

The Relationship Between the Coverage of Antenatal Care (K4) Visits to Flood Incidents

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ARTICLE INFORMATION

Received: 20, January, 2024
Revised: 4, June, 2024
Accepted: 6, June, 2024

KEYWORD

ANC; K4; Flood Event

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DOI

<https://doi.org/10.36456/embrio.v16i1.8665>

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A B S T R A C T

Antenatal care or pregnancy care/examination is one of the factors that is very important to be considered and carried out by pregnant women to prevent complications until death occurs during childbirth, in addition to that, it is also very important to maintain and monitor the health and growth of the fetus. The main problem that is the highest is the maternal and infant mortality rate. The KIA program is responsible for providing health services to pregnant women, mothers giving birth, and neonatal babies. Floods are a form of disaster in Indonesia that occurs almost every year. In the last ten years, flood disasters have always occupied the first position of disaster events. Ngrame Village is one of the villages in the Pungging Mojokerto sub-district that experienced a flood event. The flood incident was caused by the collapse of barriers in two rivers in the Mojosari Region, and 4 points broke. The initial survey results in March 2024 showed that ten pregnant women in TM III and 20 pregnant women in TM III were evacuated to other villages due to the flood disaster in Ngrame village. Using the chi-square test, this study uses the cross-sectional method located in Polindes, Ngrame Village, with a sample of 20 TM III pregnant women. The results of the calculation of the chi-square test using SPSS (value = 0.00) can be concluded so that it can be concluded that Ho was accepted as having a relationship between the coverage of antenatal care (K4) visits to flood events in Polindes, Ngrame Village, Watukenongo Health Center, Mojokerto Regency.

Introduction

Antenatal care or pregnancy care/examination is one of the most critical factors in the attention and implementation of pregnant women because it prevents complications until death occurs at the time of delivery, in addition, it is also very important to maintain and monitor the health and growth of the fetus (Paramita & Nadhila, 2023). The biggest major problem is maternal and infant mortality. The MCH program provides health services for pregnant women, childbirth, and neonatal babies. Implementing pregnant women's health services can be assessed by looking at the components of pregnancy checks obtained by pregnant women and K4 visits (Indrayani et al.,2020).

The Maternal Mortality Rate (MMR) in East Java in 2022 has decreased compared to the previous two years. In 2020, East Java's MMR was 98.40 per 100,000 live births, and in 2021, it was 234.7 per 100,000 live births, while in 2022, it managed to drop to 93.00 per 100,000 live births. The achievement of East Java MMR in 2022 has exceeded the target of the East Java Provincial Health Office's Strategic Plan (RENSTRA) 2022 of 96.42 per 100,000 live births (Profil Kesehatan Jatim, 2022).

The achievement of k4 pregnant women in East Java Province in 2017 was 89.9%. This figure has increased compared to 2016, which was 89.5%. For Tulungagung Regency, the achievement of K4 during 2017 amounted to 90.35% of the number of pregnant women, as many as 16,833 people, while the coverage of pregnant women on the First Visit (K1) of East Java Province in 2022 was 98.2%. At the same time, the coverage of the Fourth Visit (K4) was 88.2% (Nuraisya et al.,2024).

Health services for pregnant women must meet the minimum frequency in each semester, namely at least once on TM I (UK 0-12 weeks), at least once on TM II (UK 12-24 weeks), and at least twice on TM III (UK 24 weeks until delivery. The visit indicator (K4) has yet to reach the target, the fourth visit indicator (K4) includes the SPM indicator (Minimum Service Standard) with a target of 100% (Iswarani et al., 2019).

Flooding is one form of disaster in Indonesia that occurs almost every year. In the past ten years, flood disasters have occupied the first position of disaster events (Qodriyatun, 2020). According to the book Indonesia Disaster Management Reference Handbook, Indonesia's largest flood disaster occurred from May to July 2016 (Alliyu, 2023). Floods occurred in South Kalimantan, West Kalimantan, Central Kalimantan, Bengkulu, Gorontalo, West Java, Central Java, Bali, East Nusa Tenggara, North Sulawesi, and Papua. Then, in August-October 2016, significant floods hit East Nusa Tenggara, East Java, West Java, Central Java, Aceh, North Sumatra, South Sulawesi, and Jambi (Santoso,2019).

Ngrame Village is one of the villages in the Pungging Mojokerto sub-district that experienced a flood event, the flood event was caused by the breaking of dikes in two rivers in the Mojosari Region 4 points broke. Three points are on the Gembolo River, Kebondalem Village, and one more point on the Sadar River in Kedung Gempol village. The impact of the flood event caused many residents to flee to other villages (Nurrahmania, 2023).

The initial survey results in March 2024 showed that ten pregnant women in TM II and 20 pregnant women in TM III were visiting other villages due to flooding in Ngrame village. From the results of the explanation and initial survey of the study, The purpose of this study is to analyse the relationship between antenatal care (K4) visit coverage and flood events in Polindes Ngrame village, Watukenongo Health Center, Mojokerto regency.

Method

This research is analytical research, which is research designed to analyse and explain a relationship based on existing theories. This study uses the cross-sectional method, where data concerning free and bound variables will be collected simultaneously. The population in this study was as many as 20 pregnant women at the time of the flood, and the sampling technique used was a total sample, the instrument used in this study used a cohort of pregnant women (K4 visit coverage) and for data analysis using the chi-square test with the SPSS calculation system.

