FACTORS RELATED TO MATERNAL DEATH AND INFANT DEATH IN INDONESIA

By
Helvy Yunida
Widyaiswara Ahli Madya Balai Besar Pelatihan Kesehatan Ciloto,
Program Pasca Sarjana Universitas Negeri Jakarta
Email: hybindjaji@gmail.com

Abstract

Background: Maternal Mortality Rate and Infant Mortality Rate in Indonesia are still high. According to Supas (2015) that the MMR is 305, it means that there are 305 maternal deaths caused by pregnancy, childbirth until 42 days after giving birth. 1. The main causes of maternal death due to hemorrhage, pre-eclampsia and comorbidities. Based on the results of the Indonesian Demographic and Health Survey (IDHS), infant mortality in 2017 was 24/1,000 KH.3 The causes of infant mortality: LBW, Asphyxia and Congenital Disorders. LBW and prematurity are still the main causes of infant mortality (38.8/1000 KH). Research Objectives: To determine the factors associated with the incidence of AKI and IMR in Indonesia. The research method used is by using secondary data, namely literature study (library study) by collecting all references or reading materials such as printed books, rule books, Google Scholar and Mendeley looking for journals with the same title or related ones. Discussion: factors related to maternal mortality and infant mortality are complications of childbirth, history of anemia, low birth weight, asphyxia, congenital abnormalities, and premature birth, ANC examination, maternal employment status, health costs, maternal age, maternal knowledge , Mother's education, Parity, pregnancy distance, maternal weight, maternal upper arm circumference, history of maternal chronic disease, bleeding, hypertension, birth attendant, family participating in family planning, delivery assistance from non-health facilities, infant not receiving complete basic immunization, utilization (ASI) exclusive, monitoring the growth of toddlers. Conclusion: there are factors related to maternal mortality and infant mortality in Indonesia either directly or indirectly

Keywords:Factors; Mother's Death; Baby Death

INTRODUCE

Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) are still high. According to WHO data, the MMR in the world in 2015 was 216 per 100,000 live births or it is estimated that the number of maternal deaths was 303,000 deaths with the highest number being in developing countries, which was 302,000 deaths. [1]

According to Supas (2015) that the MMR or MMR is 305, meaning there are 305 maternal deaths caused by pregnancy, childbirth until 42 days after giving birth in that period per 100,000 live births. [2] RPJMN MMR target 2024 = 183/100,000 KH, SDGs Goal AKI Golbal = 70/100,000 KH, AKI nationally = 305/100,000 KH (SUPAS 2015), Main Causes of Maternal Death due to Bleeding, PE-Eclampsia and comorbidities.[3] Meanwhile MMR by Island (joined): Sumatra 344, Bali 247, Kalimantan 466, Sulawesi 282, NTT Maluku and Papua 489 and Indonesia 305. The number of maternal deaths in Bojonegoro in August 2020 was 27 (227.22/100,000 KH). (18 September 2020).[4] MMR in 2020 is 16 maternal deaths, while the number of maternal deaths up to August 2020 is 27.3. Based on data from the Ministry of Health (Kemenkes) MMR and IMR have been stagnant in the last ten years. Secretary General Untung Suseno Sutarjo said that based on the 2015 census, the MMR rate was 305 per 100,000 live births. Every day two mothers and eight newborns die. In this case, maternal

death can occur during pregnancy (22%), childbirth or after delivery (57%) and delivery (15%).[5] According to the Director of Family Health of the Ministry of Health, Eni Agustina, that the main cause of maternal death is high blood pressure (hypertension).), in pregnancy (32%) and bleeding after delivery (20%). MMR under the age of 20 years reaches 6%, while over the age of 35 years it reaches 25%. The highest mortality rates in this case occurred in West Java, East Java, Central Java, North Sumatra, Banten and South Sulawesi. According to BPS (9 June 2017) that MMR and IMR are not only indicators of maternal and child health, but can also describe the level of public access to health services, efficiency and effectiveness in health management (9 June 2019).[6]

