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DETERMINANTS OF UNINTENDED PREGNANCY AMONG MARRIED WOMEN AGED 15-49 YEARS IN EAST JAVA

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ABSTRACT

The percentage of Unintended Pregnancy or *Kehamilan Tidak Diinginkan* (KTD) in Indonesia is still 17.5%. East Java contributed for 14.6% of cases of KTD during 2019. The increase in fertility rates and maternal mortality cases in Indonesia is partly due to KTD. This study will analyze the determinants of the incident of KTD in women of childbearing age or *Wanita Usia Subur* (WUS) in East Java. This study is a non-reactional study with a Cross-sectional design using data on the Program Performance and Accountability Survey (PPAS) for Family Planning and Family Development Program (KKBPK) 2019. Sample in this study were 2,650 married WUS with ages 15-49 years. Secondary data were analyzed using multiple logistic regression tests. Some factors that determine the incidence of unintended pregnancy include mother's age (p=0.000), age of first marriage or *Usia Kawin Pertama* (UKP) (p=0.004), number of living children (p=0.000), welfare level (p=0.004), residence (p=0.043), knowledge of contraception (p=0.022), history of contraceptive use (p=0.001), access of information (p=0.000), and family planning decisions (p=0.003). Meanwhile mother's education (p=0.998), mother's occupation (p=0.362), and insurance ownership (p=0,750) did not affect the case of KTD in East Java. New policies and innovations that are more targeted are needed so that prospective acceptors receive contraceptive services easily and affordably so as to reduce the number of KTD. Optimizing the role of the Family Planning Field Officer or *Petugas Lapangan Keluarga Berencana* (PLKB) to increase the rate of the use of modern contraceptives in East Java.

Kata Kunci:
Kehamilan Tidak Diinginkan (KTD), wanita kawin, kontrasepsi, kebijakan

ABSTRAK

Persentase kejadian Kehamilan Tidak Diinginkan (KTD) di Indonesia masih di angka 17.5%. Jawa Timur menyumbang 14.6% untuk kasus KTD selama kurun waktu 2019. Peningkatan angka fertilitas dan kasus kematian yang dialami ibu di Indonesia penyebab salah satunya oleh KTD. Tujuan penelitian ini untuk menganalisis faktor penentu kejadian KTD pada Wanita Usia Subur (WUS) di Jawa Timur. Penelitian ini menggunakan penelitian nonreaksional dengan desain cross sectional menggunakan data Survei Kinerja dan Akuntabilitas Program (SKAP) Kependudukan, Keluarga Berencana dan Pembangunan Keluarga (KKBPK) 2019. Sampel pada penelitian ini sejumlah 2.650 wanita kawin usia 15-49 tahun. Data sekunder dianalisis dengan uji regresi logistik ganda. Beberapa faktor yang menentukan kejadian KTD, diantaranya usia ibu (p=0.000), usia kawin pertama (p=0.004), jumlah anak hidup (p=0.000), tingkat kesejahteraan (p=0.004), tempat tinggal (p=0.043), pengetahuan KB (p=0.022), riwayat pemakaian KB (p=0.001), akses informasi (p=0.000), dan pengambilan keputusan KB (p=0.003). Sedangkan pendidikan ibu (p=0.998), pekerjaan ibu (p=0.362) dan kepemilikan asuransi (p=0.750) tidak berpengaruh terhadap kasus KTD di Jawa Timur. Diperlukan kebijakan dan inovasi baru yang lebih tepat sasaran agar para calon akseptor mendapatkan layanan kontrasepsi dengan mudah dan terjangkau sehingga mampu menekan angka kejadian

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INTRODUCTION

One of the bases of country's development is determined by the population aspect. The rate of population growth in the last two decades has triggered demographic changes that have an impact on the economy and society (1).The Indonesian Population Demographic Survey shows that the fertility rate in Indonesia in 2017 is still at 2.4. This means that a woman from birth to death is able to give birth to an average of two to three children (2). This is supported by data from the Program Performance and Accountability Survey (PPAS) in 2019 which showed an increase in the average birth rate from 2.38 in 2018 to 2.45 in 2019 for fertile women in the age range of 15 to 49 years. The target of reducing the Total Fertility Rate (TFR) to 2.28 in the 2015-2019 National Medium-Term Development Plan or *Rencana Pembangunan Jangka Menengah Nasional* (RPJMN) has not been realized so far. This condition is also exacerbated by the Contraceptive Prevalence Rate (CPR) which has not yet reached the 2019 RPJMN target, which is 54.97% from 61.3%. This condition is in line with the increase in the number of EFA needs for unmet need, which is 12.1%, even though the target for reducing unmet need should be 9.1%, in 2019. The results of the 2012 IDHS data analysis showed that contraceptive failure was more common in users of non-Long Acting Reversible Contraceptive Method (LARC). Most occur in users of pills, condoms, injections, and birth control implants. This means that many contraceptive failures occur in women who use contraceptives that require a high level of consistency in their use (3).

