

Study of Risk Factors on Maternal Mortality

Imelda Februati Ester Manurung¹

Faculty of Public Health, University of Nusa Cendana

e-mail: imelda.manurung@staf.undana.ac.id

Abstract. Maternal mortality is still a major problem in East Flores District. Therefore, this study aims to explain the risk factors of maternal mortality. This type of research is a qualitative study with a phenomenological approach. The main informant was the coordinator and village midwives. Data triangulation was carried out by the head of the health center and the MCH manager at the district health office. Data was collected through in-depth interviews and analyzed with content analysis. The results showed that the factors causing maternal death were maternal health conditions, low K4 visits, high transportation costs to health facilities, prioritizing traditional and spiritual health problem handling, and delays in referral to health facilities. The MCH services supervision was carried out in accordance with the guidelines. Some of the reasons found were that midwives had not received training related to the implementation of supervision, lack of budget, decree, and feedback. In conclusion, it is necessary to increase midwives' skills in monitoring MCH to improve the quality of maternal health services.

Keywords: *maternal, mortality*

Abstrak. Kematian ibu dan bayi masih menjadi permasalahan utama di Indonesia demikian juga di Kabupaten Flores Timur. Oleh karena itu penelitian ini bertujuan untuk mengkaji faktor risiko kematian. Jenis penelitian yaitu kualitatif dengan pendekatan fenomenologi. Sumber informan yaitu bidan koordinator dan bidan desa. Triangulasi data dilakukan pada kepala puskesmas dan pengelola KIA dinas kesehatan kabupaten. Data dikumpulkan dengan wawancara mendalam. Analisis data dengan metode content analysis. Hasil penelitian menunjukkan bahwa faktor kematian ibu yaitu kondisi kesehatan ibu, rendahnya kunjungan K4, biaya transportasi yang mahal untuk pergi ke fasilitas kesehatan, lebih mengutamakan penanganan masalah kesehatan dengan cara tradisional dan spiritual dan terlambatnya rujukan ke fasilitas kesehatan. Perlunya peningkatan keterampilan bidan dalam melakukan supervisi KIA untuk upaya perbaikan kualitas layanan kesehatan ibu dan anak. Edukasi kesehatan ibu hamil dan bayi serta kerja sama lintas sektoral lebih ditingkatkan.

Kata kunci: *kematian, ibu*

Article history:

Received 20 July 2022

Received in revised form 22 July 2022

Accepted 27 July 2022

Available online 31 July 2022

Introduction

The level of maternal and child health is one indicator of the success of a country's development. Maternal and infant mortality rates are still very high. Around 295,000 women in 2017 died during and after pregnancy and during childbirth. Most of these deaths (94%) occurred in low-middle income countries. The data also shows that most deaths are preventable (WHO, 2019). The Indonesian Demographic and Health Survey (IDHS) 2017 reported that the neonatal mortality rate was 15 per 1,000 live births, and the Toddler Mortality Rate was 32 per 1,000 live births (BPS, 2018). For the Province of East Nusa Tenggara, the infant mortality rate increased from 7 per 1000 live births to 11.7 per 1000 live births. Maternal mortality increased from 120 per 100,000 KH in 2017 to 161 per 100,000 live births in 2018 (NTT, 2019). Various efforts have been made to achieve the 2030 SDGs target, namely reducing the infant mortality rate to 12 per 1,000 live births, the under-five mortality rate (IMR) to 25 per 1,000 live births, and maternal mortality to 70 per 100,000 live births. Many factors influence maternal and infant mortality.

Based on several research, results show that childbirth complications, parity, delays in handling by officers, and discipline in antenatal examinations are risk factors for maternal death (Prahutama, Sudarno, Suparti, & Mukid, 2017). Maternal and infant mortality are closely related to employment status and birth weight. In addition, this situation is part of a combination of factors such as the health of the mother, the newborn, the living conditions of the mother and family, the quality of care during pregnancy, childbirth, and the postpartum period as well as for the newborn during hospitalization (Lengkong, Langi, & Posangi, 2020). Midwives are the spearhead of maternal and infant safety services. Therefore, the skills of midwives in improving the quality of services must continue to be improved. Efforts to improve the skills of midwives must also be supported by supporting health facilities (Aminah, 2018). MCH facilitative supervision helps midwives quickly identify any problems and get support for improvement efforts (Indonesia, 2015).

