

# Analysis Of Risk Factors Related To Maternal Mortality In Wamena Regional General Hospital, Jayawijaya Regency

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*Abstract: This research was geared towards studying the quality of experience (QoE) of the mobile signal received by mobile subscribers' occupants of multi-dwelling units in Ilorin metropolis. The study was done using three mobile signal parametric values of reference signal received power (RSRP) from base transceiver stations, signal packets throughput and latency and ping test success rates for each of the four major mobile vendors providing radio coverage within the Ilorin metropolis. The drive test was conducted along major routes that span across the ancient city's nook and cranny through the professional version and license RantCell network signal monitoring application installed on the android mobile phone. The gauging of the study of the multi-dwelling units on the major network service providers was computationally analyzed showing routes that are clustered in the multi-dwelling units depicted high average signal strength variation along the altitude while the GLO network depicted low latency and high throughput, followed by Airtel, 9mobile and MTN. However, MTN network was observed to be characterized by increased voice and internet traffic majorly along all the four measurement routes.*

*Keywords: Multi-dwelling units, 4G network, Average Signal Strength and Mobile Subscribers*

## I. BACKGROUND

The maternal mortality rate is one of the indicators for the health progress of a country. Maternal Mortality Rate is the number of deaths of women during pregnancy or within 42 days of termination of pregnancy regardless of the duration and place of delivery, caused by the pregnancy or its management, and not due to other causes, per 100,000 live births. (Ministry of Health, 2015)

According to data from the World Health Organization (2015), it is known that from 1990-2015 Maternal Mortality Rate ranks fourth from the list of the highest MMR in Southeast Asian countries. In 2015 the MMR decreased to 126 per 100,000 live births from 442 per 100,000 live births in

1990, Indonesia has not yet met the Millennium Development Goals (MDGs) target of 102 per 100,000 live births, and the target of the Sustainable Development Goals. (SDGs) which is 70 per 100,000 live births in 2030. (Ministry of Health, 2015)

Based on data from the Ministry of Health of the Republic of Indonesia (2020), Papua Province is a province that contributes to maternal mortality in Indonesia. Based on the Papua Province Health Profile in 2019, the number of Maternal Mortalities decreased by 66 cases, compared to 2018 the number of Maternal Mortalities was 75 cases. In 2019, the most common causes of Maternal Mortality were 32 cases of bleeding, 6 cases of hypertension in pregnancy, 8 cases of infection, 2 cases of circulatory system disorders, and 18 cases

of other causes. (Kemenkes.RI, Indonesian Health Profile, 2020)

Maternal mortality in Papua Province in addition to the data above is due to several factors such as bleeding, pregnancy complications, education level, socioeconomic conditions, including prenatal and obstetric services. In addition, the cause of Maternal Mortality is also inseparable from the condition of the mother herself and is one of the criteria, namely being too old or too young at the time of delivery (more than 35 years and less than 20 years), having children more than 4, birth spacing that is too small. near or less than 2 years. (Papua Health Office, 2019)

The maternal mortality rate in Jayawijaya Regency in 2019 was 3 per 100,000 Maternal Mortalities in Wamena Hospital. Meanwhile, in 2020 the Maternal Mortality Rate in Jayawijaya Regency is 2 per 100,000 Maternal Mortalities in Wamena Hospital. (Dinkes.Jayawijaya, 2019)

## II. RESEARCH METHODS

This type of research is analytic observational, with a case control study design, which is a study that analyzes the relationship between exposure and disease by determining a group of cases (Maternal Mortalities) and a group of controls (live postpartum mothers) and then retrospectively (backtracking) to investigate whether case group and control group were exposed to these risk factors. This research was conducted at the Wamena Regional General Hospital, Jayawijaya Regency, from April to June 2022. (Notoatmodjo., 2012)

Research subjects were taken in this study by purposive sampling with a ratio of case and control groups of 1: 3, the number of cases of Maternal Mortality in Wamena Hospital in 2019 - 2020 was 15 cases and 45 controls in total were 60 samples. (Notoatmodjo, Health Research Methodology, 2012)

The analysis used is bivariate and multivariate analysis, bivariate analysis to see the relationship of independent variables to maternal mortality using Chi-Square and Fisher Exact tests for the two-way hypothesis and knowing the risk (Odds Ratio) of exposure to cases with a 95% confidence level. Multivariate analysis to see the effect of exposure to several risk factors together on the incidence of maternal mortality. The requirement in conducting multivariate analysis is that the bivariate analysis has a p value <0.25.

