FACTORS RELATED TO THE INCIDENCE OF ABORTION (INCOMPLETE/COMPLETE)

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ABSTRAK : FAKTOR - FAKTOR YANG BERHUBUNGAN DENGAN KEJADIAN ABORTUS (TIDAK LENGKAP / LENGKAP)

Latar Belakang: Kematian ibu akibat abortus seringkali tidak dilaporkan sebagai penyebab kematian ibu tetapi dilaporkan sebagai perdarahan atau sepsis. Abortus dapat terjadi secara tidak sengaja atau sengaja dan dapat dialami oleh semua ibu hamil pada usia kehamilan muda. Di negara berkembang, lima penyebab utama kematian ibu adalah perdarahan, sepsis, hipertensi karena kehamilan, abortus yang tidak aman, dan partus lama. Selain itu, penyebab kematian ibu terbanyak adalah perdarahan selama kehamilan sebesar 45,7%, hipertensi selama kehamilan sebesar 14,5%, dan infeksi sebesar 8%.

Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan usia ibu, paritas, dan status gizi dengan kejadian abortus (tidak lengkap/lengkap) di PONED (Pelayanan Obstetri Neonatal Emergensi Dasar), UPTD Puskesmas Karya Mukti Tahun 2020.

Metode: Penelitian survei analitik ini menggunakan pendekatan cross sectional. Analisis hubungan kausal antara kejadian abortus dengan identifikasi penyebab yang terdiri dari umur, paritas, dan status gizi dilakukan dengan cara mengukur atau mengamati dalam satu waktu. Populasi dalam penelitian ini adalah seluruh ibu hamil yang mengalami komplikasi kebidanan di wilayah kerja UPTD Puskesmas Karya Mukti tahun 2020 sebanyak 96 orang. Sampel dalam penelitian ini adalah sampel kasus yaitu 29 ibu hamil dengan komplikasi kebidanan yang melakukan aborsi. Untuk sampel kontrol, 65 ibu hamil dengan komplikasi kebidanan tidak mengalami aborsi.

Hasil: Dari uji statistik Chi-Square, variabel usia ibu mendapatkan p-value 0,047 (< = 0,05), variabel paritas memiliki nilai p-value 0,039 (< = 0,05), dan variabel status gizi. menghasilkan nilai p 0,005 (< = 0,05). Kesimpulannya, ada hubungan yang signifikan antara usia ibu, paritas, status gizi, dan kejadian abortus (tidak lengkap/lengkap).

Saran : Puskesmas PONED Karya Mukti diharapkan lebih aktif memberikan penyuluhan kepada ahli kebidanan terkait kejadian abortus (tidak lengkap/lengkap).

Kata kunci: Aborsi, paritas, usia ibu, status gizi

ABSTRACT

Background: Maternal death due to abortion is often not reported in the maternal death causes but is reported as hemorrhage or sepsis. Abortion can occur accidentally or intentionally and can be experienced by all pregnant women at a young gestational age. In developing countries, the five leading causes of maternal death are bleeding, sepsis, hypertension due to pregnancy, unsafe abortion, and obstructed labor. In addition, the most common causes of maternal death are bleeding during pregnancy at 45.7%, hypertension during pregnancy at 14.5%, and infection at 8%.

Purpose: This study aims to determine the relationship between maternal age, parity, and nutritional status and the incidence of abortion (incomplete/complete) at the PONED (Basic Emergency Neonatal Obstetric Service), UPTD Karya Mukti Public Health Center, in 2020.

Method: This analytical survey research used a cross-sectional approach. The causal relationship analysis between the incidence of abortion and the identification of causes, consisting of age, parity, and nutritional status, was carried out by measuring or observing at one time. The population in this study was all pregnant women who experienced obstetric complications in the UPTD Karya Mukti Public Health Center working area in 2020, with as many as 96 people. The sample in this study was a case sample, i.e., 29 pregnant women with obstetric complications who had abortions. For the control sample, 65 pregnant women with obstetric complications did not experience abortion.

