weather make victims, especially pregnant women and children, get sick (Teja, 2018).

It is hoped that pregnant women will play an important role in the prevention and management of flood disasters. Pregnant women must have positive knowledge and attitudes and be encouraged by simulations (practices) in flood prevention and management. With the availability ofknowledge and good attitudes, action will be formed so that good behavior arises in overcoming tyres. The higher a person's knowledge, the more his preparedness behavior will increase (Akhirianto, 2018).

Aceh Province is one of the flood-prone areas almost every year when the rainy season comes, there will be floods in several areas of Aceh untilthe end of 2021, at least 674 natural disasters occur in Aceh. The Aceh Disaster Management Agency (BPBA) recorded that Aceh's total losses due to the disaster reached Rp 240 billion. The number of floods in 2021 in Aceh was 11,626 people affected who inundated parts of Aceh, in addition to South Aceh there were other flood points such as in K abupaten/K ota in Tanah Rencong which was still hit by floods. Lhokseumawe City, Subulussalam South Aceh Regency, Simeulue, Aceh Singkil, Central Aceh and Southeast Aceh. In Lhokseumawe City, the health crisis against the flood disaster that occurred in 1 Kecamatan, namely Blang Mangat District, Lhokseumawe City, hujan deras that poured into the Lhokseumawe City area and its surroundings caused the Krueng Pase River to overflow, 3 villages in Blang Mangat District were flooded (Wijaya, 2021).

The total population in Lhokseumawe City in 2021 is 211,346 and as many as 4,817 are pregnant women in Lhokseumawe City. The number of pregnant women consists of 1461 at the Banda Sakti Health Center, 609 pregnant women at the Mon Geudong Health Center, 816 at the Muara Dua Health Center, 428 at the Kandang Health Center, 893 pregnant women at the Muara Satu Health Center. 413 pregnant women at the Blang Mangat Health Center and as many as 197 pregnant women at the Blang Cut Health Center in Lhokseumawe City.

2. METHOD

The design of this study is an analytical research with a *cross-sectional* approach is a study where looking for the relationship between free variables and bound variables and measurements or observations are carried out at the same time.

The research will be carried out at the Blang Mangat Health Center, Lhokseumawe City, the reason for choosing the location is carried out on the consideration that every year there is always a flood disaster and never before have pregnant women been trained to deal with flood disasters. This research wascarried out in Juli and Agustus 2021.

The population in this study was 147 pregnant women who visited or treated at the Blang Mangat Health Center, Lhokseumawe City. The sample for this study was the total number of maternal populations in the Blang Mangat Health Center using the Slovin formula as follows:

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{147}{1+(147\times 0.05^2)}$$

$$n = \frac{147}{1.3675}$$

n = 107 orang

So the number of samples needed is as many as 107 pregnant women

Information:
n: is the number of samples searched for
N: is the number of populations
E: is the tolerated margin of error.

The data collection method in this study was based on two types, namely primary data and secondary data. Primary data is data obtained through direct direct interviews with respondents/pregnant women using questionnaires, which have been compiled based on variables (Knowledge, gestational age, education, attitudes, behaviors, education, and sources of information while The dependent variable is disaster preparedness before flooding, during flooding and after flooding. Secondary data are data obtained from reports, records or documents from the Lhokseumawe City Health Office and from data from the Blang Mangat Health Center related to research. Meanwhile, the data analysis design used in this study includes univariate, bivariate and multivariate analysis designs.

3. RESULTS AND DISCUSSION

Overview of the study location

Puskesmas Blang Mangat is located in Meunasah Blang Punteut Village, Blang Mangat District, Lhokseumawe City, Aceh, Indonesia. It has an area of 56.12 KM². Geographically, Puskesmas Blang Mangat borders as follows: the north is bordered by Muara Dua District, the south is bordered by Syamtalira Bayu District, North Aceh Regency, the East is bordered by Blang Cut Village, the West is bordered by Cot Matahe, North Aceh Regency. Puskesmas Blang Mangat has 4 auxiliary health centers (Pustu), 10 poskesdes, 20 posyandu, 9 SD/MI, 2 junior high schools? 1 MTs, 1 high school/ma, 5 pasantren and 17 paud and there are 13 villages. The total population of Puskesmas Blang Mangat in 2021 is 18,022 people, the number of men is 8,988 people and women are 9,034 people.

