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Determinants of Abortion in the Pandeglang District General Hospital

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ABSTRACT

Abortion results from excessive bleeding due to cervical dilatation. Abortion is a threat or release of the results of conception before the fetus can live outside the womb of gestational age less than 20 weeks. In Indonesia the maternal mortality rate (MMR) in Indonesia is one of the highest in Southeast Asia, which is 228 per 100,000 live births. This research is to find out the determinants of the incidence of abortion in the Regional Hospital of Berkah Pandeglang . This type of research is quantitative analytic with a case control design with a ratio of 1: 1, using medical record data. The study population was all pregnant women in the Hospital of Berkah Pandeglang in 2019 namely 862, in the case of a population of 193 mothers who experienced abortion in 2019, the control population of mothers who did not experience abortion 669 in 2019. Sampling using a total sampling technique was obtained 193 and control samples using systematic random sampling that is 193. Analysis using univariate, bivariate with chi square test and multivariate with multiple logistic regression tests. The results of bivariate analysis obtained variables related to the incidence of abortion, namely age, parity, distance of pregnancy, education, history of abortion. Multivariate analysis results obtained a dominant variable, namely the distance of pregnancy with OR 5.114 after being controlled with parity, education, and history of abortion.

Keywords:

Pregnant, Women, Abortion

1. INTRODUCTION

Problem largest in developing countries moment This including in Indonesia namely death and pain Mother pregnant nor childbirth that is about 25-50%. Death rate mother (AKI) is a barometer of service health mother in a country. If numbers death mother (AKI) still tall so service For health Mother can interpreted Not yet good and vice versa If number low maternal mortality so service For health Mother Already good (Ministry of Health, RI, 2010).

From statistical data number death mother (AKI) in Indonesia one the highest in Southeast Asia, namely 228 per 100,000 births life (Ministry of Health RI **,** 2015). In 2015 figures death mother (AKI) 305 deaths mothers per 100,000 births life based on results Survey Resident Between Census (SUPAS) [4].

Death Rate Mother based on report routine District / city Health Profile 2016 recorded namely 799 people (84.78/100,000 KH), with proportion deaths in pregnant women 227 people (20.09/100,000), in childbirth 202 people (21.43/100,000 KH), and in postpartum mothers , 380 people (40.32/100,000 KH **),** (Provincial BPS West Java in 2016). Whereas according to Banten Provincial Health Office numbers death mothers (AKI) in Banten throughout In 2014 it reached 230 cases and cases Maternal deaths in 2015 occurred 48 cases in the district Pandeglang.

According to Sri Wahyuni's research (2016), regarding Factor associated risks with spontaneous abortion at home Sick Regional General Hospital (RSUD) Ungaran in Central Java that influential history of abortion to abortion with the result of P value < 0.05. On research Jernita Megawati (2015) about factors reason spontaneous

abortion at home Sick Center General Dr. Mohammad Hoesin Palembang who is in touch with spontaneous abortion that age mother and parity with results p-value < 0.05. Riskesdas 2010 shows abortion rate in Banten province about 5.7% and is one province highest that is, in position fifth throughout Indonesia [4].

Study Results introduction based on information from record medical that origin reference experienced abortion cases enhancement from 2016 to 2018. Following is amount number incidence of abortion in Berkah Hospital Pandeglang amounted to 14 % in 2016 , in 2017 amounted to 15 % and in 2018 amounted to 27 % , this interesting For lifted as problem because in Banten province there are still cases of abortion high.

2. METHOD

Draft research used *quantitative analytics* with design *case control* with ratio 1:1, with using record data medical . Population study is whole Mother pregnant at Berkah Hospital Pandeglang in 2019 that is 862, population cases of 193 mothers who had abortions in 2012 2019 , population control mother who doesn't experienced abortion 669 in 2019. Retrieval sample case use technique *total sampling* obtained 193 and control samples use *systematic random sampling* that is 193 . Data processing using univariate , bivariate using chi square and multivariate regression logistics double with (α<0.05).