Based on the results of the Indonesian Demographic and Health Survey (IDHS), infant mortality in 2017 was 24/1,000 KH. There has been a decrease in the infant mortality rate, in 2017 but it has not met the specified infant mortality rate (12/1,000 KH).7 According to the Bojonegoro Health Office (2015), Infant Mortality Rate (IMR): 2017 IDHS Data: Neonatal Mortality Rate (AKN)) 15/1,000 KH, Infant Mortality Rate (IMR) 24/1,000KH, Indonesian Target (RPJMN 2024): AKN 10/100,000 KH, IMR 16/100,000 KH, Global Target SDGs 2030 IMR→ 12/1,000 KH, AKN→ 7 /1.000 KH and in 2020 until August there have been 74 cases of neonatal death AKN 6.23/1.000 KH and 116 deaths post-neonatal IMR 9.78/1.000 KH. The Causes of Infant Death: LBW, Asphyxia and Congenital Disorders. LBW and prematurity are still the main causes of infant mortality (38.8/1000 KH). The results of the initial study in Purworejo Regency, found that 20 mothers died from the following causes: 55% due to bleeding, 10% due to eclampsia, 5% due to sepsis, and 30% died due to other factors (Dinkes, 2007). The understanding of pregnant women about the danger signs of pregnancy is an important factor because knowledge is an important domain as a shaper of one's actions so that they are able to act and seek help quickly and appropriately (Pusdiknakes RI, 2003). On the basis of this description, research on MMR and IMR needs to be carried out, especially to find out the factors related to the incidence of MMR and IMR in Indonesia.

Formulation Of The Problem

What are the factors associated with the incidence of maternal and infant mortality in Indonesia?

Research Questions:

1. What are the factors associated with the incidence of maternal mortality in Indonesia?
2. What are the factors related to the incidence of infant mortality in Indonesia?

Research purposes

1. General Purpose

   To find out the factors related to the incidence of maternal mortality and infant mortality in Indonesia
2. Special Purpose
   a. To find out the factors related to the incidence of maternal mortality in Indonesia
   b. To find out the factors related to the incidence of infant mortality in Indonesia

BENEFITS OF RESEARCH

1. Theoretically

   The results of this study are expected to be useful for developing and adding to existing knowledge about the factors associated with the incidence of maternal and infant mortality in Indonesia.
2. Practically
   a. For Researchers

      Hopefully, the results of this research can add to the experience and insight of research as well as a medium to apply the knowledge that has been obtained
   b. For institutions

      The results of this study are useful for fulfilling SKP for researchers who have been previously targeted.

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c. For Government Agencies

The results of this study may be useful as input in determining policy events related to the incidence of AKI and IMR in Indonesia

d. For Society

Hopefully it can be used as a reference in determining actions regarding factors related to AKI and IMR, so that the good things are taken and the bad things are avoided.

LITERATURE REVIEW

1. Theoretical Framework

a. BATTERY

Definition of AKI (Maternal Mortality Rate)

According to Supas (2015) MMR 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. 2

Definition of Maternal Death

What is meant by maternal death is the death of a woman during pregnancy or the death of a woman within 42 days of termination of pregnancy regardless of the duration of pregnancy or the place of delivery, namely death caused by pregnancy or its management, but not due to other causes such as accidents, falls. , etc. 2

Determinant Factors of Maternal Mortality

three components in the process of maternal death. The closest to death and illness are pregnancy, childbirth, or its complications. This component of pregnancy, complications, or death is completely influenced by 5 intermediate determinants, namely health status, reproductive status, access to health services, health behavior, and other unknown factors. Examples of socio-economic and cultural.

b. IMR

Definition of IMR (Infant Mortality Rate)

According to Bapedalitbang (2020), MMR is not only an indicator of maternal and child health, but also describes the level of public health access to health services, efficiency and effectiveness in managing health programs.