The number of health workers at the Blang Mangat health center is 156 people consisting of 60 midwives, 51 nurses, 2 dentists, 9 general practitioners, 1 pharmacist, 1 pharmacist assistant, 2 nutritionists, 3 public health graduates, 2 health analysts, 2 dental nurses, 1 person administrative staff, 4 high schools, Bachelor of Economics 1 person, pharmacy 2 people, sanitarian staff 2 people and health management 1 person.

The problem faced by puskesmas Blang Mangat is: disparity in health status between socioeconomic levels between regions and between cities-rural areas. The double burden of disease, the pattern of disease suffered by society. The low performance of health care is not in accordance with the large number of health workers. People's behaviors that do not support a clean and healthy lifestyle such as smoking habits, lack of exercise, lack of exclusive breastfeeding and more nutrition. Low state of health of the environment. Low quality and affordability of health services. Uneven distribution of health workers between Puskesmas areas in urban and rural areas. Low health status of the poor. The low allocation of health budgets for the achievement of all programs because most of the budget is allocated for the construction of health facilities and infrastructure.

Characteristics of respondents

In this section, it is explained about the characteristics of respondents including age and occupation. Presented in Figures 3 and 4 below.

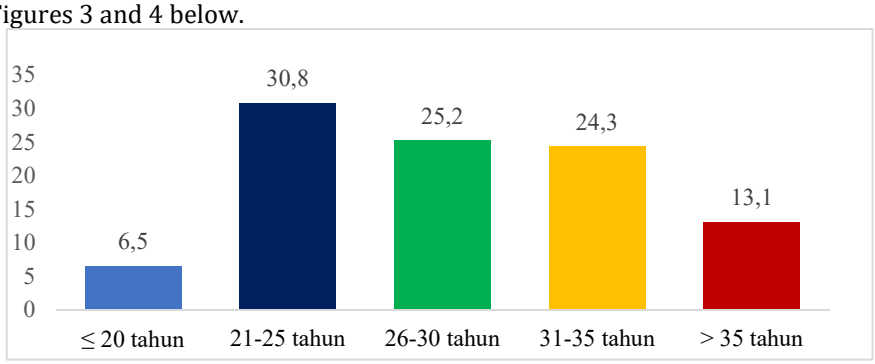

Figure 1. Age characteristics of respondents

Figure 1 shows that the average distribution is dominated by the age of respondents in the 21-25 year group of 33 (30.8%), 26-30 years by 27 (25.2%) and 31-35 years by 26 (24.3%). According to the age distribution of respondents, it shows that the average respondent, based on health sciences, in the ideal age that is biologically and psychologically mature is 20-25 years for women, The age is considered the best period because it is mature and can think maturely on average.

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For the occupational characteristics of mothers, almost all respondents as housewives (IRT) or non-working were 106 (99.1%) and only 1 (0.9%) respondents had the status of an ASN can be seen in detail in Figure 5 below.

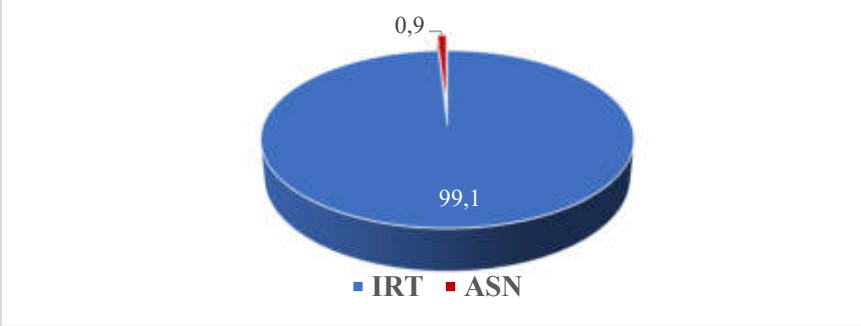

Figure 2. Characteristics of the respondent's work

Figure 2 describes the gravida characteristics of respondents. In this study, 13 categories were obtained, namely: G1 P0 AB0, G2 P1 AB0, G3 P2 AB0, G4 P3 AB0, G5 P4 AB0, G3 P1 AB1, G2 P1 AB1, G3 P2 AB1, G4 P2 AB1, G3 P0 AB1, G5 P2 AB1, G6 P5 AB0, and G7 P5 AB2.