RESULTS AND DISCUSSION

Table 1
Distribution Mother according Age , Parity , Pregnancy Distance , Abortion Education and History with the incidence of abortion at the Berkah Pandeglang Hospital

Variable Independent	Case		Control		*P Value*	OR (95% CI)
	n (193)	%	n (193)	%		
Age						
No At risk (20 – 35 years)	91	47.2%	124	64.2%	0.001	2.014 (1.339 -3.029)
At risk (< 20 years and > 35 years)	102	52.8%	69	35.8%		
Parity	89	46.1%	130	67.4%	0.000	2,411 (1.595-3.645)
No At risk (≤ 4x)						
risky (> 4x)	104	53.9%	63	32.6%		
Pregnancy Distance	73	37.8%	125	64.8%	0.000	3,022 (1,996 – 4,574 **)**
No At risk (≥ 2 years)						
At risk (< 2 years)	120	62.2%	68	35.2%		
Education						
Tall (≥ SMA)	102	52.8%	130	67.4%	0.005	1,841 (1.218 – 2.782 **)**
Low (< high school)	91	47.2%	63	32.6%		
Abortion history	76	39.4%	107	46.6%	0.002	1,915 (1.278 – 2.871 **)**
No (No had an abortion)						
Yes (Having repeated abortions)	117	60.6%	86	53.4%		

Multivariate Analysis

Variables in the Equation

		B	SE	Wald	df	Sig.	Exp(B)	95% CI for EXP(B)	
								Lower	Upper
Step 1 [a]	Parity	1,284	,247	26,914	1	,000	3,610	2,223	5,864
	DistancePregnancy	1,632	,251	42.155	1	,000	5,114	3.125	8,369
	Education	,986	,247	15,930	1	,000	2,680	1,652	4,349
	HistoryAbortion	1.016	,239	18,096	1	,000	2,761	1,729	4,408
	Constant	-7,192	,912	62,264	1	,000	,001		

Relationship between Age and Abortion Incidence

The results of the analysis in table 1 obtained age risky tall For experiencing abortion in aged mothers (< 20 years and > 35 years) of 52.8 % while age mother who doesn't risky by 35.8%. *Chi square* test results obtained the p value *is* 0.001 , so that can concluded that There is significant relationship between age Mother with abortion with OR value of 2.014 means age risky 2.014 times more likely big compared with age mother who doesn't risky high .

this in accordance with Elisa's research (2017) is known age at -risk mother high 70% with p *value* = 0.001 so can concluded There is meaningful relationship between age Mother with the incidence of abortion and the OR value of 4.84 which means mother who has age at risk (< 20 years and > 35 years) have odds of 4.84 times for experience abortions were compared with Mother with no age risk and payoff Nuri's research (2017) shows that of 260 respondents part big are of age reproduction healthy (20-35 years) ie as many as 194 people (74.6%) meanwhile age <20 years and >35 years found as many as 66 people (25.4%). on analysis bivariate show that factor age proven own contribution abortion with mark significant p-value = 0.000 <0.05 and Odds Ratio (OR) value of 4.021 (95% CI: 2.161-7.483), with thereby so mothers aged <20 and > 35 years own risk 4.021 times more big experienced an abortion compared with aged mother reproduction Healthy that is age between 20-35 years .

existing theory in Elisa (2017), with pregnancy at age <20 years in a manner biological tool reproduction Not yet function with perfect and yet Ready For accept results conception . Besides that is , strength perineal muscles and muscles stomach Not yet Work optimally . Whereas pregnancy at age ≥35 years , physiological process body Already experience decline . Height age Mother responsible responsible for production progesterone that doesn't adequate and things This cause production pregesterone by the corpus luteum does not adequate For maintain implantation.

According to Jernita (2017) Pregnant women aged < 20 years and >35 years risky consequence uterus and pelvis mothers aged < 20 years Not yet grow reach size mature so that when happen pregnancy and childbirth will more easy experience incident complications including abortion and at older ages from 35 years obstetric organs Already old so that easy happening complications pregnancy and numbers incident abnormality chromosomes too increase . Besides it , p This because happening marriage at age not enough from 20 years or wedding early consequence circumstances social culture in a still environment allow For married at age young or under age , and in married women late cause Lots Woman tend pregnant at age old.

