

Factors affecting family planning behavior among women in Samarinda, Indonesia

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ABSTRACT

Women are considered to be the most common recipients of contraceptive methods. This study aimed to determine the most influential factors in family planning behavior among women in Samarinda, Indonesia. This study used a cross-sectional design and involved 384 women of childbearing age in the area of Samarinda Primary Health Care. Data were collected using a questionnaire to measure education, income, culture, parity, health workers, and family support for family planning. All variables were categorized and the data were analyzed using binary logistic regression. The significance level was set at 0.05. The study showed that generally respondents have good family planning behaviour (228 respondents; 59.4%) while parity, family support and culture are good in contraceptive use. It is presented that culture support ($p=0.004$; $OR=2.081$) become the most dominant factor of contraceptive use behaviour after controlled by education ($p=0.047$; $OR=1.574$), income ($p=0.043$; $OR=0.632$), parity ($p=0.011$; $OR=0.575$) and family support ($p=0.025$; $OR=0.518$). Women with a supporting culture will have better contraceptive use behavior than women who do not after controlling for education, income, parity, and family support. It is expected that harmonizing culture with health programs can encourage people to improve their health behaviors.

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1. INTRODUCTION

Family planning is crucial for empowering women and their male partners to make autonomous decisions about having children, including how many and when to have them [1], [2]. They enhance maternal and child health, decrease the frequency of unintended pregnancies and unsafe abortions, guard against sexually transmitted infections (STIs), and boost family economic well-being [3]–[5]. Additionally, family planning promotes women's sense of independence and capacity for making health decisions [6]. Due to its significance in accomplishing development goals, the United Nations (UN) has given growing and maintaining family planning utilization priority. To support couples in realizing their right to choose freely and responsibly how many children they want to have and how far apart they should have them, a focus has been made in particular on ensuring that everyone has access to a variety of safe and dependable family planning options [2].

Evidence indicates that family planning is becoming more widely used, especially in Asia (62%) and Latin America (67%). Tanzania and the rest of Sub-Saharan Africa provide a distinct picture, with fewer than 20% of the months on average used for family planning [7]. More than 200 million women in sub-Saharan Africa are of childbearing age, but less than 30% of them utilize family planning, despite the fact that they would like to avoid unintended pregnancies. From 7% in 1991 to over 30% in 2015, Tanzania saw a significant growth in the use of modern family planning methods among women [8]–[10]. Despite this expansion, more than 20% of women of reproductive age still have unmet family planning needs. Africa also has a high rate of women who stop using contraception [11]–[14].

Indonesia has been facing a demographic dividend between 2020-2030 [15]. This condition not only affects highly productive age but also increases the number of women of childbearing age. This situation can be disadvantageous if gender-based issues such as child marriage are not solved. During the COVID-19 pandemic, the number of child marriages increased by 300%. This situation places Indonesia seventh in the world for child marriages [16]. Furthermore, demographic dividends face some challenges in realizing that a high population increase will have an impact on increasing poverty [17], and rapid growth in the human population in urban centers and growing megacities has been identified as a threat to city resilience [18], [19]. For years, some strategies have been developed to limit the population, prevent unwanted pregnancy, increase birth spacing, and increase maternity and child health, namely family planning. This is expected to change behaviors, attitudes, and values regarding family size for the welfare of the generation. Family Planning aims to increase public awareness by increasing the age of marriage, birth control, fostering family resilience, and increasing family benefits to create happy and prosperous small families [2]. Several factors affect people's decisions to choose and use contraceptive methods, including personal factors, health factors, cost, side effects, possible side effects, possibility of failed or unwanted pregnancy, husband or wife approval, culture, environment, and family support. The lack of involvement of men in contraceptive use is viewed as common in society. Even though men desired to prevent pregnancy, they took very little responsibility because they thought that contraception was a woman's business [20]. Many factors affect the willingness of families to carry out family planning; therefore, other factors need to be identified. Often, the influencing factors differ between countries; therefore, it is important to identify the supporting factors in the family planning program in Indonesia, as the researchers took the city of Samarinda as a basic reference for a research area that can be developed in the future.

2. METHOD

This cross-sectional study was conducted in Samarinda Primary Health Care, Samarinda City, East Kalimantan. A total of 384 respondents were included in this study, including married women of childbearing age who were willing to sign an informed consent form to participate in this research. This study measured the behavior of family planning among women and its correlation with several factors such as education, income, culture, parity, health workers, and family support. This study was approved by the Research Ethics Commission of the Universitas Muhammadiyah Kalimantan Timur (reference number 013/KEPK-UMKT/I/2023).

Independent variables were measured using a questionnaire with a reliability value of 0.717. Family planning behavior was measured using a questionnaire adopted from the 2017 Indonesian Demographic and Health Survey. It comprehensively measured the knowledge, attitudes, and practices of family planning. The exclusion criteria for this study were menopausal and unmarried women. Sampling was carried out purposively by examining the exclusion criteria that had been applied at each health center. The questionnaire used is a development of the information from the Indonesian health demographic survey [21]. The questionnaire consisted of several parts, including the first part discussing the demographics of respondents, the second part discussing the behavior of using contraceptive pills, the third part discussing the role of health workers, the fourth part discussing family support, the fifth part discussing mothers' attitudes, and finally the sixth part discussing culture.

The data for all variables were summed, calculated, and categorized into dichotomies. Data education was categorized based on the completion of 12 years of basic required education in Indonesia (six years of elementary school, three years of junior high school, and three years of senior high school). Income was categorized based on the minimum regional wage in Samarinda. Parity was divided into <2 and >2 children based on the national family planning program. Culture, family support, and family planning behavior were categorized based on their scores, and the cut-off point was set at 60% of the total score. Statistical analysis was conducted using binary logistic regression with the significance level set at 0.05. The questionnaire was divided into several sections; the demographic section consisted of seven questions in the form of choice. Meanwhile, in the contraceptive use behavior section, the culture and role of health workers were closed questions with yes or no answers, and the family support questionnaire was also a closed question with options divided into always, often, sometimes, and never. On the part of the mother's attitude was also a closed question with the options strongly agree, agree, disagree, and strongly disagree.