Table11. Characteristics of the respondent's gravida

Characteristics of Gravida	n	%
G1 P0 AB0	23	21,5
G2 P1 AB0	24	31,8
G3 P2 AB0	23	21,5
G4 P3 AB0	8	7,5
G5 P4 AB0	5	4,7
G3 P1 AB1	3	2,8
G2 P1 AB1	1	0,9
G3 P2 AB1	2	1,9
G4 P2 AB1	1	0,9
G3 P0 AB1	2	1,9
G5 P2 AB1	2	1,9
G6 P5 AB0	2	1,9
G7 P5 AB2	1	0,9

From the results of the analysis of Table 2, it shows that the gravida characteristics of respondents are mostly in 3 categories, namely: G1 P0 AB0 of 23 (21.5%), G2 P1 AB0 of 34 (31.8%), and G3 P2 AB0 of 23 (21.5%).

Characteristics of research variables

The characteristics of respondents based on research variables are described in Table 3 below.

Table 2. Frequency distribution of respondents' characteristics based on research variables

Characteristics of Research Variables	N = 107	%
Mother's gestational age		
Trimester I	9	8,4
Trimester II	65	60,8
Trimester III	33	30,8
Maternal education		
Low	27	25,2
Intermediate	73	68,2
Tall	7	6,5
Knowledge		
Tall	49	45,8

Low	58	54,2
Attitude		
Positive	52	48,6
Negative	55	51,4
Sources of Information		
Health workers	36	33,6
Friends/Neighbors	44	41,1
RT/RW	5	4,7
Electronic media	15	14,0
Print	6	5,6
Village Disaster Responsibility	1	0,9
Flood Disaster Preparedness		
Before the disaster		
Ready	61	57,0
Unprepared	46	43,0
When disasters		
Ready	63	58,9
Unprepared	44	41,1
After the disaster		
Ready	87	81,3
Unprepared	20	18,7

Table 3 shows the percentage of maternal gestational age of more than one-third of respondents in the II Trimester category of 65 (60.8%). The percentage of maternal education in the middle category was the most dominant of all respondents, which was 73 (68.2%).

Most of the mother's knowledge was obtained by 58 respondents who belonged to the low category (5 4.2%), as well as maternal attitudes obtained the results of 55 respondents who had a negative attitude category (51.4%). For sources of information about disasters in this study, 44 respondents (41.4%) obtained information from friends/neighbors and health workers by 36 respondents (33.6%) and the lowest received information from disaster responsibility villages only 1 respondent (0.9%). Flood disaster preparedness from before the disaster stated that it was ready by 61 respondents (57.0%), and When the disaster respondents were in the ready category 63 respondents (5 8.8%). Likewise, in the category after disaster out of 107, 87 respondents (81.3%) had a category of ready to face disaster.

The relationship of knowledge, gestational age, education, attitudes, and sources of information to pre-disaster preparedness

The following table 4 describes the relationship of free variables (knowledge, gestational age, education, attitudes, sources of information) and pre-disaster preparedness bound variables.

Table3. The relationship of knowledge, gestational age, education, attitudes, and sources of information with pre-disaster preparedness

Variable	Pre-disaster preparedness				χ^2	p	RP	(95%CI)
	Ready		Unprepared					
	n	%	n	%				
Knowledge of pregnant women								
Tall	29	47,5	20	43,5	0,17	0,676	1,1	0,72-1,67
Low	32	52,5	26	56,5				
Education of pregnant women								
Tall	6	9,8	1	2,2	11,47	0,001	12,5	1,71-91,90
Intermediate	50	82,0	23	50,0	19,89	0,000	1,8	1,32-2,39
Low	5	8,2	22	47,8				
Gestational age								
Trimester I	6	9,8	3	6,5	0,66	0,418	1,6	0,47-5,74
Trimester II	38	62,3	27	58,7	0,43	0,512	1,1	0,82-1,47
Trimester III	27	27,9	16	34,8				
Attitudes of pregnant women								
Positive	28	45,9	24	52,2	0,41	0,520	0,9	0,59-1,29