According to researcher woman aged pregnant not enough from 20 years can harm health Mother nor growth and development fetus Because Not yet ripe tool reproduction For pregnant.

The relationship between parity and the incidence of abortion

The results of the analysis in table 1 obtained Mother with parity (>4x) is at risk tall For experienced an abortion of 53.9% while in the group mother who doesn't risky by 32.6%. *Chi square* test results obtained p value *0.000* , so that can concluded that There is significant relationship between parity with abortion with the OR value is 2.4 times the mean parity risky 2.4 times more likely big For experience abortion compared parity that is not risky.

this in accordance with study Jernita (2017) at the DR . Mohammad Hoesin Palembang , the results of the chi squarer statistical test obtained p *value* = 0.001 (p <0.05) so that can concluded There is meaningful relationship between parity with the incidence of abortion and the OR value of 10.2 which means parity risk tall 10.2 times more likely big For experience abortions were compared parity of respondents risk low and yield study lu'ul (2014) in Home Sick the Islamic Sultan Agung of Semarang as indicated by the chi square test p = 0.021 where p- value < 0.05. In study this , parity Mother pregnant is factors that have risk to abortion , p the showed with (OR=3,000) meaning respondent with parity risk tall have risk had an abortion 3 times compared parity of respondents risk low .

Risk of spontaneous abortion the more increase with increase parity and age mother . Research in London stated that pregnancy First have higher risk of abortion tall than pregnancy second and third . However , the risk of abortion returns increase after pregnancy fourth . So are the results research in Palembang which shows that there is meaningful relationship between parity with abortion incident . A frequent mother give birth to have risk health and also for health his son . this risky because of the mother can arise damage damage to the vessels blood affected uterine wall circulation nutrition to fetus . Frequent abortions occurs in pregnancy First is Because factor physique

or any reason social Not yet Ready own child Lu'ul (2014). in pregnancy womb Mother stretched by existence fetus . If too often give birth , uterus will the more weakened . When mother has gave birth to 4 children or more , then need watch out exists interruption at time pregnancy , childbirth and puerperium . Risk of spontaneous abortion increase along with parity mother (Kenneth J. Leveno et all, 2009).

According to Researcher parity more from four own risk Because parity the cause Mother experience decline from facet function tool reproduction and physique For undergo her pregnancy.

Connection Pregnancy Distance with Abortion incident

The results of the analysis in table 1 obtained Mother with distance pregnancy at risk (< 2 years) at risk tall For experienced an abortion of 62.2% while at a distance pregnancy No at risk (≥ 2 years) of 35.2%. *Chi square* test results obtained p value *0.000* , so that can concluded that There is significant relationship between distance pregnancy (<2 years) with abortion with OR value 3.022 times the mean distance pregnancy risky chance 3.022 times more big For experienced an abortion compared distance pregnancy that is not at risk (≥ 2 years).

this in accordance with Nuri's research (2017) at Jend . Ahmad Yani Metro, results analysis bivariate obtained mark significance *p-value* = 0.000 < 0.05, then in a manner statistics there is connection between distance pregnancy with abortion incident . On results analysis is also obtained mark *Odds Ratio (OR)* of 3.955 (CI; 95%: 2.354-8.556), with thereby so mother who has distance pregnancy <2 years risk 3.955 times more big experienced an abortion compared with mother who has distance pregnancy ≥ 2 years and according Rika's research (2016) at Tangerang Hospital from statistical test results obtained p value 0.001 can concluded There is connection distance pregnancy with abortion with OR value of 3.5 (95% CI 1.795 – 6.824) means Mother with distance pregnancy at risk (< 2 years) 3.5 times more likely big For experience abortions were compared with distance pregnancy that is not risky.

this in accordance with theory Astuti (2017) A distant pregnant woman pregnancy with child the smallest < 2 years . Will cause Lots risk Because health body and uterus Mother Still need Enough Rest For experience pregnancy next . Pregnancy spacing too near will influence recovery , can raises damage system reproduction or postpartum problems . [8].