The government's failure in efforts to reduce unmet need, the increase in the TFR rate, the failure to increase the achievement of family planning participation in couples of childbearing age or *Pasangan Usia Subur* (PUS) make unwanted pregnancies or *Kehamilan Tidak Diinginkan* (KTD) unavoidable. The KTD rate in Indonesia is 17.5% with the highest case being 29.9% in the Bangka Belitung region. This figure does not include KTD cases that occur in adolescents. This prevalence increased from the data reported by the 2012 IDHS of 15.4% of cases. The incidence of adverse events in East Java Province of 14.6% is in the middle order of Indonesia's overall adverse events data (4). One of the serious impacts of unintended pregnancy is the incidence of abortion which triggers an increase in fetal death in Indonesia (5). Some of the common adverse events that occur include abortion, maternal death and indifference to child growth and development (6). Mothers who do not want their pregnancy tend to not regularly check their pregnancy at health facilities. This is supported by the IDHS data which state that there is a decrease in the percentage of coverage of mothers who check their pregnancy at health facilities from 2012 to 2017 (7).

Based on the 2013 Riskesdas data analysis, there are several factors in Indonesia that trigger the occurrence of unintended pregnancy, consisting of the use of contraceptives, marital status, history of illness suffered by the mother, discipline during antenatal care, number of children born, place of residence and parental education (8). Qualitative research conducted in 2017 in the Sleman area showed that the incidence of KTD was also experienced by many teenagers. There are several reasons behind this, namely the lack of knowledge about reproductive health, ease of access to information about pornography, free attitudes in relationships, parenting patterns that are too liberating for children, lack of parental control and mistakes in choosing close friends (9). Parenting patterns and relationships are important aspects that affect the high KTD in Yogyakarta in adolescents (10). Based on the things that have been described, most of the studies on KTD cases are related to aspects of pregnancy check-ups and unmet need. This study aims to analyze other factors that have an influence on KTD in married women and have not been studied in East Java, such as maternal age, age at first marriage, education, mother's occupation, welfare level, number of living children, place of residence, family planning knowledge, history of family planning use, access to information and family planning decisions.

METHODS

This research is a non-reactional research conducted through a cross-sectional study. Researchers used secondary raw data from the results of the 2019 PPAS KKBPK. This unit of analysis was taken from the PPAS, namely married women aged 15-49 years, including those who are pregnant or already have children. Age interval criteria were taken based on secondary data from PPAS 2019. The

number of samples was 2,650 couples of childbearing age.

The independent variables in this study consisted of mother's age, age of first marriage or *Usia Kawin Pertama* (UKP), mother's last education, number of children still living, welfare level, mother's occupation, insurance ownership, place of residence, family planning knowledge, history of family planning use, access to information and decision-makers in Family Planning. While the dependent variable is the status of pregnancy planning which consists of KTD (when the survey is carried out, want to get pregnant later, not now or do not want to get pregnant again). While non-KTD are respondents who stated that they were planning a pregnancy at that time.

In this study, two analyses were carried out, namely descriptive and analytic. The data were analyzed descriptively to describe the characteristics of women of childbearing age or *Wanita Usia Subur* (WUS) who experienced adverse events and did not. Furthermore, multiple logistic regression tests were conducted to determine the factors that influence KTD in WUS in East Java 2019.

RESULT

The analysis of the results of this study can be seen in the presentation of the data in Table 1 and Table 2 below.