Results

Table 1. Characteristics of Pregnant Women in Polindes Ngrame Village

Characteristics	Frequency	
	(n=20)	Percentage (%)
Ages (Years)		
<20	5	0,25
20-34	15	0,75
Education		
Low	10	0,5
High	10	0,5
Parity		
Primipara	10	0,5
Multipara	10	0,5
Work		
Work	9	0,45
Does not work	11	0,55

Based on Table 1, the characteristic description of pregnant women based on the age of 20-34 years is 0.75%, while the characteristics of highly educated pregnant women are 0.5%, the characteristics of pregnant women based on parity; primiparous by 0.5%, and the characteristics of pregnant women according to the work of non-working mothers are 0.55%

Table 2. Frequency of K4 Visits to Pregnant Women Before the Flood Event

Visit for pregnant women (K4)	Frequency	
	Total	Percentage (%)
Visit	16	80
Did not visit	4	20
Total	20	100

Based on Table 2 above, the total coverage of pregnant women who made K4 visits at the Ngramee Village police station before the flood incident was 80%, and those who did not visit by 20%.

Table 3. Frequency of Visits for Pregnant Women (K4) after the Flood Event in Polindes Ngrame

Visit for pregnant women (K4)	Frequency	
	Total	Percentage (%)
Visit	4	40
Did not visit	16	80
Total	20	100

Based on the table above, the coverage of pregnant women who visited K4 at the Ngrame Village Police station after the food incident was 40%, and those who did not visit was 80%

Table 4. Cross Tabulation of the Relationship Between ANC (K4) Visit Coverage of Pregnant Women to Flood Events in Polindes

K4 Before Flood event \ K4 After Flood event	Visit		Did not visit		Total	
	F	%	F	%	F	%
Visit	16	80	4	40	20	100%
Did not visit	4	20	16	80	20	100%
Total	20	100	20	100		

Chie Square 0,00

The results of the SPSS calculation using Chi-Square cross-tabulation related to the coverage of ANC (K4) visits of pregnant women to flood events in Polindes Melati amounted to 0.00, so Ho was rejected, and H1 was accepted. It can be concluded that there is a relationship between the coverage of ANC (K4) visits of pregnant women and flood events in the Ngrame Village Polindes.

Discussion

The number of coverage of K4 pregnant women before the flood incident was more than 80%, this shows that the level of knowledge of pregnant women about carrying out ANC visits is high, and pregnant women also know the benefits of ANC visits; this is based on the explanation that ANC services are services that can detect early problems and diseases experienced by pregnant women and carry out various interventions adequately so that pregnant women are ready to give birth (Sari & Fruitasari, 2021). Pregnancy examination in ANC, including assessment of the physical and psychological condition of pregnant women. Case handling and follow-up are based on the results of anamnesis, physical and laboratory examinations, and the doctor's diagnosis. This is also based on the purpose of ANC examination so that pregnant women (K4) get care during pregnancy, which includes pregnancy checks, education, and high-risk detection so that if there are findings, preventive and curative efforts can be immediately made to prevent morbidity and mortality (Febriani et al., 2022)

The result of ANC (K4) visit coverage after the flood event (40%) shows that inadequate facilities and infrastructure have caused a decrease in ANC (K4) visit coverage. According to research on the inhibiting factors of ANC (K4), visits to pregnant women are made to health facilities (facilities and infrastructure) where adequate facilities and infrastructure can support integrated ANC services. In Ngrame village, there was a flood that hampered facilities and infrastructure. Besides that, accommodation was also an inhibiting factor in the decline in the coverage of ANC (K4) visits for pregnant women.

This study found a relationship between antenatal care (K4) visits for pregnant women and flood events (P value= 0,00). In This study, flood events can reduce ANC (K4) visits because one of the inhibiting factors in ANC (K4) coverage is accommodation (Widyatun & Fatoni, 2013.)

In a study, an analysis of the problem and its root causes was carried out, some of the coverage of ANC service visits that are still not perfect, categorised into 5M, namely Manpower, Machine, Material, Method, mother nature (Siregar et al., 2023.)

The flood situation causes a lack of coverage for ANC (K4) visits, including environmental factors, facilities, and infrastructure. Before the flood incident, pregnant women in Ngramee village diligently visited ANC (K4) because there were no environmental, facilities, or infrastructure obstacles (Indrayani et al., 2020).

One of the factors causing the decline in ANC visits is the affordability of access. Factors that can affect the implementation of routine antenatal care visits include the area of residence, which makes it easier to visit during pregnancy. This is like a place where pregnant women live far from health services. The ease of access is due to good road conditions in the area around the residential environment, the distance to the place for the pregnancy examination is close, and there is a vehicle for the implementation of the pregnancy examination. Pregnant women with a place to live close to the health centre will make pregnancy check-ups more regular than the distance between home and the health centre (Azhari, 2021).

Pregnant women with a place to live close to the puskesmas will make pregnancy checks more regular than the distance between home and the distant puskesmas. Interviews with several residents in Ngrame Village During the flood incident, many residents were displaced to other villages, and visits by pregnant women in Ngrame Village were reduced due to the affordability of access to the police due to flooding (Sari & Fruitasari, 2021).

Conclusions

It can be concluded that there is a significant relationship between ANC (K4) in pregnant women and flood events in Polindes Ngrame village, Watukenongo Health Center, Mojokerto Regency (p-value = 0.00). From the factor of affordability of access due to the flood disaster, there has been a decrease in ANC visits to pregnant women. From this study, it was found that the visits of pregnant women (K4) before the flood incident had increased, while after the flood incident, there was a decrease because the facilities and infrastructure were flooded, besides that, accommodation to Polindes also had obstacles.

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