According to researcher distance pregnancy is distance between labor with pregnancy next . Pregnancy spacing too meetings (< 2 years) more risky compared pregnancy ≥ 2 years . this caused Because in a manner anatomical woman need time For restore health and adequate nutrition . A woman giving birth return with short distance from pregnancy previously will give bad impact to condition mother and baby . this because form and function of the reproductive organs Not yet return with perfect , so function will disturbed .

There is role officer health in effort enhancement related use tool contraception For arrange distance ideal pregnancy , of course expected cooperation between cadre in each area too, as well role member family closest that is husband in support Mother in a manner active follow the family planning program to achieve distance ideal pregnancy i.e. ≥ 2 years.

Connection Education with Abortion Incidents

The results of the analysis in table 1 obtained that mothers who had abortions were 47.2% with education low (< SMA) whereas mother who doesn't experienced an abortion of 32.6% with education high (≥ SMA). *Chi square* test results obtained p value *0.005* , so can concluded that There is significant relationship between education Mother with abortion with the OR value is 1.841 times the mean Mother with education low level (< SMA) has a chance of 1.841 times more big For experienced an abortion compared educated mother high (≥ SMA). this in accordance with research Astrid (2014) that statistical test results with the *chi square* test showing exists meaningful relationship between level education patients who had an abortion with p = 0.003 (p ≤ 0.05).

this in accordance with theory Prawirohardjo (2008), someone who is educated tall will more easy accept information health from various media and usually will more look for information sufficient health especially in mothers pregnant . Generally mothers who have had abortions education 1 -9 years and allows on education . The incidence of abortion in educated women more low more Lots Because in a manner theoretical woman educated tall tend more notice health himself and his family . Education will too influence pattern think somebody in obtain and receive information , so ability Mother in think rational in determine ideal age for pregnancy and childbirth as well child .

According to researcher educated mother will influence knowledge and concern somebody to something information danger pregnancy as well as concern somebody about maintenance pregnancy .

Connection History of Abortion with Abortion Incidents

Analysis results obtained experiencing mother history of recurrent abortion risky tall For experienced an abortion of 60.6% while the mothers who did not had an abortion of 44.6. *Chi square* test results obtained p value *0.002* , so can concluded that There is significant relationship between history of abortion (having repeated abortions) with abortion with the OR value is 1.915 times the mean history of abortion (having repeated abortions) has a 3.022 times more chance big For experienced an abortion compared history of abortion without Once have an abortion.

this in accordance with Elisa's research (2017) at Temanggung Hospital , results analysis bivariate performed on variables free history of abortion shows that in a manner statistics age Mother is factor risk Spontaneous abortion , p This showed from results analysis obtained bivariate $p = 0.001 < 0.05$. Based on results analysis is also obtained OR value of 5.727 at 95% *confidence interval* . this show that risk of spontaneous abortion in mothers who have history of abortion is is 5 times more big compared to mother who doesn't own history of abortion and according to Sri's research (2017) results of the p-value analysis of Kruskal Wallis obtained 0.022 <α (0.05). This It means There is connection history of abortion abortion in Ungaran Hospital .

this in accordance with previous research by Masitoh (2013) where obtained results Mother with history of abortion own proportion as much as 55.6% for have an imminent abortion . After tested with the chi square statistic it turns out obtained p value = 0.004 (p value <0.005) so can concluded that there is connection between history of abortion with In the event of imminent abortion , history of abortion has a risk of 4.2 times > large from mother who doesn't own history of abortion.

this in accordance with theory Prawirohardjo (2009) history of abortion, especially in abortion patients is predisposition recurrent abortions . From several studies show that after 1 partner abortion have 15% risk for experience miscarriage again and when been 2 times, the risk an increase of 25%. A number of studies foresee that risk of abortion after 3 consecutive abortions is 30 – 45%. Mother who has history labor for example 3 times abortion or more ordinary called habitual abortion . With often abortion occurs will experiencing repeated abortions (Astuti , 2017).