Table 1. Characteristics of married women of childbearing age (15-49 years) Based on Children Birth Planning Status in East Java in 2019

Characteristics	Childbirth Planning Status							
	Want That Time		Want Later		Don't Want Any More		Amount	
	n= 2261	%	n= 247	%	n= 142	%	n= 2650	%
Female Age								
15-19 years old	31	82.1	7	17.9	0	0.0	38	100.0
20-24 years old	300	93.8	20	6.2	0	0.0	320	100.0
25-29 years old	603	89.1	52	7.7	22	3.2	677	100.0
30-34 years old	573	84.2	81	11.8	28	4.0	682	100.0
35-39 years old	519	81.6	62	9.7	55	8.7	636	100.0
40-44 years old	213	78.9	19	7.3	37	13.8	269	100.0
45-49 years old	22	78.6	6	21.4	0	0.0	28	100.0
Age of First Marriage								
10-14 years old	54	73.9	13	17.2	7	9.0	74	100.0
15-19 years old	887	86.3	87	8.5	54	5.2	1.028	100.0
20-24 years old	918	84.6	100	9.2	67	6.2	1.085	100.0
25-29 years old	304	83.2	47	12.8	14	4.0	365	100.0
30-34 years old	80	100.0	0	0.0	0	0.0	80	100.0
35-39 years old	15	100.0	0	0.0	0	0.0	15	100.0
40-44 years old	3	100.0	0	0.0	0	0.0	3	100.0
Mother's Education								
Never schooled	21	100.0	0	0.0	0	0.0	21	100.0
Not school yet	9	100.0	0	0.0	0	0.0	9	100.0
Primary School	492	83.5	46	7.8	51	8.6	589	100.0
Junior High School	552	84.0	57	8.7	48	7.3	657	100.0
Senior High School	884	88.2	92	9.2	27	2.6	1,003	100.0
Academy/Diploma 1-3	77	77.8	18	18.3	4	4.0	99	100.0
College	226	83.1	34	12.4	12	4.5	272	100.0
Number of Children Alive								
2	1,958	90.9	146	6.7	50	2.3	2.155	100.0
> 2	303	61.2	101	20.4	92	18.4	495	100.0
Prosperity level								
Low	324	88.0	24	6.5	20	5.5	368	100.0

Characteristics	Childbirth Planning Status							
	Want That Time		Want Later		Don't Want Any More		Amount	
	n= 2261	%	n= 247	%	n= 142	%	n= 2650	%
Intermediate	1,217	87.1	105	7.5	75	5.4	1,397	100.0
Tall	720	81.4	118	13.4	47	5.2	885	100.0
Mother's Job								
Not working/study	8	77.5	0	0.0	3	22.5	11	100.0
Not working/housewife	1,378	87.1	135	8.4	71	4.5	1,584	100.0
Farmer	167	90.4	3	1.5	15	8.1	185	100.0
Entrepreneur/trader	322	80.4	40	10.2	38	9.4	400	100.0
Civil Servant/ Soldier/Police/ state-owned enterprise	50	78.2	14	21.8	0	0.0	64	100.0
Private employees	276	82.8	45	13.5	11	3.6	332	100.0
Freelancer	28	90.7	2	9.3	0	0.0	30	100.0
Other	32	37.6	8	18.2	4	8.2	44	100.0
Insurance Ownership								
Don't have	1,264	73.9	13	17.2	7	9.0	74	100.0
Have	997	86.3	87	8.5	54	5.2	1,028	100.0
Decision-making in Taking Contraception								
No answer	552	90.0	32	5.2	30	4.8	614	100.0
Mother alone	785	84.7	97	10.4	45	4.8	927	100.0
Service provider	24	92.2	0	0.0	3	7.8	27	100.0
Couple	48	87.4	0	0.0	6	12.6	54	100.0
Mothers and service providers	76	90.5	2	2.2	6	7.3	84	100.0
Mother and husband	774	82.1	116	12.3	52	5.5	942	100.0
Other	2	100.0	0	0.0	0	0.0	2	100.0
Residential Area								
Urban	1,043	83.9	143	11.5	56	5.6	1,242	100.0
Rural	1,218	86.6	104	7.4	86	6.0	1,408	100.0

Source: Secondary data PPAS of Women of Childbearing Age on National Population and Family Planning Board of East Java in 2019 processed

Table 1 shows the status of planning for the birth of a child divided into three categories, namely the respondents answered that they wanted children at that time, wanted children but not now and did not want more children. Respondents who at that time answered that they wanted children at that time were classified as planned pregnancies (non-KTD). Then WUS who stated that she actually wanted to get pregnant but not at that time or did not want any more children was classified as KTD. Based on Table 1, the percentage of KTD cases in WUS in East Java is 14.6% (the sum of WUS want their children later is 9.3% and don't want any more children 5.3%).