## III. RESULT

No	Variabel	P-value	OR	95%CI	Keterangan
1	Pregnancy Complications	0.34	2.15	0.64-7.16	Not Related
2	Labor Complications	0.00	15.3	3.58-7	Relate
3	Postpartum Complications	0.00	12.0	2.99-0	Relate
4	Mother's Age	0.00	14.9	3.98-2	Relate
5	Pregnancy	0.02	4.98	1.36-	Relate

	Distance			18.23	
6	Parity	0.36	2.07	0.63-6.76	Not Related
7	Nutritional Status	0.00	10.7	2.14-53.34	Relate
8	Decision Making Delay	0.00	43.2	5.09-367.6	Relate
9	Delay in Reaching In The Referral Place	0.02	4.63	1.34-15.96	Relate
10	Delay In Handling Health Services	0.30	2.00	0.54-7.32	Not Related
11	Antenatal Check Up	0.00	16.0	3.86-66.20	Relate
12	Education	0.01	5.28	1.48-18.82	Relate
13	Work	0.67	1.62	0.35-7.50	Not Related
14	Family Income	0.87	0.75	0.22-2.50	Not Related

Table 1: Analysis of the Relationship Between Independent Variables and Dependent Variables

Based on table 1 shows the relationship between childbirth complications (p = 0.00; OR = 15.37), postpartum complications (p = 0.00; OR:12), maternal age (p = 0.00; OR = 14.92 ), pregnancy interval (p=0.02; OR=4.98), nutritional status (p=0.00; OR=10.70), delay in making decisions (p=0.00; OR=43.27) , delay in reaching the referral place (p=0.02; OR=4.63), education (p=0.01; OR=5.28), and antenatal examination (p=0.00; OR=16) with mortality maternal. Meanwhile, there was no correlation between parity pregnancy complications (p=0.34; OR=2.15), delay in handling health workers (p=0.30; OR=2), occupation (p=0.67;OR=1, 62) and income (p=0.87; OR=0.75) with maternal mortality in Wamena Hospital.

No	Faktor Risiko	p-value	OR	95%CI Lower-Upper
1	Decision Making Delay	0.42	16.11	1.10-234.19

Table 2: Final Model of Double Logistic Regression Analysis

Based on table 2 shows, the results of multiple logistic regression statistical tests obtained factors related to maternal mortality in Wamena Hospital, Jayawijaya Regency, the smallest p value (0.042) is the delay in making decisions. Which means delay in making decisions.

## IV. DISCUSSION

### A. PREGNANCY COMPLICATIONS

The results of the Chi Square statistical test analysis, obtained a p value of 0.34 on the variables of pregnancy complications, meaning that the relationship between pregnancy complications and maternal mortality was not significant. The results of the calculation of the Odds Ratio

obtained 2.15 (95% CI: 0.64-7.16) which means that pregnancy complications are a significant risk factor. This study is inversely proportional to previous studies that there is a significant relationship between pregnancy complications and maternal mortality in Dr. Soeselo Slawi Hospital, Tegal Regency with  $p$  value = 0.000. From the results of the analysis, the value of OR = 7,200 means that mothers who experience pregnancy complications have a risk of 7,200 times experiencing death compared to mothers who do not experience pregnancy complications. According to WHO, pregnant women who experience complications such as eclampsia, anemia that are not handled properly will increase the risk of complications during childbirth and the puerperium which will result in Maternal Mortality. (Novriyanti P, Desmiati, & Nuntarsih, 2021).

#### B. Labor COMPLICATIONS

The results of the Chi Square statistical test analysis, obtained a  $p$  value of 0.00 on the variables of labor complications, meaning that the relationship between childbirth complications and maternal mortality was significant. The results of the calculation of the Odds Ratio obtained 15.37 (95% CI: : 3.58-65.96) which means that childbirth complications are a significant risk factor. This study is directly proportional to previous studies, obtained  $p$  value of 0.001 <0.05 (OR = 9.533; 95% CI: 2.397 – 37.909), which means that mothers who experience childbirth complications are 9.533 times more likely to experience Maternal Mortality than mothers who do not experience birth complications. childbirth complications. Complications of childbirth are close determinants of maternal mortality. So it is necessary to recognize early signs of complications in labor with all its risk factors, both improving the quality of ANC and implementing normal delivery care. (Rindhani, Anjarwati, Putri, & Keb, 2019).