The causes of infant mortality are asphyxia, birth trauma, infection, prematurity, congenital abnormalities, and other causes. The slow decline in IMR is caused by poverty, low status of women, poor nutrition, inadequate detection and treatment, early pregnancy, poor access and quality of antenatal care, childbirth, and postpartum.

CONCEPTUAL FRAMEWORK

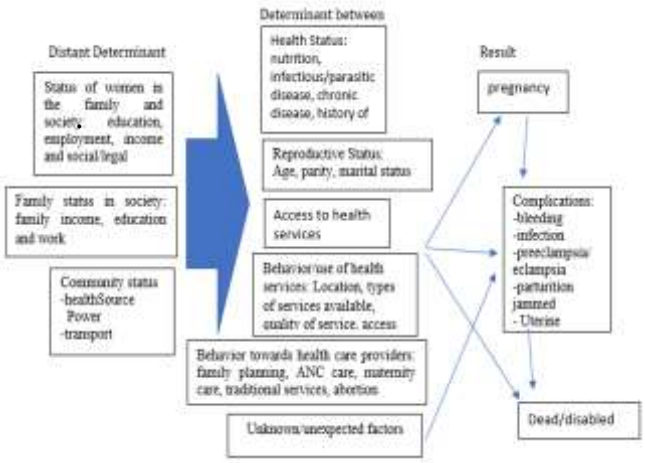

Figure: Framework for Analysis of Determinants of Maternal Mortality and Illness

RESEARCH METHOD

The data collection technique used is by using secondary data. Secondary data according to Setiawan Ari Saryono (2011: 113) are: "data taken from data on the number of adults from the kelurahan that can be used to complement and support primary data.9 What is meant by literature study or literature study according to Fatin & Nur (2017).) are: “Literature study conducted by searching various written sources, either in the form of books, archives, magazines, articles, and

journals, or documents relevant to the problem being studied. So that the information obtained from this literature study is used as a reference to strengthen the existing arguments. This literature study was carried out by researchers after determining the research topic and determining the formulation of the problem, before going into the field to collect the necessary data. [10]

DISCUSSION

According to Lengkong, tirsa Langi G, Fima L.F.G, Posangi & Jimmy, (2020), Research results: Baby's birth weight (p = < 0.001), ANC examination (p = < 0.001), mother's employment status (p = 0.048), health costs (p = 0.037). Conclusion: Infant weight, ANC examination, maternal employment status and health costs have an effect and have a relationship with infant mortality in Indonesia. Meanwhile, according to Prawirohardjo (2011: 56) that the factors of perinatal mortality are divided into three, namely distant determinants, namely socio-economic and cultural factors, intermediate determinants are unknown/unexpected factors, including health status, reproductive status, access to services. Health and behavior/use of health services. That is the complication factor. So the factors of the research results have something to do with the theory, which is included in the distant determinants and intermediate determinants. [11]

Meanwhile, according to Manik, Badiran, Muhamad Anto & Zulfanda, (2020), Based on the results of the study, it is known that the Infant Mortality Rate (IMR) is related to families who participate in family planning (p = 0.020), mothers give birth in health facilities (p = 0.024) , infants received complete basic immunization (p = 0.006), exclusive use (breastfeeding) (p = 0.038), under-five growth monitoring (p = 0.000). The results of this study are also related to the theory of Prawirohardjo S (2011: 56). the determinant factor is the intermediate determinant. That is caused by health status, reproductive status, access to health services and behavior or utilization of health services. This means that there are factors associated with infant mortality.[12]

