

Socio-Demographic Factors Associated with Postpartum Contraceptives Used

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Abstract. Narrow pregnancy intervals are known to increase the risk of maternal and neonatal mortality. At intervals of less than 6 months, siblings less than 2 years old are at 60% risk of death. Increased use of family planning can reduce maternal mortality by 40%. The achievement of postpartum family planning in Kulon Progo Regency was 13.83%. Postpartum contraception in Indonesia is defined as the immediate use of contraceptives up to 6 weeks (42 days) after delivery. This study's purpose is to examine the socio-demographic factors associated with postpartum contraceptives used. We conducted a community-based cross-sectional study from August to September 2022. A total of 207 women in the first year after giving birth in Kulon Progo, Yogyakarta, Indonesia enrolled in the study. Data were collected using structured questionnaires. Chi-square Test is used to analyze data. The prevalence of postpartum family planning use was 38.6%. The results of the analysis chi-square obtained variable age p-value 0.022 < 0.05 education level with a p-value of 0.003 < 0.05, employment status with p-valof ue 0.018 < 0.05, family income with p-value 0. 487 > 0.05. Parity with p-value 0.400 > 0.05, number of children with p-value 0.226 > 0.05, and social norms with p-value 0.090 > 0.05. It can be concluded that age, level of education, and employment status are related to the use of post-partum family planning.

Keywords: postpartum family planning · socio-demographic factors · Indonesia

Introduction

The global maternal mortality ratio in 2017 is 211 deaths per 100,000 live births [1]. The maternal mortality rate in low-income countries in 2017 was 462 per 100,000 live births. There are 94% of maternal deaths found in low- and lower-middle-income countries [2]. In developing countries, the risk of prematurity and low birth weight increases when the gestation interval is less than 6 months, and children born within 2 years of older siblings are 60% more likely to die in infancy. Increased contraceptive use can reduce maternal mortality by 40% [3].

Short pregnancy intervals are known to increase the risk of maternal and neonatal morbidity and mortality [4–6]. The impact of short pregnancy intervals is associated with an increased risk of subsequent pre-pregnancy obesity, pregnancy diabetes, and increased risk [6]. Interpregnancy interval of fewer than six months since the last delivery is associated with an increased risk for preterm birth, small age for pregnancy, and infant death [5].

Based on the results of the 2015 Inter-Population Census Population Survey (SUPAS), the Maternal Mortality Rate in Indonesia is still high, which is 305/per 100,000 live births [7]. Meanwhile, the number of infant deaths according to the 2017 Indonesian Health Demographic Survey is 24/1000 live births, where newborn deaths contribute to the largest number of infant deaths. The newborn/Neonatal Mortality Rate is infants aged 0–28 days with 15/1,000 live births [8]. The targets of the 2030 SDGs are for maternal mortality rates of 70/100,000 live births, neonatal mortality rates of 7/1,000 live births, and Infant mortality rate of 12/1,000 live births [8].

Based on the 2017 Indonesian Health Demographic Survey, Indonesia's Total Fertility Rate (TFR) decreased by 0.2 points, from 2.6 per woman of childbearing age in 2012 to 2.4 per woman of childbearing age in 2017, and participants in active family planning coverage increased from 62% to 64%, however, the coverage of active family planning in modern methods has decreased from 57.9% to 57.2% [8]. This is related to the quality of Educational Information Communication (IEC) and counseling during antenatal services and family planning services, postpartum family planning services [8].

The World Health Organization (WHO) recommended that women wait for a minimum of 24 months believe birthright and conception of the next child to reduce the risk of adverse maternal, perinatal, and infant outcomes [9]. Postpartum family planning (PPFP) focuses on preventing unwanted pregnancies during the first 12 months after delivery [10]. Postpartum contraception in Indonesia is defined as the immediate use of contraceptives up to 6 weeks (42 days) after delivery. The purpose of postpartum family planning services is to regulate the distance between pregnancies/births and avoid unwanted pregnancies so that each family can plan a pregnancy safely and healthily [11].

Factors associated with modern family planning use include education, number of children, knowledge, health status, and visits [12]. Mothers with low economies and more children receive low family support [13]. Better partner communication can help women identify their husband/partner's consent. Interventions involving informal education and promoting male involvement in [12, 13] family planning may increase the prevalence of contraception [14]. Long *et al.*, (2020) revealed that secondary education is positively related to contraceptive use [15]. According to Boadu *et al.*, (2022), women without formal education are less likely to use modern contraceptives compared to women with higher education [16].