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Results: From the Chi-Square statistical test, the maternal age variable got a p-value of 0.047 (< α = 0.05), the parity variable had a p-value of 0.039 (< α = 0.05), and the nutritional status variable resulted in a p-value of 0.005 (< α = 0.05). In conclusion, there is a significant relationship between maternal age, parity, nutritional status, and the incidence of abortion (incomplete/complete).

Suggestion: The PONED Karya Mukti Public Health Center is expected to be more active in providing counseling to midwifery experts related to the incidence of abortion (incomplete/complete).

Keywords: Abortion, parity, maternal age, nutritional status

INTRODUCTION

Abortion is the end of a pregnancy (by specific consequences). It usually occurs in pregnancies of less than 22 weeks or the fetus has been unable to live outside the womb with a fetal weight of fewer than 500 grams (Amelia, 2019).

According to Erlina (2018), incomplete abortion is defined as the expulsion of part of the results of conception/fertilization in pregnancy before 20 weeks, with some remaining in the uterus. Meanwhile, complete abortion (complete miscarriage) is an abortion in which the results of the conception/fertilization (decidua and fetus) come out entirely before 20 weeks of gestation. The characteristics of a complete abortion are vaginal bleeding, uterine contractions, the closing of the closed cervical ostium, the presence of tissue outside, the absence of remnants in the uterus, and a shrinking uterus.

Moreover, the probability presentation of the incidence of abortion is relatively high. About 15-40% of the incidence is known in mothers who have tested positive for pregnancy, and 60-70% of abortions occur before 12 weeks of gestation. Abortion results in bleeding or infection, embolism, vagal inhibition, and can even cause death. Therefore, maternal mortality due to abortion is often not reported as the cause of maternal death but as hemorrhage or sepsis. Abortion can also occur accidentally or intentionally and can be experienced by all pregnant women at a young gestational age. In developing countries, the five leading causes of maternal death are bleeding, sepsis, hypertension due to pregnancy, unsafe abortion, and obstructed labor. In addition, complications causing the most maternal death are bleeding in pregnancy at 45.7%, hypertension during pregnancy at 14.5%, and infection at 8% (Ministry of Health, 2015).

Based on the 2019 United Nations Fund for Population Activities (UNFPA) database indicator report, there were 32 deaths per 100,000 births. In 2019, specifically in South Sumatra, there were 17.55% of pregnant women with risk factors, including pregnant women with abortions. The maternal mortality rate (MMR) in South Sumatra was 142 deaths/100 thousand in 2017, 107 deaths/100 thousand in 2018, and 119 deaths/100 thousand in 2019. In OKU Regency, the number of maternal deaths in 2020 was as many as 12 people, of which three were caused by bleeding, two had preeclampsia, and the remaining seven were caused by other factors, including abortion (OKU Health Office, 2020).

From the initial observation results at the PONED (Basic Emergency Neonatal Obstetric Service), UPTD Karya Mukti Public Health Center, abortion data in 2020 revealed that there were 27 abortion patients from 96 pregnant women with obstetric complications handling.

Based on the above background, the researchers are interested in conducting a study titled "Analysis of Factors Related to the Incidence of Abortion (Incomplete/Complete) at PONED UPTD Karya Mukti Public Health Center in 2020."

RESEARCH METHODS

This analytical survey research used a cross-sectional approach. Analysis of the causal relationship between the incidence of abortion and the identification of causes, including age, parity, and nutritional status, was carried out by measuring or observing one time.

The population in this study was all pregnant women who experienced obstetric complications in the UPTD Karya Mukti Public Health Center working area in 2020, with as many as 96 people. According to Arikunto (2019), if the total population is less than 100 people, the sample should be taken as a whole (using the population).

The sample in this study consisted of case samples, i.e., pregnant women with obstetric complications who had abortions, as many as 29 people. In addition, the control sample comprised 65 pregnant women with obstetric complications who did not experience abortion. Bivariate analysis was then employed on two variables suspected to be related or correlated (Notoatmodjo, 2018).