#### C. POSTPARTUM COMPLICATIONS

The results of the Chi Square statistical test analysis, obtained a  $p$  value of 0.00 on the variables of labor complications, meaning that the relationship between postpartum complications and maternal mortality is significant. The results of the calculation of the Odds Ratio obtained 12.00 (95% CI: 2.99-48.16) which means that postpartum complications are a significant risk factor. This study is in line with previous research that mothers who experience postpartum complications have a significant effect on maternal mortality with a  $p$ -value of 0.000 <0.05. Postpartum complications have a high risk of Maternal Mortality. There are complications during the puerperium, especially infections that can cause Maternal Mortality because of the spread of germs into the bloodstream, bleeding during the puerperium if you don't get early treatment to control bleeding can continue in the occurrence of Maternal Mortality. (Respati, Sulistyowati, & Nababan, 2019).

#### D. AGE

The results of the Chi Square statistical test analysis, obtained a  $p$  value of 0.00 on the variable age of pregnant women, meaning that the relationship between the age of pregnant women and maternal mortality is significant. The results of the calculation of the Odds Ratio obtained 14.92 (95% CI: 3.68-60.52) which means that maternal age is a significant risk factor. The results of this study are in line with research from Widiyanti that the risk of death in the age group less than 20 years and more than 35 years is three times greater than the age group 20-34 years. (Widiyanti, 2019) Pregnancy for women who are too young or too old is a condition that poses a risk, the age of 20-35 years is a safe period for pregnancy and childbirth with a low risk of maternal morbidity and mortality. Being too young significantly increases the risk of childbirth worldwide. (Huurun Ien & Ika Fibriana, 2018).

#### E. PREGNANCY DISTANCE

The results of the Chi Square statistical test analysis, obtained a  $p$  value of 0.02 on the variable distance of pregnancy, it means that the relationship between pregnancy distance and maternal mortality is significant. The results of the calculation of the Odds Ratio obtained 4.98 (95% CI: 1.36-18.23) which means that the distance between pregnancies is a significant risk factor. Based on the results of research from Huurun Ien & Ika Fibriana, 2018 showed that there was a relationship between the distance of pregnancy and maternal mortality at Dr. Soeselo Slawi Hospital, Tegal Regency ( $p$  = 0.010; OR = 3.9). (Huurun Ien & Ika Fibriana, 2018) Delivery that is too frequent or the interval is less than 24 months nationally is 15% and is a high risk group for postpartum hemorrhage, maternal morbidity and mortality. A safe pregnancy interval is generally at least two years, so that the mother's body can recover from pregnancy and lactation. The distance between pregnancies that are too close (less than 2 years) can increase the risk of Maternal Mortality. (Depkes.RI, 2016).

#### F. PARITY

The results of the Chi Square statistical test analysis, obtained a  $p$  value of 0.36 on the parity variable, meaning that the relationship between parity and maternal mortality is not significant. The results of the calculation of the Odds Ratio obtained 2.07 (95% CI: 0.63-6.76) which means that parity is a significant risk factor. Based on the results of research from Huurun Ien & Ika Fibriana, 2018 at RSUD dr Soeselo Slawi, Tejal Regency, it shows that there is no relationship between parity and mortality. This is based on the results of the analysis with the chi square test, which obtained  $p$  value = 0.445. (Huurun Ien & Ika Fibriana, 2018) Mothers with parity > 3 times who did not experience Maternal Mortality in this study were due to their healthy condition and no comorbidities. In terms of maternal mortality, the safest parity is parity 2-3 times. Mothers who have never given birth or have given birth for the first time and mothers who have a

history of parity more than 4 times have a risk of Maternal Mortality. (Saifuddin, 2010).