The characteristics of married women in 2019 were mostly in the age range of 25 years to 39 years with the age of first marriage in the range of 15 years to 24 years. The last education of married women is dominated by high school with middle to upper welfare levels. At the time of the study, most of the married women had two living children and were housewives and lived in the village. Table 1 also shows that there are still many respondents who do not have health insurance, while in terms of family planning decisions the majority are dominated by mothers themselves or mothers discussing with their husbands. Based on Table 1, in terms of women's age, more KTD cases were found in mothers in the categories 15-19 years (17.9%) and 45-49 years (21.4%). Meanwhile, in terms of UKP, many KTD cases are experienced by mothers with an age range of 15 to 24 years. Cases of KTD are increasing along with the increase in the number of children still living who are owned by respondents and do not have health insurance.

Table 2. Factors Affecting Unintended Pregnancy in Married Women (15-49 years) in East Java 2019

Variable	Exp (B)/ PR	Sig (p value)	Information	95% CI	
				Lower	Upper
Female Age	0.172	0.000	Significant	1.038	1.075
Age of First Marriage (UKP)	0.449	0.004	Significant	0.259	0.778
Last education					
Not school yet (reference)	1.000	-	-	-	-
Primary School	318221300.6	0.998	Not significant	0.000	-
Junior High School	307853956.5	0.998	Not significant	0.000	-
Senior High School	216300908.0	0.998	Not significant	0.000	-
Academy/Diploma 1-3	462170746.5	0.998	Not significant	0.000	-
College	327998815.9	0.998	Not significant	0.000	-
Number of Children Alive					
≤Two children	1.000	-	-	-	-
>2 children	6.325	0.000	Significant	5.011	7.984
Prosperity level					
Low (reference)	1.000	-	-	-	-
Intermediate	1.085	0.649	Not significant	0.764	1.541
Tall	1.678	0.004	Significant	1.174	2.398
Work					
Not working/study	1.000	-	-	-	-
Not working/housewife	0.511	0.362	Not significant	0.121	2.162
Farmer	0.365	0.193	Not significant	0.080	1.663
Entrepreneur/trader	0.839	0.814	Not significant	0.196	3.599
Civil Servant/ Soldier/Police/ state-owned enterprise	0.961	0.959	Not significant	0.203	4.534
Private employees	0.714	0.652	Not significant	0.165	3.083
Freelancer	0.351	0.277	Not significant	0.053	2.320
Other	1.236	0.793	Not significant	0.254	0.025
Insurance ownership					
Have insurance	1.000	-	-	-	-
Don't have insurance	0.819	0.750	Not significant	0.657	1.020
Family Planning decision making					
Not answered	1.000	-	-	-	-
yourself	1.621	0.003	Significant	1.179	2.230
Service provider	0.759	0.707	Not significant	0.180	3.195
Couple	1.291	0.554	Not significant	0.555	3.001
You and the service provider	1.955	0.878	Not significant	0.433	2.045
You and your partner	0.000	0.000	Significant	1.431	2.671
Other	0.111	0.999	Not significant	0.000	-
Family Planning Knowledge					
Don't understand KB implant	0.429	0.022	Significant	0.229	0.884
Don't understand bead bracelet	2.113	0.019	Significant	1.132	3.943

Variable	Exp (B)/ PR	Sig (p value)	Information	95% CI	
				Lower	Upper
Don't understand lactational Amenorrhea or *Metode Amenore Laktasi* (MAL)	0.662	0.001	Significant	0.520	0.843
Do not understand interrupted intercourse	1.296	0.050	Significant	1,000	1.680
Information Access					
Didn't hear from teacher	2.377	0.000	Significant	1.510	3.741
Didn't hear from PLKB	1.511	0.001	Significant	1.183	1,930
Didn't hear from formal education	1.987	0.013	Significant	1.159	3.407
Not reading flipchart	3.497	0.000	Significant	1.885	6.486
Residence					
Urban	1.000	-	-	-	-
Rural	0.801	0.043	Significant	0.646	0.993
Birth Control History					
Use contraception	-	-	-	-	-
Don't use contraception	0.419	0.001	Significant	0.256	0.685

Source: PPAS 2019 Secondary Data for Women of Childbearing Age processed

Based on Table 2, there are nine factors that act as determinants of the incidence of KTD, namely the age of the woman, UKP, number of children still living, level of welfare, place of residence, history of family planning use, family planning knowledge, access to information and family planning decisions. Based on the results, it was found that respondents who did not have knowledge of the IUD/Spiral, bead bracelets, lactational amenorrhea or interrupted intercourse had a higher risk of adverse events compared to other groups.