East Flores Regency in 2017 had an MMR of 97 per 100,000 KLH, where this death was not due to a direct cause due to treatment but an indirect cause, namely the mother had a history of congenital diseases including chronic kidney failure, PEB, severe seizures, pulmonary TB and pulmonary embolism. The number of infant deaths was 66 cases and IUFD was 44 cases (Dinas Kesehatan Provinsi NTT, 2018). A study in Central Java found that complications of pregnancy and childbirth and family income were associated with maternal mortality. Based on these circumstances, this study will examine the factors of maternal mortality in the East Flores Regency. This research is expected to provide benefits for the community and health services to make efforts to improve care for pregnant women (Kusnadi, Hari Respati, & Sulistyowati, 2019).

Method

The research method used in this study is qualitative techniques (Sugiyono, 2014) which aim to examine the problem of maternal mortality and infant mortality rates in East Flores Regency. The research was conducted in August 2019. Informants are people who are considered to know the most about the problems they are facing and are willing to provide the information needed by researchers on the questions posed by researchers. There were nine key informants in this study, consisting of 5 heads of the health centers and 3 Coordinator Midwives from 5 health centers in the East Flores Regency. In addition, researchers also triangulated sources with section heads and section heads from the health office of East Flores Regency.

Data collection techniques were through in-depth interviews related to the factors causing maternal and infant mortality and MCH services. The instrument in this study was the researcher himself; the researcher also used a tape recorder and field notes. Before the researcher started the research, the researcher asked permission from the informants to be interviewed. When the informant agreed to be interviewed and signed the informed consent, the researcher asked for permission

to record the interview. Each interview conducted by the researcher with each informant ranged from 50 to 60 minutes.

The data were analyzed using the content analysis method by first making a transcript of the matrix, coding, and themes, then doing an inductive and deductive analysis. Furthermore, the researchers then made transcripts of interviews with each informant, whether it was the Coordinator Pawn, the Head of the Health Center, Religious Leaders, Community Leaders, Section Heads, and Section Heads at the East Flores District Health Office. The research has received ethical approval from FKM Nusa Cendana University under the number 2019216 – KEPK.

Result

Based on the results of in-depth interviews, information was obtained regarding the factors causing maternal and infant mortality, namely the state of maternal and infant health, the behavior of using health services, and the supervision of maternal and child health services by health workers. Information is presented in the following interview excerpts.

Risk Factors for Maternal Mortality

The interview results obtained information on the causes of death of pregnant and maternity women. Several factors were found to be direct and indirect causes. The direct causative factors are eclampsia and congenital heart defects.

“4 cases of death with eclampsia”(n1)

“due to congenital heart defects” (n4)

The indirect causal factors found were related to behavioral factors. To reduce maternal and infant mortality, it is very important that people take advantage of the services of health facilities such as health centers and village clinics. However, there are still people who do not take advantage of the existing health services, as stated by the following informant:

"People think that there is no need to go to health center assistance and village clinic because there are no doctors and only nurses and midwives. The doctor is only in the health center. Likewise with inadequate facilities." (n2)

People also prefer shamans or giving birth themselves compared to health workers.

"But most people still go to traditional healers. Besides being cheaper, most of the people around the shaman live where the patients around there trust him more to help." (n.1)

Topographic Factor

Environmental topography and road conditions that are difficult to reach by vehicles:

"That's all, sometimes. Especially in some villages that are still far away. Like the mother's death earlier, the village is very remote. The road here is also very bad. So sometimes if a pregnant woman is seriously ill, we have to take her immediately, sometimes they look for excuses like this and that." (n4)

Supervision of Maternal and Infant Health Services

The things that are supervised are the condition of the facilities (buildings, equipment, logistics, and MCH documents) as conveyed by the following informants:

"It's usually the building, then the equipment. For example, if the building is clean, yes/no, then what, the requirements are that the room size, then the equipment in the room, medicine, then has administration. Registers, wall data, then other tools like drugs. We can see the quality of service from the midwife for K1/K4 visits, we can see from the results of the monthly reports." (n4)

"We'll see from his absence. See cohort, agenda, guestbook. Power is also supervised." (n5)

Obstacles in the Implementation of Supervision of Maternal and Infant Health Services. Some of the challenges faced in the implementation of supervision are related to budgetary constraints, as stated by the following informants;

"The rule is every 6 months, every year 2 times. But if there is a conflict with the budget too, the transportation is BOK funds, sometimes it is budgeted for, sometimes it is not. last year, 1 year 1 time only. but the budget for that is not in accordance with what we proposed from the health center. Many of the activities we have proposed have been omitted."(n4)

Topographical constraints are related to the condition of the area that is difficult to reach.