#### G. NUTRITIONAL STATUS

The results of the Chi Square statistical test analysis, obtained a p value of 0.00 on the nutritional status variable, meaning that the relationship between nutritional status and maternal mortality was significant. The results of the calculation of the Odds Ratio obtained 10.70 (95% CI: 2.14-53.34) which means that nutritional status is a risk factor. The results of this study are not in line with previous studies. The results of statistical analysis  $p = 0.682$  indicate that there is no effect between nutritional status and maternal mortality. The wrong diet in pregnant women has more impact on the occurrence of nutritional disorders such as anemia, underweight in pregnant women and disturbances in fetal growth. (Heriansyah & Rangkuti, 2019) Nutritional status is related to maternal mortality, poor nutritional status of mothers due to inadequate and inadequate nutritional intake, causing pregnant women to become malnourished and result in anemia. Anemia in pregnant women can cause bleeding, and this problem is the main cause of the high maternal mortality rate. (Mutiarasari, 2019).

#### H. LATE DECISION MAKING

The results of the Chi Square statistical test analysis, obtained a p value of 0.00 on the variable delay in making decisions, meaning that the relationship between delay in making decisions and maternal mortality is significant. The results of the calculation of the Odds Ratio obtained 43.27 (95% CI: 5.09-367.66) which means that delay in making decisions is a significant risk factor. This study is in line with previous research that there is a relationship between delay in decision making and maternal mortality in Dr. Soeselo Slawi Hospital, Tegal Regency, the results of the analysis with the chi square test obtained p value = 0.037. (Huurun Ien & Ika Fibriana, 2018) Research results from Rindhani, et al (2020), the delay in referral factors, namely in decision making, geographical factors and economic constraints, delays in seeking help are also caused by a belief and resignation from the community that everything What happened was an unavoidable fate. (Rindhani, Anjarwati, Putri, & Keb, 2019).

#### I. DELAY IN REACHING THE REFERRAL PLACE

The results of the Chi Square statistical test analysis, obtained a p value of 0.02 on the variable delay in reaching the referral place, meaning that the relationship between delay in reaching the referral place and maternal mortality is significant. with the results of the calculation of the Odds Ratio obtained 4.63 (95% CI: 1.34-15.96) which means that the delay in reaching the referral place is a significant risk factor. This study is in line with previous studies showing that delays in transportation/referral travel have a direct positive effect on maternal mortality, although statistically not significant ( $b = 18.19$ ; 95% CI = -1.65-1.65;  $p = 1,000$ ), delays in reaching the referral place 18.19 more Maternal Mortalities than reaching the referral site on time. (Masturoh & Siswati,

2018) The delay in reaching the referral place is the impact of delays in decision making, besides the availability of transportation facilities is also part of the delay in reaching the referral place. (Nataria, et al., 2019).

#### J. DELAY IN HANDLING HEALTH SERVICES

The results of the Chi Square statistical test analysis, obtained a p value of 0.30 on the variable delay in handling health services, meaning that the relationship between delays in handling health services and maternal mortality is not significant. The results of the calculation of the Odds Ratio obtained 2.00 (95% CI: 0.54-7.32), meaning delay in handling health services is a risk factor. This study is in line with previous studies showing that the chi square test obtained p value = 0.096, there is no relationship between delays in medical treatment and maternal mortality in Dr. Soeselo Slawi Hospital, Tegal Regency. (Huurun Ien & Ika Fibriana, 2018) Delays in getting treatment can be caused by the impact of delays in making decisions and reaching a referral place, but can also be caused by things related to the availability of infrastructure. (Nataria, et al., 2019).

#### K. ANTENATAL CARE CHECK

The results of the Chi Square statistical test analysis, obtained a p value of 0.00 variables for antenatal care examination, meaning that the relationship between antenatal care examinations and maternal mortality was significant. The results of the calculation of the Odds Ratio obtained 16.00 (95% CI: 3.86-66.20) which means that antenatal care examination is a significant risk factor. This study is in line with previous studies that mothers whose antenatal examinations were not good or incomplete were 7.86 times the risk of Maternal Mortality ( $p$  value = 0.008; 95% CI = 1.49-41.3). Good and quality pregnancy check-ups can only be provided by qualified health workers, which is not only measured by the technical capabilities and facilities owned, but also the views of health workers on the problems of midwifery services in the community. (Wahid & Dhiya, 2019).