The employment status of the mother is one of the most influential sociodemographic determining factors in the use of contraception. A study conducted in Bangladesh on

the prevalence and determining factors of contraceptive use among working and non-working women showed that employed women with a higher level of education had the possibility of increasing contraceptive use [17]. Women in low- and middle-income groups are less likely to use contraception. This may be because it is difficult for women with primary education levels to find jobs, especially high-paying ones, so they often rely on husbands/partners who dominate their work in decision-making, including the use of contraceptives [18]. Subjective norms have a direct effect on contraceptive use among mothers without formal education [17]. That is, the socio-demographic factors associated with the use of modern contraception include education, the number of children, income, employment status, and social norms.

The achievement of postpartum family planning in Kulon Progo Regency was 13.83% of mothers using postpartum contraceptives in 2019. In 2020, the achievement of postpartum family planning was 30.6%. In 2021, among the 30 postpartum mothers, there were 10 mothers (33.3%) who used postpartum family planning according to standard operating procedures, a target of 40 percent by 2024. This research purpose is to assess socio-demographic factors associated with postpartum contraception.

2 Method

2.1 Design Research

This study uses a quantitative correlation design with a cross-sectional survey approach. This research was conducted in Kulon Progo regency, Yogyakarta, Indonesia from August to September 2022, with as many as 207 respondents. The scope of this study includes factors related to post-partum Family planning use behavior including age, education level, employment status, income, parity, number of children, and social norms.

2.2 Sampling

The sample of this study was postpartum mothers who gave birth in a health facility in the first four months to one year after giving birth. Penguin *sample size* based on *Lemeshow*. The prevalence of postpartum family planning was 13.62% [19]. Value of q = 1 - p. With the error limit (d) set at 0.05 and the *value of Alpha* = 0.05, Therefore, the minimum sample size is set at 180 participants. The sampling technique of this study is multistage proportional random sampling covering 12 sub-districts in Kulon Progo Regency.

This research instrument uses questionnaires. In this study, the validity of the contents of the test instrument was analyzed using CVI (Content Validity Index) Aiken's V with 12 experts. The validity test result > 0.68, declared all items valid. Reliability test results with SPSS software, obtained Alpha Cronbach values of 0.996 > 0.75, meaning that the results are excellent, it is concluded that the research instruments are reliable. The analysis in this study consists of Descriptive analysis, Chi-Square independence analysis. The level of statistical significance is set at p < 0.05. Analysis of this study with statistics of SPSS for Windows v.27 is used.

2.3 Ethical Considerations

The ethical permit was approved by the research ethics committee of the Moewardi Regional General Hospital, Surakarta number: 998/VII/HREC/2022. The participants voluntarily signed an information-based consent form and received written information about the study. Furthermore, the researcher ensures the confidentiality of the collected data.

3 Result

3.1 Univariate Analysis

The univariate analysis includes the characteristics of the subject consisting of and the postpartum contraceptives used.

Based on Table 1. Showed that of the 207 respondents, 1 08 respondents (5 2.2%) were aged 20–35 years, 1 24 people (59.9%) had secondary education levels, 148 people (71.5%) were employed, 1 29 people (62.3%) had a family income of less than IDR 1,904,275, 9 9 people (47.8%) had parity 2 times, 103 people (49.8%) had a total of 2 children, 171 people (74.3%) had good social norms, 80 people (38.6%) used postpartum family planning.

3.2 Bivariate Analysis

Bivariable analysis between the variables of respondents' age, education level, employment status, family income, parity, number of children, and social norms regarding postpartum contraceptive use. The results of the chi-square test between independent variables and dependent variables are shown in Table 2.

Table 2 Showing the results of analysis chi-square obtained variable age p-value 0.022 < 0.05 this result indicates a significant relationship between age and the use of postpartum family planning. The education level with a p-value of 0.003 < 0.05, this result indicates a significant relationship between education and the use of postpartum family planning. The employment status with p-value 0.018 < 0.05. This result indicates a significant relationship between employment status and the use of postpartum family planning. Family income with p-value 0.487 > 0.05. There is indicates that there is no significant relationship between income and the use of postpartum family planning. The Parity with p-value 0.400 > 0.05. There is indicating that no significant relationship between parity and the use of postpartum family planning. A number of children with a p-value of 0.226 > 0.05, indicates that there is no significant relationship between the number of children and the use of postpartum family planning. And social norms with a p-value of 0.090 > 0.05. There is indicated no significant relationship between social norms and the use of postpartum family planning. It can be concluded that age, level of education, and employment status are related to the use of post-partum family planning.