According to Barep Adji Widhi Pangestu, Purhadi Purhadi, (2020), one of the efforts to reduce infant and maternal mortality is to continue to examine the factors causing it. This problem can be solved by using the Bivariate Gamma Regression method to determine the factors that influence the Infant Mortality Rate and Maternal Mortality Rate. The data used comes from the East Java Health Office in the form of the publication of the East Java Provincial Health Profile in 2017 and 2018. The variables that are thought to affect the Infant Mortality Rate and Maternal Mortality Rate are the percentage of deliveries by health workers, the percentage of obstetric complications treated, the percentage of babies born with birth weight. low, the percentage of poor people, and the percentage of married women under 17 years. In testing the similarities of the 2017 and 2018 BGR models, they produced different models. The factors found in the results of the study were related to MMR and IMR. Included in the outcome determinants in pregnancy complications (haemorrhage, infection, preeclampsia, obstructed labor). And others are included in the determinants, including the determinants of which are deliveries by health facilities. And it is also included in the far determinant factors including: the percentage of poor people and under the age of 17 years. [13] Undip, (2016), The results show that the implementation of the EMAS program in Brebes Regency in 2015-2016 has succeeded in reducing maternal mortality. However, overall it is not optimal because in 2016 when the EMAS Program ended, Brebes still topped the highest maternal mortality rate in Central Java. In addition, it also explains the factors that influence and impact the implementation of the EMAS Program in Brebes Regency in 2015-2016. In the future, the Brebes Regency government needs to pay attention to maternal and child

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health problems. Determination of supporting regulations for emergency handling of mothers and babies. Improving facilities and infrastructure in health facilities, in order to create better services. The results of the gold program activities have something to do with AKI and IMR, both direct and indirect impacts. In accordance with the theory of Prawirohardjo (2011: 59). It is said that maternal mortality and infant mortality can have three impacts, namely direct impacts: health services, medium impacts: nutrition, income, education and long-term impacts: women's status and women's empowerment. This impact also has something to do with MMR and IMR factors. Suwarni, Eny Widiarti, & Tri Sunarsih, (2010), Result: The majority of respondents (77.9%) are aged 20-35 years, the majority of respondents (41.2%) have junior high school education, the majority of respondents (47.1%) with secondipara parity, the majority of respondents (70.6%) are housewives, the majority of respondents (77.9%) obtain information from midwives, the criteria for the level of knowledge of respondents about danger signs of pregnancy are high (29.4%), moderate (67.6%) and low (2.9%). Conclusion: The average level of knowledge of pregnant women about the danger signs of pregnancy is moderate.[14]

Stikes Karya Cipta Husada, (2019), The results of bivariate analysis which are risk factors for the incidence of preeclampsia are parity (OR = 3,750), age (OR = 3,080), education (OR = 3,667), anemia status (OR = 1,196) while the examination visit Antenatal care (ANC) was not a risk factor for the incidence of preeclampsia (OR = 1,000) and LILA status was a protective factor against the incidence of preeclampsia (OR = 0.6478). This study recommends that pregnant women carry out routine and regular prenatal checkups to minimize the risk of preeclampsia. According to Prawihardjo (2011: the cause of maternal death or maternal death, one of which is due to pre-eclampsia or hypertension in pregnancy. So it is indirectly a determinant factor of unknown/unexpected factors, because pre-eclampsia is one of the complications in pregnancy. Which is one of the determinants of the outcome, which will cause death and disability for the mother and baby. [15]

According to Handayani, Kusumawardani Sri, & Anisa, (2018), the results showed that the risk factors associated with the incidence of infant mortality in Banjarnegara Regency were complications of childbirth, history of anemia, low birth weight, asphyxia, congenital abnormalities, and premature births. It is hoped that from the results of this study, health workers can prevent risk factors related to infant mortality by recommending and visiting pregnant women to perform timely and complete ANC including giving Fe tablets to mothers and monitoring them through MCH surveillance officers.

Based on the results according to Mutia, Sari Maya, (2018), the results obtained based on the results of the bivariate test can be seen that found 3 variables of infant factors that significantly influence perinatal mortality, namely congenital abnormalities, neonatal sepsis, birth trauma. Variables of maternal factors have a significant effect on perinatal mortality, namely antepartum bleeding, and premature rupture of membranes. Based on the results of the study, the authors suggest improving services health care for pregnant women and babies and provide more complete health facilities, especially for cases of pregnancy complications such as preeclampsia and eclampsia, premature rupture of membranes and antepartum hemorrhage and babies born with health problems such as infants with birth trauma, congenital abnormalities and neonatal sepsis and provide educating the community about the benefits of antenatal care visits, so that people are willing to make pregnancy visits at least 4 times during pregnancy to be able to find out early if there are pregnancy complications and can prevent pregnancy complications that can pose a risk to the mother and baby and reduce infant mortality.