#### L. EDUCATION

The results of the Chi Square statistical test analysis, obtained a p value of 0.01 on the education variable, meaning that the relationship between maternal education and maternal mortality is significant. The results of the calculation of the Odds Ratio obtained 5.28 (95% CI: 1.48-18.82) which means that education is a significant risk factor. This study is in line with previous research, the results of the analysis using the chi square test,  $p$  value  $0.011 < 0.05$  and  $OR = 3.818$  means that mothers whose education level is junior high school have a risk of 3,818 experiencing death compared to mothers whose education level is > junior high school. Maternal education is one of the factors associated with maternal mortality. (Huurun Ien & Ika Fibriana, 2018) Mothers with low levels of education have less understanding of the dangers that can occur during pregnancy, especially in obstetric emergencies. (Respati, Sulistyowati, & Nababan, 2019).

## M. WORK

The results of the Chi Square statistical test analysis, obtained a p value of 0.67 on the employment variable, meaning that the relationship between work and maternal mortality is not significant. The results of the calculation of the Odds Ratio obtained 1.62 (95% CI: 0.35-7.50) which means that work is a significant risk factor. The results of the study are in line with previous studies showing that there is no relationship between work and maternal mortality in RSUD Dr. Soeselo Slawi, Tegal Regency, with the chi square test, with a p value of 0.793. This is possible because housewives who are busy with household chores will have relatively little time to be able to access adequate information about the health of the mother and fetus and the mother's lack of knowledge about her pregnancy. Work can also affect the economy, which depends on the husband's income and does not have extra income that can be used to meet needs during pregnancy, childbirth and the postpartum period. (Huurun Ien & Ika Fibriana, 2018).

## N. FAMILY INCOME

The results of the Fisher's Exact Chi Square statistical test analysis, obtained a p value of 0.87 on the monthly income variable, meaning that the relationship between income and maternal mortality is not significant. Odds Ratio calculation results obtained 0.75 (95% CI: 0.22-2.50) where  $OR < 1$  which means monthly income is not a risk factor. This study is in line with previous studies that there is no effect between family income and maternal mortality ( $p = 0.540$  or  $p > 0.05$ ) ( $OR = 0.686$ ; 95% CI: 0.205 – 2.295). (Respati, Sulistyowati, & Nababan, 2019) Family income plays a role in determining a person's health status, especially pregnant women, because it is directly proportional to the family's purchasing power. Families can afford to buy groceries depending on the size of their monthly income. (Saputri, Restuastutui, & Christato, 2014).

## O. DOMINANT FACTORS OF MATERNAL MORTALITY

From the results of multiple logistic regression analysis, it shows that delay in making decisions is the most dominant factor, where delay in making decisions shows the largest odd ratio value, namely 16.110 (95% CI: 1.10-234.19) This means that a person or family who makes decisions in referrals late then 16,110 more risk of Maternal Mortality with 95% CI between 1,10-234,19. 110 were more at risk of Maternal Mortality with a 95% CI between 1.10-234.19. Delay in making the decision to refer is a risk factor for Maternal Mortality. The majority of people still adhere to the system of negotiation in making decisions, this causes delays in decision making. The delay in decision making can also be influenced by the mother's employment status, because mothers who do not work or as housewives are economically very dependent on income from their husbands and do not have their own income that can be used to obtain needs during pregnancy, childbirth and the postpartum period. (Masturoh & Siswati, 2018) Delays in decision-making at the community level can

be caused by several things, including problems of tradition or belief in family decision-making and the inability to provide funds; the family is late in referring because they do not understand the danger signs that threaten the mother; health workers are late in preventing and/or identifying complications early; and health workers are unable to advocate for patients and their families regarding the importance of timely referrals so that the lives of mothers and babies are saved. (RI, Basic Health Research, 2013).

## V. CONCLUSION

### A. FACTORS RELATED TO OBSTETRIC COMPLICATIONS

- ✓ The relationship between pregnancy complications and maternal mortality at the Wamena Regional General Hospital was not significant (p-value = 0.34 OR = 2.15; 95% CI = 0.64-7.16). Pregnancy complications are a significant risk factor.
- ✓ The relationship between labor complications and maternal mortality at the Wamena Regional General Hospital was significant (p-value=0.00). Labor complications were a significant risk factor (OR=15.37; 95% CI = 3.58-65.96).
- ✓ The relationship between postpartum complications and maternal mortality at the Wamena Regional General Hospital was significant (p-value=0.00). Postpartum complications were a significant risk factor (OR=12.00; 95% CI = 2.99-48.16).