Negative	33	54,1	22	47,8				
Sources of information								
Health workers	21	34,4	15	32,6	0,70	0,402	0,9	0,87-1,04
Friends/Neighbors	24	39,3	20	43,5	0,82	0,366	0,9	0,88-1,04
RT/RW	1	1,6	4	8,7	2,40	0,121	0,5	0,12-1,99
Electronic media	11	18,0	4	8,7	0,36	0,551	0,9	0,77-1,11
Print	3	4,9	3	6,5	0,88	0,349	0,7	0,42-1,32
Disaster liability villages	1	1,6	0	0				

Ket: * significant *p-value* <0.05

The results of the statistical test in Table 4 show that there is no meaningful relationship between the knowledge of pregnant women and pre-disaster preparedness statistically seen from the p-value of > 0.05, but it is practically related meaningful from RP value = 1.1 (95% CI: 0.72-1.67). This explains that the chances of high knowledge are 1.1 times greater in pre-disaster preparedness than in low knowledge of pregnant women.

The maternal education variable shows a meaningful relationship between maternal education and pre-disaster preparedness statistically and practically seen from the *p* value of < 0.05 and RP = 12.5 in the higher education category. and RP = 1.8 secondary education. This means that pregnant women who have higher education are 12.5 times more likely to have pre-disaster preparedness than mothers with low education categories. Likewise, pregnant women in the secondary education category are 1.8 times more likely to have pre-disaster preparedness than mothers in the lower education category.

The gestational age variable has no statistically meaningful relationship with pre-disaster preparedness seen from a p-value of > 0.05 but there is practically a meaningful relationship with the value of RP of each trimester I = 1.6 and trimester II = 1.1. It can be concluded that pregnant women who have a gestational age of the I trimester 1.6 times and the II trimester are 1.1 times more likely to have pre-disaster preparedness than pregnant women in the III trimester.

For attitude variables and information sources, it shows that statistically and practically there is no meaningful relationship with pre-disaster preparedness because the *p value* > 0.05 and obtained a value of RP ≤ 1.

The relationship of knowledge, gestational age, education, attitudes, and sources of information to disaster preparedness

This subsection describes the relationship between free variables (knowledge, gestational age, education, attitudes, sources of information) and variables bound by preparedness during disasters (Table 5).

Table 4. The relationship of knowledge, gestational age, education, attitudes, and sources of information with disaster preparedness

Variable	Disaster preparedness				χ^2	p	RP	(95%CI)
	Ready		Unprepared					
	n	%	n	%				
Knowledge of pregnant women								
Tall	28	44,4	21	47,7	0,11	0,737	0,9	0,61-1,41
Low	35	55,6	23	52,3				
Education of pregnant women								
Tall	6	9,5	1	2,3	8,41	0,004	9,7	1,31-71,67
Intermediate	50	79,4	23	52,3	14,57	0,000	1,6	1,22-2,20
Low	7	11,1	20	45,4				
Gestational age								
Trimester I	7	11,1	2	4,5	2,96	0,085	3,2	0,75-13,56
Trimester II	41	65,1	24	54,5	2,78	0,096	1,3	0,94-1,74
Trimester III	15	23,8	18	41,0				
Attitudes of pregnant women								
Positive	33	52,4	19	43,2	0,88	0,349	1,2	0,80-1,83
Negative	30	47,6	25	56,8				
Sources of information								

Health workers	26	41,3	10	22,7	0,38	0,537	0,9	0,89-1,04
Friends/Neighbors	19	30,2	25	56,8	1,28	0,258	0,9	0,86-1,05
RT/RW	2	3,2	3	6,8	1,20	0,273	0,7	0,30-1,48
Electronic media	12	19,0	3	6,8	0,25	0,621	0,9	0,79-1,11
Print	3	4,7	3	6,8	0,88	0,351	0,7	0,42-1,32
Disaster liability villages	1	1,6	0	0,0				

Ket: * significant *p-value* <0.05

The results of the statistical test in Table 5 showed no meaningful relationship between the knowledge of pregnant women and disaster preparedness statistically and practically judging from the p values > 0.05 and RP = 0.9 (95% CI = 0.61-1.41). The maternal education variable shows a meaningful relationship between maternal education and disaster preparedness statistically and practically seen from the p value of < 0.05 and RP = 9.7 on higher education category and RP = 1.6 secondary education. This means that pregnant women who have high education are 9.7 times more likely to have disaster preparedness than mothers in the low education category. Likewise, pregnant women in the secondary education category are 1.6 times more likely to have disaster preparedness than mothers in the lower education category.