RESEARCH RESULTS
Univariate Analysis

Table 1

Distribution of Frequency and Percentage of Abortion Incidents (Incomplete/Complete) at PONED, UPTD Karya Mukti Public Health Center in 2020

Abortion Incidents	Total (N)	Percentage (%)
Abortion	27	28.1
Not abortion	69	71.9

From Table 1 above, it can be seen that out of 96 respondents, 27 respondents (28.1%) experienced an abortion, and 69 respondents (71.9%) did not experience an abortion.

Table 2

Distribution of Frequency and Percentage by Maternal Age at PONED, UPTD Karya Mukti Public Health Center in 2020

Maternal Age	Total (N)	Percentage (%)
High risk	30	31.3
Low risk	66	68.7

Table 2 above shows that out of 96 respondents, 30 (31.3%) were at high risk, while 66 (68.7%) were at low risk.

Table 3

Distribution of Frequency and Percentage by Parity at PONED, UPTD Karya Mukti Public Health Public Center in 2020

Parity	Total (N)	Percentage (%)
High risk	57	59.4
Low risk	39	40.6

From Table 3 above, it can be observed that from 96 respondents, 57 respondents (59.4%) had high risk, and 39 respondents (40.6%) had low risk.

Table 4

Distribution of Frequency and Percentage by Nutritional Status at PONED, UPTD Karya Mukti Public Health Center in 2020

Nutritional Status	Total (N)	Percentage (%)
Chronic Energy Deficiency (CED)	51	53.1
Normal	45	46.9

Table 4 above reveals that of the 96 respondents, 51 respondents (53.1%) had chronic energy deficiency (CED) nutritional status, and 45 respondents (46.9%) had normal nutritional status.

Bivariate Analysis

Table 5

Frequency Distribution of Maternal Age Relationship with Abortion Incidence (Incomplete/Complete) at PONED, UPTD Karya Mukti Public Health Center in 2020

Maternal Age	Abortion				Total	Sig.	OR
	Yes	%	No	%			
High risk	13	43.3	17	56.7	30	0.047	2.840
Low risk	14	21.2	52	78.8	66		

Based on Table 5 above, it can be known that of the 30 respondents, 13 respondents (43.3%) were at high risk of having an abortion, and 17 respondents (56.7%) did not have an abortion.

The statistical test results revealed a significant relationship between maternal age and the incidence of abortion (incomplete/complete) with the chi-square test obtaining p-value = 0.047 ((> α = 0.05).

From the analysis, an OR value of 2.840 was also obtained. It indicates that respondents with high-risk age had a risk of 2.840 times experiencing abortion compared to low risk.

Table 6
Frequency Distribution of Parity Relationship with Abortion Incidence (Incomplete/Complete) at PONED, UPTD Karya Mukti Public Health Center in 2020

Parity	Abortion				Total	Sig.	OR
	Yes	%	No	%			
High risk	21	36.9	36	63.1	57	0.039	3.208
Low risk	6	15.3	33	84.6	39		

Table 6 above presents that of 57 respondents, 21 respondents (36.9%) had a high risk of having an abortion, and 36 respondents (63.1%) did not have an abortion.

Table 7
Frequency Distribution of Relationship between Nutritional Status and Abortion Incidence (Incomplete/Complete) at PONED, UPTD Karya Mukti Public Health Center in 2020

Nutritional Status	Abortion				Total	Sig.	OR
	Yes	%	No	%			
Chronic Energy Deficiency (CED)	21	41.2	30	58.8	45	0.005	8.000
Normal	6	13.3	39	86.7	17		

From Table 7 above, out of 51 respondents, 21 respondents (41.2%) with chronic energy deficiency (CED) nutritional status experienced an abortion, and 30 respondents (58.8%) did not undergo an abortion.

DISCUSSION

The statistical test results showed a significant relationship between maternal age and the incidence of abortion (incomplete/complete); with chi-square, p-value = 0.047 (> α = 0.05) was obtained.

This study is in line with the research conducted by Qori Armiza Septia et al. (in Tanjung Mulia Medan, 2019), which found a relationship between the age of pregnant women and the incidence of abortion, where the p-value was 0.018.