### B. FACTORS OF REPRODUCTIVE STATUS

- ✓ The relationship between the age of pregnant women and maternal mortality at the Wamena Regional General Hospital was significant (p-value = 0.00). Age was a significant risk factor (OR=14.92 ; 95% CI = 3.68-60.52).
- ✓ The relationship between pregnancy distance and maternal mortality at the Wamena Regional General Hospital was significant (p-value = 0.02). Pregnancy spacing was a significant risk factor (OR=4.98; 95% CI=1.36-18.23)
- ✓ The relationship between parity and maternal mortality at the Wamena Regional General Hospital was not significant (p-value=0.36). Parity was a significant risk factor (OR=2.07 ; 95% CI = 0.63-6.76).
- ✓ The relationship between nutritional status and maternal mortality at the Wamena Regional General Hospital was significant (p-value = 0.00). Nutritional status was a significant risk factor (OR=10.70; 95% CI = 2.14-53.34).

### C. FACTORS RELATED TO HEALTH SERVICES

- ✓ The relationship between delay in making decisions and maternal mortality at the Wamena Regional General Hospital was significant (p-value = 0.00). Delay in making decisions is a significant risk factor (OR=43.27; 95% CI=5.09-367.66).

- ✓ The relationship between delay in reaching the referral place and maternal mortality at the Wamena Regional General Hospital was significant (p-value = 0.02). Delay in making decisions is a significant risk factor (OR=4.63; 95% CI = 1.34-15.96).
- ✓ The relationship between delays in handling health services and maternal mortality at the Wamena Regional General Hospital was not significant (p-value = 0.30). Delay in handling health services was a significant risk factor (OR=2.00; 95% CI = 0.54-7.32).
- ✓ The relationship between antenatal care and maternal mortality at the Wamena Regional General Hospital was significant (p-value=0.00). Antenatal care examination was a significant risk factor (OR=16.00 ; 95% CI = 3.86-66.20)

#### D. SOCIO-ECONOMIC FACTORS

- ✓ The relationship between maternal education and maternal mortality at the Wamena Regional General Hospital was significant (p-value=0.01). Education was a significant risk factor (OR=5.28; 95% CI = 1.48-18.82).
- ✓ The relationship between work and maternal mortality at the Wamena Regional General Hospital was not significant (p-value = 0.67). Occupation was a significant risk factor (OR=1.62 ; 95% CI = 0.35-7.50).
- ✓ There is a relationship between income and maternal mortality at the Wamena Regional General Hospital. Income is a significant risk factor
- ✓ 5. The most dominant risk factor for Maternal Mortality at the Wamena Regional General Hospital is the delay in making decisions (Exp B = 16.110; CI 95: 1.10-234.19).

#### VI. SUGGESTION

##### ✓ FOR HEALTH CARE INSTITUTIONS

Maintaining and improving health services in an effort to reduce maternal mortality so that it can be used as input in terms of risk factors that affect maternal mortality and become a priority for determining future policy directions.

##### ✓ FOR HEALTH WORKERS

Improve competence, especially those related to more optimal promotive, preventive and curative planning in an effort to reduce maternal mortality.

##### ✓ FOR THE COMMUNITY

More digging and seeking information, especially pregnant women about the importance of adequate antenatal checks during pregnancy for early detection of high risk in order to prevent complications which are the direct cause of Maternal Mortality.