Table 1. Characteristics of the Subject and Postpartum Contraceptives Used

Related factors	N = 207	%		
	14 = 207	/0		
Age Group				
> 30 years	93	44. 9		
20 – 35 years old	108	52. 2		
< 20 Years	6	2.9		
Education Level Tall	47	22.7		
Intermediate	124	59.9		
Basis	36	17.4		
Employment Status Work Not working	148 59	71.5 28.5		
Family Income < IDR 1,904,275 IDR 1,904, 275- IDR 5. Million > Rp 5 million	129 68 10	62.3 32.9 4.8		
Parity				
1	76	36.7		
2	99	47.8		
> 2	32	15.5		
A number of Children 1 2 > 2	78 103 26	37. 7 49. 8 12.6		
Social norms Good Enough less	171 40 19	74.3 17.4 8.3		
Postpartum Contraceptives Yes not	80 127	38.6 61.4		

^aSource: primary data (2022)

Table 2. Chi-Square Analysis of Socio-Demographic Variables on Postpartum Contraceptive Use

Related factors	Post-partum used Yes		Not.		Sum		p-value
	n	%	n	%	N=207	%	
Respondent's Age							
>30	64	68.1	30	31.9	94	100	0.022
20-30 th	58	53. 7	50	46.3	108	100	
< 20	5	100	0	0.0	5	100	
Education Level							
Tall	27	57.4	20	42.6	47	100	
Intermediate	86	69.4	38	30.6	124	100	0.003
Basis	14	38.9	22	61.1	36	100	
Employment Status							
Work	98	66.2	50	33.8	148	100	0.018
Not Working	29	49.2	30	50.8	80	100	
Family Income							
•	7	70.0	3	30.0	10	100	0.487
IDR 5,000,000	38	55.9	30	44.1	68	100	
IDR 1,904,270 – IDR 5,000,000	82	63.6	47	36.4	80	100	
< IDR 1,904,270							
Parity							
1	17	53.1	15	46.9	32	100	0.400
2		65.7	34	34.3	99	100	
>2	65	59.2	31	40.8	76	100	
	45						
Number of Children							
>2	17	65.4	9	34.6	26	100	0.226
2	68	66. 0	35	34.0	103	100	
1	42	53.8	36	46.2	78	100	
Social norms	-		-				
Good	8	66.7	4	33.3	12	100	0.090
Enough	31	75.6	10	24.4	41	100	
less	88	57.1	66	42.9	80	100	

a. Source: primary data (2022)

4 Discussion

The results showed that the majority of respondents were 108 people (52.2%) aged 20–35 years. In line with the research of Mekonnen et al., (2020) that the majority of respondents aged 25–24 years as many as 142 people (50.5%) chose to use postpartum family planning [20]. According to Boadu (2022), women aged 35–39 years have a higher chance of using modern contraceptives compared to women aged 15–19 years [16]. Furthermore, the majority of respondents aged > 30 years had a significant relationship choosing to use postpartum family planning as many as 64 people (68.1%) with a p-value of 0.022 < 0.05. This result indicates a significant relationship between age and the use of postpartum family planning. The results of this study are supported by the results of

previous studies that modern contraceptive use among married women comes from the high reproductive age group [21].

The results showed that as many as 124 respondents (59.9%) had a secondary education level. In line with the research of Lasong et al., (2020) that secondary education is positively related to contraceptive use [15]. The failure of mothers to use contraceptives promptly is due to low levels of education. Some basic education turns out to have an impact on the mother's understanding of contraception, where mothers can learn about contraception, and when is the family to use family planning [21]. Furthermore, the majority of respondents who had a significant level of secondary education chose to use postpartum family planning many as 86 people (69.4%) with a p-value of 0.003 < 0.05. This result indicates a significant relationship between education and the use of postpartum family planning. The results of this study are supported by the results of previous studies that the educational status of the mother shows a statistically significant relationship with the use of postpartum family planning. Mothers without formal education (98.4%) were less likely to use postpartum family planning than mothers who did not pursue formal education [22]. In line with Gejo et al., (2019) maternal education levels showed a statistically significant relationship with postpartum family planning use. Women without formal school (98.4%) were less likely to use postpartum family planning than women who did not pursue formal school, and women with secondary education had a 74% smaller chance of using postpartum contraceptives [22].