Table 2 states that the chance of experiencing an adverse event is experienced by respondents who do not understand about interrupted intercourse by 1.3 times compared to those who understand about interrupted intercourse. In terms of access to information, respondents who did not obtain information from teachers, formal education, PLKB and flip chart readings about family planning are more at risk of experiencing adverse events than others. Then, the factor of the number of children still living has the greatest influence on the incidence of KTD compared to other factors. Respondents who have more than two children have a 6-fold risk (PR= 6.325, 95% CI =5.011-7.984) more likely to experience adverse events than mothers who have fewer than two children. Age of women is one of the determinants of KTD. Mothers who are too young (15-19 years old) and too old (45-49 years old) are more likely to experience adverse events. Furthermore, mothers with UKP ranging from 15 to 24 years are more likely to experience adverse events. Respondents with a high level of welfare are also more likely to experience adverse events. Family planning decision-making is also one of the factors that contribute to the incidence of KTD. Mothers who decide on their own in planning children without discussing with their partners are more likely to have adverse events than those who plan together.

DISCUSSION

The difference in the prevalence of unwanted pregnancies in several regions of the world is due to the targeting of respondents who are used as research samples. In the Malawi region, Africa, the incidence of KTD is quite high because the respondents who are questioned are pregnant women regardless of marital status (6). Meanwhile, in Indonesia, the calculation of KTD in married women and unmarried adolescents is carried out separately.

For both married and unmarried women, unwanted pregnancies can cause adverse effects that need to be anticipated early on by various parties, both in terms of strengthening family life and from agencies engaged in population and family welfare such as the National Population and Family Planning Board. A research team in 2016 studied 11,742 women aged 15 to 49 years based on the 2012 IDHS data and reported that mothers who experienced adverse events had twice the tendency to not routinely carry out antenatal care (ANC) than those who wanted to get pregnant (11). The lack of routine care during pregnancy can have an impact on the development of the fetus and the health condition of the mother.

Factors Affecting KTD in Married Women in East Java 2019

Age

The results of statistical analysis prove that maternal age is associated with the incidence of KTD. Age is one of the intrinsic aspects related to the structure of organs and bodily functions (12). Differences in hormone systems and physiological functions will determine a person's consideration in planning a child. This is in accordance with field observations which show that KTD cases are more common in mothers who are too young (15-19 years old) and too old. Respondents who are relatively young do not plan to use contraception even though they do not want to have children, resulting in adverse events. Supporting research in Ethiopia states that women under 20 years of age are twice as likely to have an unwanted pregnancy (13). This condition is related to the lack of information related to the provision of access to contraceptive services. In addition, research in Malawi Africa also shows that the higher the age of the mother, the higher the tendency to experience adverse events.

Mothers who are too young or old are classified as high risk for pregnancy and childbirth, so most are not ready to undergo pregnancy (6). Mothers over the age of 35 feel that they have a small chance of getting pregnant, so they ignore the use of contraception (5). A case-control study in the Mulyorejo Health Center area of Surabaya on 50 couples of childbearing age did not agree with the results of the study. Age has no effect on KTD in EFA because the main determining factor is the use of contraceptives (14).

Age of First Marriage (UKP)

Age at first marriage affects unwanted pregnancies in women of childbearing age. Most of the KTD cases were experienced by women with an age range of 15 to 24 years. Age at first marriage indicates the time of first fertilization (15). The younger the age at first marriage, the longer the chances of getting pregnant and giving birth. This will increase the possibility of many children being born and increase the risk of adverse events. On the other hand, increasing the age at marriage will reduce the risk of adverse events (16).

Number of Living Children

The number of live children is a strong predictor of unwanted pregnancy. Data in the field show that the greater the number of living children, the chance of experiencing KTD is six times. EFA with more than two living children tend not to want more children so that, when a pregnancy occurs, it is classified as KTD (17). The same conclusion from Riskesdas in 2013 stated that the chance of unwanted pregnancy increases with the number of children born. The main reason is the impact of contraceptive failure and unfulfilled access to contraception (5). This research is in line with the one conducted in Africa. The prevalence of adverse events in the Malawi region, Africa is quite high at 43%. The data were analyzed based on the 2010 African Demographic and Health Survey report on 2,144 pregnant women as the unit of analysis. The related determinants included the age of the respondent, fertility preferences and the number of children ever born. Researchers suggest reinforcing family planning services to reduce the incidence of KTD and focus on PUS in villages with a large number of living children (6).