Similar results were also uncovered by Anita Dewi Lieskusumastuti (2016) at PKU Muhamadiyah General Hospital Delanggu Surakarta, in which there was a significant relationship between maternal age and the incidence of abortion; after statistical test, p-value = 0.000 < 0.005 was obtained. It is consistent with the theory that the risk of spontaneous abortion increases at age > 35 years by 26% and at age < 20 years by 12%, along with an increase in maternal age (Cunningham, 2009 in Yulita Elvira, 2018). Moreover, a significant relationship between maternal age and the incidence of spontaneous abortion is because couples of childbearing age still do not understand healthy reproductive age. Meanwhile, the negative effect of increasing maternal age on pregnancy outcomes can be assessed from decreased fertility, miscarriage, abnormalities, chromosomes,

complications of hypertension, and stillbirth. It is due to the fact that the older the mother will affect the function of the ovaries, where there will be fewer quality eggs, which results in chromosomal abnormalities resulting from conception, which in turn will be difficult to develop.

Based on the research results of Notiqatul Fatkhiyah et al. (in Qori Armiza et al., 2019) at RSUD Dr. Soeselo Slawi, Tegal Regency, the type of analytical method with a cross-sectional approach was used. Data analysis was performed univariate and bivariate with a chi-square test. The results obtained revealed mothers who experienced abortions based on age; 75% of respondents (30 mothers) had a risky age (age < 20 years and > 35 years), and 25% (ten mothers) had a healthy reproductive age (age 20-35 years). Also, the chi-square statistical test results obtained a p-value = 0.003 (> α = 0.05), meaning that there was a relationship between maternal age and the incidence of abortion.

Moreover, from the statistical test results, there was a significant relationship between parity and the incidence of abortion (incomplete/complete); with chi-square, p-value = 0.039 (> α = 0.05) was obtained. From the analysis, an OR value of 3.208 was also obtained, meaning that respondents with high-risk parity had 3.208 times the risk of having an abortion compared to low risk.

In line with the research results of Ruqaiyah et al. (2019) at the Bahagia Makassar General Hospital between parity and abortion, out of 69 people who experienced abortion as a case sample, there were 22 people with parity Grande multipara

and 47 people with parity primipara or multipara. Meanwhile, of the 69 people who did not experience abortion as a control sample, there were three people with Grande multipara parity and 66 people with primipara or multipara. From the chi-square statistical test results using the cross-sectional method, p-value = 0.000 < α = 0.05 was obtained. Thus, H0 α was rejected, and Ha was accepted, denoting a significant relationship between parity and the incidence of abortion at the Bahagia Makassar General Hospital.

Agree with Eka Yuli Handayani's (2015) research at the Rokan Hulu Regency General Hospital, and the study was analytic with a cross-sectional design. It revealed that the abortion incidence was higher in pregnant women with parity at risk, which was 30.8%, compared to pregnant women with parity without risk. Statistical test results also obtained p-value = 0.000 < α = 0.05. Therefore, it can be seen that there was a relationship between parity and the incidence of abortion at the Rokan Hulu District Hospital in 2015.

Also, in accordance with Lydia Mardinson's (2018) research at Puskesmas IV, Koto Sub-district, Agam Regency, the incidence of abortion was higher in pregnant women with parity at risk with 18.6% compared to pregnant women with no parity at risk. In addition, the statistical test results obtained a p-value of 0.278 (> 0.05), meaning that there was a significant relationship between the number of parity and the incidence of abortion.

Furthermore, the statistical test results revealed a significant relationship between nutritional status and the incidence of abortion (incomplete/complete), with the chi-square having a p-value value of 0.005 (< α = 0.05). From the analysis, an OR value of 4.550 was also obtained, indicating that respondents with CED had 4.550 times the risk of having an abortion compared to normal nutritional status.