The gestational age variable is statistically no meaningful relationship with disaster preparedness seen from the p-value of > 0.05 but there is practically a meaningful relationship seen from the value of RP trimester I = 3.2 and trimester II = 1.3. It can be concluded that pregnant women who have a gestational age of the first trimester of 3.2 times and pregnant women in the second trimester are 1.3 times more likely to have preparedness atthis time disastrous compared to pregnant women in the III trimester.

For the attitude variable, statistically there is no meaningful relationship with disaster preparedness in terms of the p-value of > 0.05, but it has practically a meaningful relationship derived from RP value = 1.2. This can be interpreted to mean that pregnant women who have a positive attitude are 1.2 times more likely than pregnant women who have a negative attitude in disaster preparedness.

The results of the analysis of variables sumber information show statistically and practically no meaningful relationship with disaster preparedness because the *p value* of > 0.05 and obtained a value of RP ≤ 1.

The relationship of knowledge, gestational age, education, attitudes, and sources of information to preparedness after a disaster

In Table 5 the following describes the relationship of free variables (knowledge, gestational age, education, attitudes, sources of information) and the variables bound to preparedness after a disaster.

Table 5. The relationship of knowledge, gestational age, education, attitudes, and sources of information with preparedness after a disaster

Variable	Disaster preparedness				χ^2	p	RP	(95%CI)
	Ready		Unprepared					
	n	%	n	%				
Knowledge of pregnant women								
Tall	45	51,7	4	20,0	6,59	0,010	2,6	1,05-6,36
Low	42	48,3	16	80,0				
Education of pregnant women								
Tall	6	26,4	1	20,0	0,00	0,972	1,0	0,15-6,86
Intermediate	58	66,7	15	75,0	0,42	0,516	0,9	0,69-1,19
Low	23	6,9	4	5,0				
Gestational age								
Trimester I	8	9,2	1	5,0	0,47	0,494	1,9	0,27-12,98
Trimester II	53	60,9	12	60,0	0,11	0,745	1,1	0,73-1,55
Trimester III	26	29,9	7	35,0				
Attitudes of pregnant women								
Positive	46	52,9	6	30,0	3,41	0,065	1,8	0,88-3,54
Negative	41	47,1	14	70,0				
Sources of information								

Health workers	31	35,6	5	25,0	0,16	0,689	0,9	0,91-1,03
Friends/Neighbors	35	40,2	9	45,0	0,26	0,613	0,9	0,92-1,03
RT/RW	5	5,8	0	0,0	-	-	-	-
Electronic media	13	14,9	2	10,0	0,15	0,696	0,9	0,80-1,10
Print	2	2,3	4	20,0	1,56	0,212	0,7	0,29-1,48
Disaster liability villages	1	1,2	0	0,0				

Ket: * significant *p-value* <0.05

The results of the statistical test in Table 6 show that there is a meaningful relationship between the knowledge of pregnant women and preparedness after disasters statistically and practically seen from the p value of < 0.05 and RP = 2.6 (95% CI = 1.05-6.36). This means that pregnant women who have high knowledge are 2.6 times more likely to be in disaster preparedness than pregnant women with low knowledge.

The variables of gestational age and attitudes of pregnant women were statistically no meaningful relationship with preparedness after a disaster judging from the p-value of > 0.05. However, at gestational age there is practically a meaningful relationship if you look at the results of the RP value of trimester I = 1.9 and trimester II = 1.1. It can be concluded that pregnant women who have a gestational age of the first trimester of 1.9 times and pregnant women in the second trimester are 1.1 times more likely to have preparedness after a disaster than pregnant women in the III trimester. For positive pregnant women's attitudes, they are 1.8 times more likely to carry out preparedness after a disaster than pregnant women who have a negative attitude.