The employment status of the mother is one of the most influential sociodemographic determining factors in the use of contraception. Evidence suggests that mothers' employment status is a strong relationship with contraceptive use because economic roles give them more autonomy and control over critical decisions [23]. The results of this study showed that the majority of respondents 148 people (71.5%) had a working job status. Furthermore, the majority of respondents who worked had a significant relationship and chose to use postpartum family planning as many as 98 people (66.2%) with a p-value of 0.018 < 0.05. This result indicates a significant relationship between employment status and the use of postpartum family planning. The results of this study are supported by the study conducted in Bangladesh on the prevalence and determining factors of contraceptive use among working and non-working mothers showed that employed mothers had the possibility of increasing contraceptive use [17].

The results showed that the majority of respondents 129 people (62.3%) had a family income of < Rp 1,904,275. Women in low- and middle-income groups are less likely to use contraception. This may be because it is difficult for women with primary education levels to find jobs, especially high-paying ones, so they often rely on husbands/partners who dominate their work in decision-making, including the use of contraception [18]. Based on the results of the analysis in this study, it shows that 63.6% of respondents who have an income of < Rp 1,904,275 choose to use post-copy family planning with a p-value of 0.487 > 0.05 indicating that there is no significant relationship between income and the use of postpartum family planning. The results of this study are notably the results of previous studies that respondents with incomes above the regional minimum wage had a higher family planning participation rate compared to residents with incomes below the regional minimum wage. This is influenced by the fact that low-income families prefer to meet the basic needs of the family rather than become acceptors of family planning.

Despite the free family planning program, respondents still had to pay to access services or get contraceptives [22].

The results of this study showed that the majority of respondents 103 people (49.8%) had two children. Furthermore, 66.0% of respondents who had two children, chose to use postpartum family planning and had a significant relationship with a p-value of 0.226 > 0.05 indicating that there is no significant relationship between the number of children and the use of postpartum family planning. The results of this study are different from the results of Mekonnen, et al. (2020) the majority of maternity mothers 164 people (58.3%) who have 2–3 children choose to use postpartum family planning [20]. Another study also explains that women who have more than three children will use contraception more than those who have not had children [24]. Women will use contraception when they become a family whose size fits their paradigm [25].

Parity or number of births is one of the factors that influence family planning participation. Parity is directly related to the goals of family planning, namely delaying pregnancy, delaying pregnancy, and not wanting to get pregnant again. The use of postpartum family planning can significantly reduce maternal and infant mortality by preventing unplanned and unwanted pregnancies, as well as setting a new pregnancy distance of at least two years after the previous birth [26]. The results of this study showed that the majority of respondents 99 people (47.8%) had already given birth twice. Furthermore, 65.7% of respondents who had twice parity, chose to use postpartum family planning with a p-value of 0.400 > 0.05. The results of this study are not supported by the results of previous studies that respondents who had a parity of > 2 children compared to respondents who had a parity of 1-2 children had a 1.5 times higher family planning participation rate. Some matters of concern such as the risks of pregnancy, childbirth, and the responsibilities of raising and educating are considered for postpartum family planning use [27].

Social norms can help in understanding the reproductive health of adolescents, especially adolescent girls in developing countries, and can also influence attitudes and behaviors [28]. For example, social norms can influence whether and how people can choose to use contraception. Understanding social norms can influence attitudes and behaviors towards access and use of contraceptives [29]. The results of this study showed that the majority of respondents 171 people (74.3%) had good social norms. Furthermore, 66.7% of respondents who had a good choice chose to use postpartum family planning with a p-value of 0.090 > 0.05. There is indicated no significant relationship between social norms and the use of postpartum family planning. The results of this study are not supported by the results of previous studies that Mothers with good social norms will encourage mothers to be willing to become acceptors of postpartum family planning. Mothers with fewer social norms are less likely to refuse to be acceptors of family planning and not participate in postpartum family planning programs [30].

5 Conclusion

The age of the mother, level of education, and employment status are associated with the use of postpartum family planning. Health workers are expected to further improve health promotion related to postpartum family planning for women who are less than 30 years old, have low education, and do not work.

Authors' Contributions. Yani Widyastuti was responsible for the study design, planning data collection, and writing the manuscript.

Muhammad Akhyar contributed to data collection, data management, and writing manuscripts.

Retno Setyowa isti is responsible for the critical review of the manuscript.

Sri Mulyani contributed to the manuscript writing and review manuscript.

Anik Lestari contributed to the manuscript and publishing data.

All authors have agreed to the final version of the manuscript.

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