"Regarding the topography, there are 2 very difficult places, now this road is quite difficult, about one 7 KM, one 8 km." (n4)

"Mountain area, there are good roads, some are not" (n6)

The next obstacle is that many midwives still have not received facilitative supervision training.

"It's just that I haven't received training yet, I just got it from a manual like that." (n2)

In addition to not receiving training, the supervision team supervises without organizational support in the form of a decree.

"There really is no decree, just because supervision was carried out by coordinator midwife, it was done." (n4)

The other obstacle is that supervision findings often do not receive adequate feedback when reported to higher levels, namely health centers, and health offices.

"After supervision, there will definitely be problems, it's just that if the follow-up is heavy, then there is no follow-up. The work is also not neat, there is no follow-up, so it's useless to do it" (n2)

“Reporting to the Head of the Puskesmas is sometimes followed up at the office. If last year we stopped at the head of the puskesmas, then we can handle what we can handle at the puskesmas level.” (n4)

Discussion

Based on information obtained from the head of the health center and the coordinating midwife, several factors that influence the incidence of maternal and infant mortality include: being late in referring due to waiting for spiritual treatment, trying traditional medicine, the shame factor when pregnant women are embarrassed to check their pregnancy because they are pregnant outside of marriage, a history of congenital abnormalities, and a large number of children. The maternal mortality rate can also be influenced by several factors, namely the low awareness of pregnant women to check their pregnancy, the low level of public knowledge, especially the introduction of danger signs, and high risks during pregnancy, childbirth, and postpartum (Jayanti, N, & Wibowo, 2016); (Maniruzzaman et al., 2018).

In addition, another possibility is due to the lack of blood availability, especially in healthcare facilities, or because public access to healthcare centers is still very difficult to reach due to geographical constraints (Susiana, 2019). The baby's condition related to birth weight, body length, pregnancy abnormalities, and maternal age is risk factors for infant mortality (Rachmadiani, Shodikin, & Komariah, 2018).

Facilitative supervision activities are carried out by the coordinating midwife, the head of the health center, pharmacy, and KTU regularly twice a year. However, usually, only two officers supervise. A decree for the supervision team was not made because usually, the supervisors alternated depending on the staff's time and limited funds. If there is no health center operational vehicle, the officer/coordinator midwife uses a private vehicle to carry out supervision. The coordinating midwife seeks to supervise at least once a year. Supervision activities

carried out at the village clinic include monitoring the need for damaged facilities and lack of medicines, recording the register book, and motivating the village clinic midwives to stay enthusiastic about their duties and not leave the place of duty without permission of the Coordinator Midwife.

The coordinating midwife prepares the report on the results of the facilitative supervision, and the report feedback will be made in the form of a mini-workshop meeting. However, not all coordinating midwives did this due to a lack of funds. To overcome this, the coordinating midwife makes a report/verification and immediately coordinates with the head of the health center, village head, and village midwife regarding the procurement of equipment and improvement of MCH services. The activities resulting from the verification of facilitative supervision should ideally be discussed every 3-4 months. Likewise, the implementation of supervision should be carried out every month (Indonesia, 2015).

However, in its implementation, this activity is not routinely carried out due to several factors, including no funds, and busy officers, the problems found are always the same as the length of procurement of damaged facilities. In addition, the quality of village contract midwives who are not experienced enough can affect the quality of services. So, the coordinator and village midwives must focus more on recording the register and MCH services.

The midwife's solution is related to the length of procurement of damaged equipment such as tension, midwife kits, scales, etc.; the midwife will use private property to wait for the procurement of equipment in the following year's budget. Village fund support for facilities at the clinic village already exists. Such support includes intensive contract village midwives, clinic village operations related to clean water and electricity, medical equipment such as scales, tension, and midwife kits, furniture, building maintenance, and so on.