#### REFERENCES

- [1] Depkes.RI. (2016). Profil Kesehatan Indonesia 2015 (3 ed.). Jakarta: Departemen Kesehatan RI.
- [2] Dinkes.Jayawijaya. (2019). Data Dinas Kesehatan Jayawijaya. Jayawijaya: Dinas Kesehatan Kab.Jayawijaya.
- [3] Dinkes Jayawijaya. (2021).Data Dinas Kesehatan Kabupaten Jayawijaya: Dinas Kesehatan Kab.Jayawijaya
- [4] Dinkes Papua. (2019). Profil Kesehatan Papua.:Dinas KEsehatan Provnsi Papua
- [5] Heriansyah, R., & Rangkuti, N. (2019). Hubungan Jarak Kehamilan Dengan Kejadian Anemia Ibu Di Puskesmas Danau Marsabut Kabupaten Tapanuli Selatan Tahun 2019 . Jurnal Kesehatan Ilmiah Indonesia.
- [6] Huurun Ien, T., & Ika Fibriana, A. (2018). Higeia Journal of Public Health. Journal of Public Health Research and Development, 227-238.
- [7] Kemenkes.RI. (2015). Kesehatan dalam kerangka Sustainabile Development Goals (SDG's). Jakarta: Kementerian Kesehatan RI.
- [8] Kemenkes.RI. (2020). Profil Kesehatan Indonesia. Jakarta: Kementerian Kesehatan RI.
- [9] KemenkesRI. (2015). Profil Kesehatan Indonesia Tahun 2014. Jakarta: Kemenkes RI.
- [10]KemenkesRI. (2020). Profil Kesehatan Indonesia. Jakarta: Kementrian Kesehatan Republik Indonesi.
- [11]Masturoh, S., & Siswati, S. (2018). Tiga Keterlambatan Penyebab Kematian Maternal Di Kabupaten Brebes. Pena Medika Jurnal Kesehatan, 1, 1-8. Retrieved from <https://jurnal.unikal.ac.id/index.php/medika/article/view/374/345>
- [12]Mutiarasari, D. (2019). Hubungan Status Gizi dengan Kejadian Anemia pada Ibu Hamil di Puskesmas Tinggede. Jurnal Kesehatan Tadulako, 2, 42-48. Retrieved from <https://jurnal.fk.untad.ac.id/index.php/htj/view/119>
- [13]Nataria, D., Husin, F., Hidayat, Y. M., Sismayadi, D., Sukandar, H., & Wirakusumah, F. F. (2019). Analisis Penyebab Kematian Maternal Di Kabupaten Cirebon. Jurnal Kesehatan. Retrieved from <https://doi.org/10.35730/jk.v11i1.465>
- [14]Notoatmodjo. (2012). Metodologi Penelitian Kesehatan. Jakarta: Rineka Cipta.
- [15]Notoatmodjo. (2012). Metodologi Penelitian Kesehatan. Jakarta: Rineka Cipta.
- [16]Novriyanti P, H., Desmiati, H., & Nuntarsih. (2021). Analisis Deskripsi Kematian Maternal Berdasarkan Komplikasi di Kabupaten Tangerang Tahun 2018-2019.
- [17]Respati, S., Sulistyowati, S., & Nababan, R. (2019). Analisis Faktor Determinan Kematian Ibu di Kabupaten Sukoharjo Jawa Tengah Indonesia. Jurnal Kesehatan Reproduksi. Retrieved from <https://doi.org/10.22146/jkr.43463>
- [18]RI, K. (2013). Riset Kesehatan Dasar. Jakarta: Badan Pengembangan Kesehatan Kementerian Kesehatan RI.
- [19]RI, K. (2015). Kesehatan dalam kerangka Sustainabile Development Goals (SDG's). Jakarta: Kementerian Kesehatan RI.

- [20] Rindhani, S., Anjarwati, S., Putri, I., & Keb, M. (2019). Literature Review Gambaran Karakteristik Kematian Maternal.
- [21] Saifuddin, A. (2010). Ilmu Kebidanan (3 ed.). Jakarta: YBPSP.
- [22] Saputri, F., Restuastutui, T., & Christato, E. (2014). Hubungan Pendapatan Keluarga dengan Asupan Gizi Energi, Protein, Zat Besi, Vitamin A Ibu Hamil di Puskesmas Umban Sari Kota Pekanbaru. *Jom Fk*, 1-11.
- [23] Wahid, M., & Dhiya, A. (2019). Risiko Kematian Maternal di Kabupaten Bantul Tahun 2010-2014. *Jurnal Kesehatan*.
- [24] Widiyanti, R. (2019). Faktor – Faktor Penyebab Kematian Maternal Di Kabupaten Tasikmalaya Tahun 2015. *Jurnal Ilmu Kesehatan Immanuel*, 1(13). Retrieved from <https://doi.org/10.36051/jiki.v13i1.81>

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