History of abortion shows that condition less uterus Good or exists abnormalities in pregnancy before , p This will risky had an abortion during pregnancy next when No handled with ok . History of abortion most related factors with imminent abortion because mother who has own experience experience previous abortion so that know signs and symptoms of abortion and more be careful , moment Mother experience sign of the abortion Mother will hurry up come to power health For check pregnancy , so arrived at the facility health diagnosis Mother is imminent abortion or threatening (Sri, 2017).

According to researchers , there are connection history of abortion with abortion at Pandeglang Hospital possibility No caused by one factor only , but by some factors , among others age growing mother increase moment pregnancy next and also without wait condition tool reproduction recover return like beginning resulted risk pregnancies that cause abortions.

3. CONCLUSION

Associated variables with incident abortion that is , age mother , parity , interval between pregnancies, education and history of abortion. Variables relate dominant with abortion is distance pregnancy with OR value of 5.114 (95% CI 3.125 – 8.369) means Mother with distance pregnancy at risk (<2 years) likely had an abortion 5.11 times more tall compared to Mother with distance pregnancy No at risk (≥ 2 years), after controlled with parity , education , and history of abortion.

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REFERENCES

[1] Astuti , Asri. 2017. *Upbringing Mother in pregnancy* . Bandung: PT Gelora Script Primary

[2] Elisa, diyah , 2017. *Factors risk spontaneous abortion* , http://journal.unnes.ac.id/sju/index.php/higeia Accessed January 24 , 2019

[3] Ministry of Health , 2010. Basic Health Research 2010. Accessed from kesga.kemkes.go.id/image/guidelines/2010 national risksdas.pdf

[4] Ministry of Health , 2015. *Indonesia Health Profile 2015.* http://www.depkes.go.id/resources/download/pusdatin/profil-kesehatan-indonesia/profil-kesehatan-indonesia-2015.pdf accessed 25 January 2019

[5] Lu'lul Maghni , 2015. *Factors risk home abortion Sick Islamic Sultan Agung of Semarang).* https://jurnal.unimus.ac.id/index.php/jkmi/article/download/2374/2347 accessed 25 January 2019

[6] Nuri, l uthfiati . 2017. *Relationships age and distance pregnancy with incident abortion.* http://jurnal.akperdharmawacana.ac.id/index.php/wacana/article/view/41 accessed January 25 , 2019

[7] Prawirohardjo , Sarwono. 2008. *Knowledge Midwifery* . Yogyakarta : Bina Foundation

[8] Prawirohardjo , Sarwono. 2009. *Knowledge Midwifery* . Yogyakarta : Bina Foundation

[9] Harahap, Meilani & Pulungan, Nikmatul & Hasibuan, Ennysah. (2022). The Determinants of Behavior of HIV Testing in Pregnant Mothers. International Journal of Public Health Excellence (IJPHE). 1. 21-26. 10.55299/ijphe.v1i1.5.