Based on research conducted by Eni Subiastutik (2017), the results of the research data analysis were obtained, showing the relationship between chronic energy deficiency (CED) and the incidence of abortion in RSD dr. Soebandi Jember in 2016. CED causes the growth of uterine organs that are not good, one of which is the growth of the endometrium, resulting in the conception results not being able to implant properly, which in turn will affect the fetus's growth and development in the womb. In addition, the condition of pregnant women with CED is an inhibiting factor for fetal development. In the pre-embryonic stage, if the mother experiences CED, it can cause developmental imperfections in the fetus so that the baby has chromosomal abnormalities. This chromosomal abnormality occurs during the fertilization process, which results in the fertilization

result (embryo) being deformed and coming out in the form of a miscarriage (Bunga Astria, 2019). Pregnant women with nutritional and health problems also impact the health and safety of mothers and babies and the quality of babies born. Besides, the condition of pregnant women with CED can affect the process of fetal growth, so they are at risk of causing abortion (miscarriage), premature birth, congenital disabilities, low birth weight babies (LBW), and even infant death (Kemenkes RI, 2015). In this case, abortion is the end of a pregnancy (by inevitable consequences) at or before the pregnancy is 22 weeks old or the fetus has not been able to live outside the womb (Saifuddin et al., 2010). Abortion can influence the occurrence of complications, such as bleeding, perforation, infection in the uterus and adnexa (infection in the uterus and adnexa can occur in every abortion but is usually found in incomplete abortions that are closely related to unsafe abortions), and shock (in abortion, it can occur because of bleeding and due to severe infection (Maryunani in Susana Dyah, 2020).

Consistent with the research results of Susana Dyah Madumurti, Evi Rosita, and Sri Sayekti, it was explained that pregnant women who did not abort were most commonly found in pregnant women who did not experience CED, namely 33 respondents (91.7%). Meanwhile, the incidence of abortion was most often found in pregnant women who experienced CED, i.e., nine respondents (36%). Then, from the Fisher's Exact Test statistical test results, it was obtained a significant value of degree 8 with ρ (0.010) < α (0.05), so H1 was accepted. It indicates a relationship between chronic energy deficiency in pregnant women and the incidence of abortion in the Kedung Adem Public Health Center working area, Bojonegoro Regency, in 2020. The study's results show that the incidence of abortion was most commonly found in pregnant women who experienced CED. On the other hand, pregnant women who did not abort were most commonly found in pregnant women who did not experience CED. It signifies that pregnant women who experience chronic energy deficiency have a higher risk of abortion. This situation is in accordance with the theory, suggesting that the condition of pregnant women with CED is a factor inhibiting fetal development so that the baby has chromosomal abnormalities. This chromosomal abnormality occurs during the fertilization process, which results in the fertilization result (embryo) being deformed and coming out in the form of a miscarriage (Madumurti, 2020).

Further, pregnant women with nutritional and health problems also impact the health and safety of mothers and babies and the quality of babies born.

Besides, the condition of pregnant women with CED can affect the process of fetal growth, so they are at risk of causing abortion (miscarriage), premature birth, congenital disabilities, low birth weight babies (LBW), and even infant death (Kemenkes RI, 2015). In addition, abortion can influence the occurrence of complications, such as bleeding, perforation, infection in the uterus and adnexa (infection in the uterus and adnexa can occur in every abortion but is usually found in incomplete abortions that are closely related to unsafe abortions), and shock (in abortion, it can occur because of bleeding and due to severe infection (Maryunani A 2013). Moreover, the condition of pregnant women with CED is an inhibiting factor for fetal development. In the pre-embryonic stage, if the mother experiences CED, it can cause developmental imperfections in the fetus so that the baby has chromosomal abnormalities. This chromosomal abnormality occurs during the fertilization process, which results in the fertilization result (embryo) being deformed and coming out in the form of a miscarriage (Bunga Astria, 2019). The results of this study agree with research conducted by Eni Subiastutik (2017), in which the results of the research data analysis were obtained, showing the relationship between chronic energy deficiency (CED) and the incidence of abortion in RSD dr. Soebandi Jember in 2016. CED causes the growth of uterine organs that are not good, one of which is the growth of the endometrium, resulting in the conception results not being able to implant properly, which in turn will affect the fetus's growth and development in the womb.

CONCLUSION

There is a significant relationship between maternal age, parity, nutritional status, and the incidence of abortion (incomplete/complete).

SUGGESTION

This study can be used as input to improve health services, especially the handling of abortion incidents (incomplete/complete) at the UPTD Karya Mukti Public Health Center.

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