Fertility preferences will affect pregnancy status. Married women who do not plan to have more children are more likely to experience adverse events than women who still want children later. The majority of women in Indonesia are aware of the importance of regulating the number of children but still think repeatedly about using contraceptives (18). It is necessary to increase knowledge regarding types of contraceptives and ease of access, especially for women who are no longer planning to have

children. Women who have a good level of knowledge about types of contraceptives will be more concerned about their health and have considerations in planning the number of children. Women with a high level of contraceptive knowledge will consider the benefits and have more motivation to use family planning so that they can prevent unwanted pregnancies (19).

Prosperity Level

Based on the results of research conducted in 2015 it showed that women who are classified as having a lower-middle economy tend to be more prone to experiencing adverse events than women who live well (20). Opportunities from this study show that women who live in poverty are 1.68 times more likely to experience adverse events than rich women. Women who have a high level of welfare tend to have the right to reproductive protection so they dare to decide to regulate their pregnancy. On the other hand, women with low levels of welfare tend to adhere to a patriarchal culture where everything must be based on the husband's decision so that they are vulnerable to experiencing problems (19).Women belonging to the poor economy tend to choose pill and injectable contraceptives that have low effectiveness (5). Studies in the field explain that the level of welfare is a determinant of KTD. However, respondents with a high level of welfare are more likely to experience adverse events. This may be due to limited access to information and the availability of time that respondents have to discuss with their partners in planning a pregnancy.

Residence

Based on the 2019 PPAS, KTD cases in East Java were more common in urban communities than rural communities. Women who live in urban areas have 1.2 times the risk of experiencing adverse events. Differences in access to family planning services between rural and urban areas result in differences in KTD cases in the two parts of the region (21). The incidence of KTD tends to be more in urban areas due to the high flow of urbanization which has an impact on increasing unemployment so that they are vulnerable to unsafe sexual behavior (8). The same thing was also explained by another study in 2014 that KTD cases were often found in cities due to the low use of modern contraception (16).

Further analysis of data from the Indonesian Demographic and Health Survey (IDHS) in 2017 showed that there was an increase in the use of traditional contraceptives (calendars, interrupted intercourse and other conventional methods) among people in urban areas. The research shows that people living in urban areas are twice as likely to choose traditional contraceptives as people in rural areas. One of the reasons for this condition is that rural people have more free time to access information about the use of modern family planning (22). Indirectly, this results in a higher chance of occurrence of adverse events in urban areas due to the high selection of traditional alkon which is prone to failure.

Family Planning Knowledge

The choice of the type of contraception can affect the incidence of pregnancy in women. Several types of contraception can be used for the purpose of preventing pregnancy. The use of contraceptive methods to be used follows the level of knowledge of EFA itself. According to one of the research results that support the results of studies in the field, the incidence of adverse events can decrease along with the increase in knowledge of EFA regarding complete contraceptive devices starting from the type, method of use and side effects (23). Mothers who have low knowledge of family planning have a 1.7 times risk of experiencing adverse events compared to mothers who have high knowledge of family planning (24).

Family Planning (Contraception) Usage History

Studies show that women who have not used birth control in the past 12 months have a 2.3 times greater risk of adverse events than those who use birth control. These results are supported by other research conducted in 2016 in Indramayu, Tangerang and Serang which stated the same thing (25).

Contraceptive devices are one of the supporting media that can prevent the occurrence of adverse events in EFA. Research conducted in the Dinoyo Public Health Center Malang stated that the incidence of KTD was associated with the choice of the type of contraception. The majority of PUS choose KB with lower effectiveness, such as pills and injections, thus increasing the risk of

experiencing adverse events by 7.3 times. This is related to the lack of information regarding the provision of effective and effective contraceptives (18).