In the variables of pregnant women's education and sources of information, there is no meaningful relationship between maternal education and preparedness after disasters statistically and practically seen from the p value < 0.05 and RP ≤ 1.

Logistic regression model of the relationship between pregnant women's education and pre-disaster preparedness

The statistical test used in this analysis is logistic regression with a meaningfulness level of p < 0.05 and *a confidence interval* (CI) of 95%. The value of the determinas coefficient (R 2) ranges from 0-100%, the greater the value of R^2, the better the effect to see the relationship between pregnant women's education and preparedness before disaster. Logistic regression analysis was performed on variables that had a meaningful relationship with pre-disaster preparedness and had *a* p-value of < 0.25.

Table 6. Logistic Regression Analysis: The Relationship of Pregnant Women's Education to Pre-Disaster Preparedness

Variable	Model 1 OR (CI 95%)
Education of pregnant women	
Tall	0,041** [0,0041, 0,389]
Intermediate	0,105*** [0,0352, 0,311]
Low	1 [1, 1]
N	107
R2	0,162
AIC	128,6

* P<0.05, ** P<0.01, *** P<0.001

Model 1 illustrates the relationship between pregnant women's education and pre-disaster preparedness without other variables. The results of the analysis showed that there was a meaningful relationship between pregnant women's education and pre-disaster preparedness, obtained OR values of 0.041 [0.0041, 0.389] in the higher education category and OR 0.105 [0.0352, 0.311] in the middle category.

From the results of the analysis, the value of R 2 was 0.162, which means that model 1 canpredict the occurrence of pre-disaster preparedness by only 16.2% while 83.8 % influenced by other factors.

Logistic regression model of the relationship between pregnant women's education and gestational age and disaster preparedness

Logistic regression analysis was performed on variables that had a meaningful relationship with disaster preparedness and had *a p* value of < 0.25.

Table7. Logistic Regression Analysis: The relationship between pregnant women and gestational age and disaster preparedness

Variable	Model 1 OR (CI 95%)	Model 2 OR (CI 95%)	Model 3 OR (CI 95%)
Education of pregnant women			
Tall	0,058* [0,0059, 0,573]		0,068* [0,0068, 0,683]
Intermediate	0,161***[0,0597, 0,434]		0,171***[0,062, 0,471]
Low	1 [1, 1]		1 [1, 1]
Gestational age			
Trimester I		4,200 [0,756, 23,32]	2,360 [0,405, 13,74]
Trimester II		2,049 [0,393, 10,67]	1,247 [0,230, 6,772]
Trimester III		1 [1, 1]	1 [1, 1]
N	107	107	107
R2	0,120	0,030	0,134
AIC	134,0	146,6	135,5

* P<0.05, ** P<0.01, *** P<0.001

Model 1 describes the relationship between pregnant women's education and disaster preparedness without involving other variables. The results of the analysis showed that there was a meaningful relationship between the education of pregnant women and disaster preparedness, obtained OR values of 0.058 [CI 95% 0.0059, 0.573] in the high and middle category education OR 0.161 [CI 95% 0.0597, 0.434]. Obtained an R^{value} of 2 of 0.12 which means that model 1 cant predict disaster preparedness by 12% while 88.0% is influenced by other factors.

Model 2 illustrates the relationship between gestational age and disaster preparedness without involving other variables. The results of the analysis showed no meaningful relationship between gestational age and disaster preparedness, obtained OR values of 4,200 [0.756, 23.32] the first trimester gestational age category and the SECOND trimester of OR values of 2.049 [0.393, 10.67]. In model 2 dobtained an R^{value} of 2 of 0.0 3 which means that model 2 can predict disaster preparedness of 3% while 97.0% is influenced by other factors.

Model 3 illustrates the relationship between pregnant women's education and preparedness when disasters involve gestational age variables. The results of the analysis showed that there was a meaningful relationship between pregnant women's education and disaster preparedness after being controlled by the gestational age variable, obtained OR values of 0.068 [0.0068, 0.683] higher and secondary education OR 0.171 [0.062, 0.471]. In model 3, an R^2 value of 0.13 was obtained, which means that model 3 can predict disaster preparedness by 13% while 87.0% is influenced by other factors.