However, the amount of support from each village is not the same. Geographical conditions are also challenging for the facilitative supervision verification process; road access is difficult, takes a long time, and the telephone network is unavailable. So for areas that are difficult to verify, facilitative

supervision is only carried out once a year. Another supporting factor that motivates health centers to commit to improving the quality of facilitative supervision assistance is achieving health center accreditation. The implementation of the supervision of the coordinating midwife is closely related to the quality of the ANC services provided (Aminah, 2018). Implementing this supervision is also closely related to the work motivation of midwives.

Conclusion

Factors of maternal mortality include maternal health conditions, low K4 visits, expensive transportation costs to go to health facilities, prioritizing handling health problems in traditional and spiritual ways, and delays in referrals to health facilities. The implementation of MCH service supervision carried out by midwives is supported by training, budgets, and responses related to the results of supervision as an effort to improve and implement decrees. It is necessary to increase the skills of midwives in supervising MCH for efforts to improve the quality of maternal and child health services. Health education for pregnant women as well as cross-sectoral cooperation is further enhanced.

Reference

- Aminah, S. (2018). Pengaruh supervisi bidan koordinator terhadap standar mutu pelayanan antenatal care dengan motivasi kerja sebagai variabel intervening pada bidan di wilayah Puskesmas Pagiyanten Kabupaten Tegal. *Jurnal Magisma*, 6(1), 2018.
- BPS. (2018). *Survei demografi dan kesehatan Indonesia 2017*. Jakarta.
- Dinas Kesehatan Provinsi NTT. (2018). *Profil Kesehatan Nusa Tenggara Timur Tahun 2018*. Retrieved from [http://202.70.136.161:8107/114/2/Profil KS Provinsi NTT Tahun 2018.pdf](http://202.70.136.161:8107/114/2/Profil%20KS%20Provinsi%20NTT%20Tahun%202018.pdf)
- Indonesia, K. K. R. (2015). *Buku Acuan Penyediaan Fasilitatif Kesehatan Ibu dan Anak*. Jakarta.

- Jayanti, K. D., N, H. B., & Wibowo, A. (2016). Faktor yang memengaruhi kematian ibu (Studi kasus di Kota Surabaya). *Jurnal Wiyata*, 3(1), 46–53.
- Kusnadi, N., Hari Respati, S., & Sulistyowati, S. (2019). Risk Factors of Maternal Death in Karanganyar, Central Java, Indonesia. *Journal of Maternal and Child Health*, 4(6), 499–506. <https://doi.org/10.26911/thejmch.2019.04.06.10>
- Lengkong, G. T., Langi, F. L. ., & Posangi, J. (2020). Faktor-Faktor yang Berhubungan dengan Kematian Bayi di Indonesia. *Jurnal KESMAS*, 9(1), 41–48. Retrieved from <https://ejournal.unsrat.ac.id/index.php/kesmas/article/view/29482>
- Maniruzzaman, M., Suri, H. S., Kumar, N., Menha-zul Abedin, M., Jahanur Rahman, M., El-Baz, A., ... Aimbe, F. (2018). VIEWPOINTS. *Journal of Global Health*, 8(1), 10421. <https://doi.org/10.7189/jogh.08.010421>
- Murwati, Kurniarum, A., & Zulaikhah, S. (2015). Faktor ibu, bayi dan budaya yang mempengaruhi kejadian kematian bayi di Puskesmas Pedan. *Jurnal Kesehatan*, 6(1), 83–88.
- NTT, D. K. P. (2019). *Profil Kesehatan Provinsi Nusa Tenggara Timur 2017*. Kupang.
- Prahatama, A., Sudarno, Suparti, & Mukid, M. A. (2017). Analisis faktor-faktor yang mempengaruhi angka kematian bayi di Jawa Tengah menggunakan regresi generalized poisson dan binomial negatif. *Jurnal Statistika*, 5(2), 1–6.
- Rachmadiani, A. P., Shodikin, M. A., & Komariah, C. (2018). Faktor-faktor risiko bayi usia 0 - 28 hari Di RSD DR. Soebandi Kabupaten Jember. *Journal of Agromedicine and Medical Sciences*, 4(2), 60–65.
- Sugiyono. (2014). *Statistika untuk Penelitian* (19th ed.). Bandung: Alfabeta.
- Susiana, S. (2019). Angka kematian ibu : Faktor penyebab dan upaya penanganannya. *Info Singkat*, 11(24), 13–18.
- WHO. (2019). *Fact Sheet: Maternal Death*.