17 The results of the study according to Wardani & Kania Ika Fatdo (2019), Low Birth Weight Incidence Bivariate analysis of maternal age has a relationship with P Value 0.000 P < 0.05 and OR 1.929 there is a match between theory and what is being studied, Parity has a relationship with P Value 0.000 P < 0.05 and OR 2.735 there is a match between theory and what is being studied, Pregnancy distance is related to P Value 0.003 P < 0.05 and OR 2.101 is a match between theory and what is being studied, Anemia is no relationship with P Value 0.002 P < 0.05 and OR 1.933 there is a match between theory and what is being studied, Education has a relationship with P Value 0.000 P < 0.05 and OR 8.727 there is a match between theory and what is being studied. The conclusion from the results of the study, the 5 variables studied (mother's age, parity, gestational distance, anemia, education) had a significant relationship with the incidence of Low Birth Weight (LBW). Mothers understand about the incidence of LBW, signs and symptoms as well as handling the occurrence of LBW so that it can prevent the next pregnancy. Suggestions for this study are for the public to know more and add insight into the delivery of mothers with LBW, its prevention and improvement, especially during pregnancy check-ups that are carried out in full through the provision of information on the importance of prenatal care.[18]

From several studies that have been discussed and juxtaposed with theory, both from several sources that have been described in the form of good journals obtained from Mendeley, Google Scholar and others. that there are several factors that are directly or indirectly related to maternal mortality and infant mortality rates in Indonesia, including maternal employment status, health costs, percentage of poor people, percentage of married women under 17 years of age, level of knowledge of respondents about danger signs pregnancy, education, ANC examination, health status, reproductive status, percentage of deliveries by health workers, families participating in family planning, access to health services and behavior or utilization of health services, anemia, and unknown/unexpected factors including eclampsia, percentage of obstetric complications treated, delivery complications, history of anemia, Low Birth Weight Babies. There are factors that cause maternal and infant mortality in the short, medium and long term which can cause maternal and infant mortality directly or indirectly.

CONCLUSION

a. several factors related to the incidence of MMR in Indonesia, namely:
   1. Remote determinants: maternal employment status and health costs, percentage of poor people, and percentage of married women under 17 years old, respondents' level of knowledge about danger signs of pregnancy, education
   2. determinants between: ANC examination, health status, reproductive status, percentage of deliveries by health workers, families participating in family planning, access to health services and behavior or utilization of health services, anemia
   3. unknown/unexpected factors: eclampsia, percentage of obstetric complications treated, delivery complications, history of anemia,
b. several factors related to the incidence of infant mortality in Indonesia, namely:
   1. Remote determinants: Mother's education, mother's employment status and health costs, percentage of poor people, and percentage of married women under 17 years of age, respondent's level of knowledge about danger signs of pregnancy, education
   2. determinant between: LBW,
   3. unknown/unexpected factors: eclampsia, asphyxia, congenital abnormalities, and premature birth

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Based on this information, the researcher concludes that there are several factors that are directly or indirectly related to the incidence of Maternal Mortality Rate and Infant Mortality Rate in Indonesia.

2. Suggestions

a. So that early detection is carried out routinely, to find out the factors that need to be addressed immediately. So that maternal and infant mortality can be prevented as early as possible
b. For pregnancy complications factors, immediately referred and intervened properly and correctly, so that it could be helped which ultimately decreased maternal and infant mortality.
c. For socio-economic and cultural factors, coordination and collaboration between government and private institutions is needed. Moving to provide education and counseling as well as providing financial compensation assistance to people in need.

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