Based on the results of the analysis on T8, then a model that is good enough to explain the factors related to disaster preparedness is model 3. This takes into account the values of OR, R^2, AIC, and *Confidence Interval* (CI). In model 3 the value of R 2 tends to increase compared to model 1 and model 2. The AIC value in model 3 is smaller than model 2 but not much different in value from model 1. The value of the *coefficient of determination* (R^2) in model 3 is getting bigger, meaning it is best used to see how much the education of pregnant women relates to disaster preparedness after being controlled with the gestational age variable.

Logistic regression model of the relationship between pregnant women's education and gestational age and disaster preparedness

Logistic regression analysis was performed on variables that had a meaningful relationship with disaster preparedness and had *a p* value of < 0.25.

Table 8. Logistic Regression Analysis: The relationship of pregnant women's knowledge and attitudes to preparedness after a disaster

Variable	Model 1 OR (CI 95%)	Model 2 OR (CI 95%)	Model 3 OR (CI 95%)
Knowledge of pregnant women			
Tall	4,286* [1,325, 13,86]		3,891* [1,188, 12,75]
Low	1 [1, 1]		1 [1, 1]

Attitudes of pregnant women			
Positive		2,618 [0,921, 7,443]	2,259 [0,772, 6,611]
Negative		1 [1, 1]	1 [1, 1]
N	107	107	107
R2	0,10	0,03	0,10
AIC	100,0	103,6	99,7

* P<0.05, ** P<0.01, *** P<0.001

Model 1 illustrates the relationship of pregnant women's knowledge between pregnancy and preparedness after a disaster without involving other variables. The results of the analysis showed that there was a meaningful relationship between the knowledge of pregnant women and preparedness after a disaster, obtained an OR value of 4.286 [CI 95% 1.325, 13.86]. Pregnant women with high knowledge are 4,286 kali more likely to be in preparedness after a disaster. Obtained an R^{value} of 2 of 0.1 0 which means that model 1 can t predict pregnant women to be ready for disaster preparedness by 1 0% while 90.0% is influenced by other factors.

Model 2 describes the relationship between pregnant women's attitudes and disaster preparedness without involving other variables. The results of the analysis showed no meaningful relationship between the attitudes of pregnant women and disaster preparedness, obtained OR values of 2.618 [0.921, 7.443]. The positive attitude of pregnant women is 2,618 kali greater in preparedness after a disaster. In model 2 dobtained an R^{value} of 2 of 0.03 which means that model 2 can predict disaster preparedness by 3% while 97.0% is influenced by other factors.

Model 3 illustrates the relationship between pregnant women's knowledge and preparedness after a disaster involving variables in pregnant women's attitudes. The results of the analysis showed that there was a meaningful relationship between the knowledge of pregnant women and disaster preparedness after controlling the attitude variables of pregnant women, obtained an OR value of 3,891 [1,188, 12.75]. High knowledge of pregnant women is 3,891 kali greater chance of preparedness after disasters. In model 3, an R value of ^{2} of 0.1 0 is obtained, which means that model 3 can predict disaster preparedness by 1 0% while 90.0% is influenced by other factors.

Basedon the results of the analysis on T9, then a model that is good enough to explain the factors related to disaster preparedness is model 3. This takes into account the values of OR, R^2, AIC, and *Confidence Interval* (CI). In model 3 the value of R 2 tends to increase in line with model 2 and is the same as model 2. The AIC value in model 3 is smaller than in model 1 or 2. The value of the *coefficient of determination* (R^2) in model 3 is getting bigger, meaning it is best used to see how much the relationship between pregnant women and preparedness after a disaster after being controlled with the variables of the pregnant woman's attitude.

Discussion

The results of this study showed that the number of pregnant women who had high knowledge was 49 people (45.8%), while the number of pregnant women who had low knowledge was 58 people (54.2%). According to Notoatmodjo (2012) that knowledge is one of the determining factors of behavior and is an intellectual aspect related to what is known to man.

The catastrophic situation of floods requires special attention and treatment. Increased awareness and knowledge about how to deal with before, during and after disasters in oneself and the surrounding environment. This isin accordance with the opinion that society needs to increase the capacity of knowledge about how to deal with disaster situations for itself, family, neighbors, and vulnerable groups in their environment. Disaster knowledge needs to be given to disaster-prone communities as early and as possible, both formally and informally and using various media (Teja, 2018).