[10] Siregar, Rahmah & Nasution, Lisna. (2022). Promotion the Dangers of Smoking in Adolescents at SMAN 8 Padang Sidempuan in 2022. International Journal of Community Service (IJCS). 1. 233-236. 10.55299/ijcs.v1i2.282.
[11] Siregar, Rahmah & Harahap, Maryam. (2022). Factors Affecting Couples of Reproductive Age (CRA) Without Using Contraception. International Journal of Public Health Excellence (IJPHE). 2. 385-388. 10.55299/ijphe.v2i1.286.
[12] Suryani, Elvi & Harahap, Maryam & Siregar, Rahmah. (2022). The Relationship of Learning of ASKEB II Course Practicum Laboratory With the Achievement of Level II Students' Competence. International Journal of Public Health Excellence (IJPHE). 1. 105-109. 10.55299/ijphe.v1i2.41.
[13] Ismi Noer Faridah. (2022). Racinality of NSAID Use on Osteoathritis Patients in the Army Hospital of Pematang Siantar. *International Journal of Public Health Excellence (IJPHE)*, *1*(2), 192–197. https://doi.org/10.55299/ijphe.v1i2.195
[14] Riada Marenny Pasaribu. (2022). Analysis Satisfaction Patient Treat Inap In dr. Saragih Djasamen Hospital Pematang Siantar. *International Journal of Public Health Excellence (IJPHE)*, *1*(2), 184–187. https://doi.org/10.55299/ijphe.v1i2.135
[15] Nour Sriyanah, Suradi Efendi, & Sri Mulyani. (2022). Description of the Characteristics of Parents on the Level of Anxiety of Parents whose Children are Cared for in the PICU Room of Dr. Wahidin Sudirohusodo Hospital Makassar. *International Journal of Public Health Excellence (IJPHE)*, *2*(1), 376–384. https://doi.org/10.55299/ijphe.v2i1.277
[16] Rahmatika, N & Sakti, S & Boediarto, A. (2021). Women empowerment in post- disaster recovery after 2018 tsunami in Sumur Regency Pandeglang District. IOP Conference Series: Earth and Environmental Science. 708. 012072. 10.1088/1755-1315/708/1/012072.
[17] Sapto Nugroho, Kandung & Rahayu, Rahayu & Adnan, Muhammad & Warsono, Hardi. (2020). Model Structure Of Public Policy Based On Social Learning Onto Intolerant In Pandeglang District, Banten, Indonesia. ijd-demos. 2. 10.37950/ijd.v2i2.53.
[18] Malik, Abdul & Putri, Liza. (2020). Persuasive Communication in a Healthy Lifestyle Campaign in Pandeglang District (Case Study of Arisan Jamban Program). ijd-demos. 2. 10.37950/ijd.v2i2.62.
[19] Mujiyanto, Mujiyanto & Sugianti, Yayuk & Rahayu, Risnawati & Afandy, Yusuf & Budikusuma, R. & Nastiti, Adriani & Syam, Amran & Purnamaningtyas, Sri. (2021). Reef fish community structure in the islands of Paraja Bay, Pandeglang District, Banten, Indonesia. Biodiversitas Journal of Biological Diversity. 2. 4402-4413. 10.13057/biodiv/d221033.
[20] Tesema, Getayeneh & Mekonnen, Tesfaye & Teshale, Achamyeleh. (2020). Spatial distribution and determinants of abortion among reproductive age women in Ethiopia, evidence from Ethiopian Demographic and Health Survey 2016 data: Spatial and mixed-effect analysis. PLOS ONE. 15. e0235382. 10.1371/journal.pone.0235382.
[21] Appiah-Agyekum, Nana Nimo & Sorkpor, Constance & Ofori-Mensah, Samuel. (2014). Determinants of abortion decisions among Ghanaian university students. International journal of adolescent medicine and health. 27. 10.1515/ijamh-2014-0011.
[22] Wilder, Esther. (2000). Socioeconomic and Cultural Determinants of Abortion Among Jewish Women in Israel. European journal of population = Revue européenne de démographie. 16. 133-62. 10.1023/A:1006351225920.
[23] Pacheco, Julianna & Kreitzer, Rebecca. (2015). Adolescent Determinants of Abortion Attitudes. Public Opinion Quarterly. 80. nfv050. 10.1093/poq/nfv050.
[24] Swain, Prafulla & Jena, Anmol & Priyadarshini, Subhadra. (2021). An Analysis of Trend, Pattern, and Determinants of Abortion, Miscarriage, and Stillbirths in Odisha, India. Wārasān prachākṣn læ sangkhom = Journal of population and social studies. 29. 223-234. 10.25133/JPSSv292021.014.
[25] Gilano, Girma & Hailegebreal, Samuel. (2021). Determinants of abortion among youth 15–24 in Ethiopia: A multilevel analysis based on EDHS 2016. PLOS ONE. 16. e0248228. 10.1371/journal.pone.0248228.