Information Access

Research shows that women who do not read family planning information from flip charts are 3.5 times more likely to experience adverse events than those who do. Flip chart media is one of the communication tools that can carry messages to suggest someone to have an opinion on something, one of which is related to family planning knowledge (26). Through the media, affective messages can be conveyed so that a positive attitude is formed regarding pregnancy planning. Women who do not get information from PLKB have 1.5 times the risk for adverse events. Improving the competence of PLKB still has to be done in order to increase the coverage of family planning acceptors. Formal education also plays an important role in providing information about family planning. The study stated that women who did not receive family planning information during formal education had twice the chance for KTD, in addition, women who did not hear information from teachers about family planning had a 2.4 times the risk for KTD. Therefore, the Generation Planning program in schools must also be maintained. This program has proven to be effective in increasing knowledge about family planning (27).

Family Planning Decision-Making

Decision-making in family planning contributes to cases of unwanted pregnancy. Delaying contraception discussions with partners increases the risk of unwanted pregnancy (28). Errors in conveying information about the types, benefits and side effects of contraceptives have resulted in a decrease in the achievement rate of alcohol users. The challenge for family planning officers in the field is to straighten and build trust for contraceptive users to prioritize the benefits of contraception in pregnancy planning (19). There is another study conducted in 2016 that studied 30 pregnant women that the use of this type of contraception is closely related to unwanted pregnancies (18). The risk increases to seven times of having an unwanted pregnancy in women who choose non-MKJP contraception. Low knowledge will increase errors in decision-making in family planning. There is an increased risk of drop out for non-MKJP users, such as injections, pills and condoms (8). Irregular use of contraceptive pills and low adherence to injections are the causes of contraceptive failure (5).

Factors that do not Affect KTD in Married Women in East Java 2019

Mother's Education

A similar study from the results of secondary data analysis by previous researchers using Riskesdas 2013 stated that education was a determinant of unwanted pregnancy in Indonesia. Education is related to the ability to capture information related to the benefits of small families (8). The research shows that maternal education does not affect unwanted pregnancies. Both mothers with high and low education are equally likely to experience unwanted pregnancies. Research in Malawi, Africa, supports the study results according to which there is no relationship with the mother's educational status (19). Various other literatures also show the same thing in Japan, Kenya and Nepal (29). There are beliefs that are more adhered to than the level of education itself, for example the belief that many children have a lot of luck so they prefer to have more than two children, especially for women with high levels of education and welfare who feel they are able to care for many children (30). Another supportive study was also conducted in 2019 which stated that maternal education level was not related to unwanted pregnancy, while the main determining factor was the use of contraceptive methods (14).

Work

Mother's occupation has no effect on unwanted pregnancy. The findings differ from a 2019 study that work has a significant impact on unwanted pregnancies (14). Similar findings were also found in women who visited a health facility in Kwazulu, South Africa (31). According to this, the busyness of working mothers motivates them to consider more about the use of contraceptives to plan pregnancy (16). The results of the study in the field show that both working and non-working mothers have the same opportunity for KTD to occur. Both working mothers and not both can decide for pregnancy planning in accordance with the access to information obtained.

Insurance Ownership

Insurance ownership is related to a person's level of welfare (32). The research shows that both women who have insurance and those who don't have an effect on unwanted pregnancies. Both may consider determining the type of contraception used to regulate pregnancy.

CONCLUSIONS AND SUGGESTIONS

Conclusion

The prevalence of KTD in married women in East Java was 14.6%. The determinants of the incidence of KTD consist of the woman's age, place of residence, number of living children, level of welfare, age at first marriage, family planning knowledge, history of family planning use, access to information and family planning decisions. The factor that has the greatest influence among the independent variables in the study is the number of children still living owned by the respondent. The chances of married women with more than two children increase six times to experience adverse events compared to those who have fewer than two surviving children.

Suggestion

The East Java Province National Population and Family Planning Board should innovate in promoting the availability of access to family planning services to increase the achievement rate of contraceptive users. Especially among couples of childbearing age who are prone to experiencing adverse events, namely the young age below 19 years and the old age above 45 years, both of which are classified as high risk for pregnancy and childbirth. In addition, the program is also more focused on couples of childbearing age who already have two or more children to anticipate the occurrence of adverse events through increasing IEC in the use of long-term contraceptives. The National Population and Family Planning Board is recommended to continue strengthening the GenRe and PIK-R programs in formal schools, increasing the competence of National Population and Family Planning Board and developing information media that are adapted to the latest technological advances. For further studies, it is recommended for other researchers to analyze other determinants, such as the fulfillment of family planning needs in WUS who experience adverse events. Especially regarding the socio-cultural conditions of each region so that the solutions provided are effective and on target.

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