Direja *et al.* (2018) states that health workers who have good knowledge are better prepared to face earthquake and tsunami disasters than health workers who have less knowledge. From the research, it can be concluded that knowledge will determine preparedness in the face of disasters. Therefore, the provision of information to increase disaster knowledge needs to be improved.

In this study, the number of pregnant women who had a positive attitude was 52 people (48.6%), and negative 55 people (51.4%). This can be seen in the low attitude towards where they live in flooded areas. This is in line with research (Ridha and Husna, 2017), that attitudes towards flood management consist of two types, namely positive and negative. The positive attitude in this study is that the community

is able to anticipate flood disasters, such as preparing emergency equipment that will be brought in the event of a flood disaster, storing valuables in a safe place, being active in disaster risk reduction planning and responsive attitudes to make decisions to save themselves when there are signs of a flood disaster. The negative attitude of the family or community of Lon Asan Village is the lack of efforts to store instant food just in case because they think there will be help from the government, ignore the necessity of clean and healthy living and do not determine the location of displacement.

For sources of information about disasters from the results of this study, the highest respondents obtained information from friends/neighbors as many as 44 pregnant women (41.4%), the second order of information from health workers was 36 pregnant women (33.6%) and electronic media as many as 15 people (14.0%).

Wahyuni and Krianto (2011) state that information will have an influence on one's knowledge. Although the person's education is low, if you get good information from various electronic or print media, it will be able to increase a person's knowledge. Individu and community disasterpreparedness are influenced by how much information is obtained. Various upaya can be done in obtaining information related to disaster mitigation can be done through reading disaster-related articles in print or electronic media.

The results of the study on flood preparedness before disaster were obtained by 61 respondents having ready behavior (57.0%), and unprepared by 46 respondents (43.0%). The categories during the disaster respondents obtained flood preparedness as many as 63 respondents (58.8%) and unprepared 44 respondents (41.1%). Likewise, in the category after disaster out of 107, 87 respondents (81.3%) had a category of ready to face disasters and the remaining 20 respondents declared unprepared (18.7%). From the results of the study, it can be concluded that most respondents expressed being prepared to face disasters.

The results of the study are different from the research in Lempuing, Bengkulu City, that community preparedness in facing only 34%, as many as 66% are not ready to face earthquake disasters. One of the causes of society's unpreparedness for disasters is knowledge (Main *et al.*, 2019).

In research for knowledge only on disaster preparedness that has a meaningful relationship from both bivariate and multivariate analysis results. Whereas before and during the disaster there is no meaningful relationship. For the attitudes of pregnant women from the results of all analyzes there is no meaningful relationship with disaster preparedness both, before, during and after the disaster.

The results of this study are in accordance with the opinion that basic knowledge about landslide disasters is in accordance with the education and experience of each of them. Knowledge of landslides is one of the factors that determine the ability to reduce disaster risk. So that if the community experiences a landslide disaster, the loss due to the disaster can be minimized (Chotimah, 2019). However, the attitude of the results of this study is different from the research conducted by Chotimah (2019) that the attitude of the community towards the danger of landslides is part of the community's preparedness to face landslide disasters. Positive community attitudes need to be improved so that people are able to carry out appropriate and fast behavior if they experience a landslide disaster.

4. CONCLUSION

Thereis a meaningful relationship between the knowledge of pregnant women and preparedness after the flood disaster at the Blang Mangat Health Center in Lhokseumawe City in 2022. Thereis no meaningful relationship between gestational age and preparedness during flood disasters at the Blang Mangat Health Center, Lhokseumawe City, in 2022. Thereis a meaningful relationship between pregnant women's education and preparedness during flood disasters at the Blang Mangat Health Center in Lhokseumawe City in 2022. Thereis no meaningful relationship between the attitudes of pregnant women and preparedness after the flood disaster at the Blang Mangat Health Center, Lhokseumawe City, in 2022. There is no meaningful relationship with disaster preparedness with flood information at the Blang Mangat Health Center in Lhokseumawe City in 2022

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