3. RESULTS AND DISCUSSION

Table 1 indicates that 228 participants had good contraceptive use behaviour (59.4%). The majority of the respondents had completed basic education (62.5%) and had an income equal to or more than 2.8 million rupiahs (regional minimum wage in Samarinda) (60.2%). Most respondents had ≤ 2 children (52.3%). Culture indicates a patriarchal system in the respondents' families. Having cultural support meant that respondents were given space to express their autonomy beyond the patriarchal system in their society, and most of them had it (70.3%). More than three-quarters of the respondents had support from their families in accessing family planning (81.5%). However, only 25% of respondents were supported by health providers. This means that the role of healthcare providers in accessing family planning programmes is poor.

Table 1. Characteristics of respondents

Characteristics	Variables		Frequency	%
	Categories			
Family planning behaviour	Good		228	59.4
	Less good		156	40.6
Education	Complete basic education		240	62.5
	Not complete basic education		144	37.5
Income	≥ 2.8 million		231	60.2
	< 2.8 million		153	39.8
Parity	≤ 2 children		201	52.3
	> 2 children		183	47.7
Health provider	Supported		96	25.0
	Not supported		288	75.0
Culture	Supported		270	70.3
	Not supported		114	29.7
Family	Supported		313	81.5
	Not supported		71	18.5

Table 2 presents the results of bivariate analysis for each independent variable. Parity, culture, and family support had a significant relationship with family planning behavior, with a p-value of 0.05. Education, income, and healthcare providers did not significantly affect family planning behavior. However, all the variables were available to enter the first binary logistic regression model. The results suggest that parity, culture, and family support are important factors to consider when examining family planning behavior. These variables showed a significant relationship with family planning behavior, indicating that they may play a crucial role in influencing individuals' decisions

Table 2. Respondents' distribution based on independents and dependent variables

Factors	Family planning behaviour				Total	p-value	OR (CI 95%)
	Good		Less good				
	n	%	n	%			
Education							
Complete basic education	147	61.3	93	38.8	240	0.334	-
Not complete basic education	81	56.3	63	43.8	144		
Income							
≥ 2.8 million	129	55.8	102	44.2	231	0.083	-
< 2.8 million	99	64.7	54	35.3	153		
Parity							
≤ 2 children	131	65.2	70	34.8	201	0.015	0.603 (0.400-0.909)
> 2 children	97	53.0	86	47.0	183		
Health provider							
Supported	55	57.0	41	42.7	96	0.631	-
Not supported	173	60.1	115	39.9	288		
Culture							
Supported	146	54.1	124	45.9	270	0.001	2.176 (1.356-3.494)
Not supported	82	71.9	32	28.1	114		
Family support							
Supported	197	62.9	116	37.1	313	0.003	0.406 (0.271-0.769)
Not supported	31	43.7	40	56.3	71		

Table 3 shows that all variables significantly affected family planning behavior, except for health providers (p-value=0.957). Healthcare providers were excluded from the analysis. The next multivariate analysis also showed little change in the OR value for education, income, parity, culture, and family support

before and after the disallowed health provider variable. This also means that healthcare providers were not a confounding variable in this study. Only five variables remained in the final binary logistic regression, there were only 5 variables left.

Table 3. First model of binary logistic regression

Factors	B	p-value	OR (CI 95%)
Education	0.455	0.049	1.576 (1.003-2.478)
Income	0.457	0.045	0.633 (0.405-0.991)
Parity	0.553	0.011	0.575 (0.375-0.883)
Health provider	0.14	0.957	-
Culture	0.753	0.005	2.086 (1.251-3.418)
Family's support	0.658	0.025	0.518 (0.291-0.992)

Table 4 shows the results of the multivariate analysis that five variables have a significant relationship with family planning behavior, namely education, income, parity, culture, and family support. Culture becomes the most dominant variable because its OR is the highest, which means that respondents who have a supported culture will have better family planning behavior than respondents who do not support culture after being controlled for education, income, parity, and family support. This finding suggests that cultural beliefs and practices play a crucial role in shaping individuals' attitudes towards family planning. It highlights the importance of considering cultural factors when designing interventions and programs aimed at promoting positive family planning behavior.

Table 4. Final model of binary logistic regression

Determinants	B	p-value	OR (CI 95%)
Education	0.454	0.047	1.574 (1.005-2.464)
Income	0.459	0.043	0.632 (0.406-0.985)
Parity	0.553	0.011	0.575 (0.375-0.882)
Culture	0.733	0.004	2.081 (1.260-3.435)
Family's support	0.662	0.018	0.516 (0.298-0.892)

The results showed that most women had good family planning behaviour (59.4%). It represents their knowledge, attitudes, and practices towards family planning. Living in a big city like Samarinda is a privilege for every woman because it is easy to access family planning and information. Awareness and use of family planning services were higher among urban than among rural citizens [22]. This is in line with a study conducted by Yarger *et al.* [22] which stated that awareness and use of family planning services were higher among urban than among rural citizens. This represents their knowledge, attitudes, and practices towards family planning. Living in a big city such as Samarinda is a privilege for every woman because it is easy to access family planning and information. This is also supported by Prata [23], which states that family planning programs in remote areas or villages usually have fragile resources and limited information. This is very different from findings in Mexico, where the number of women in urban areas who stopped using contraceptive pills has increased because of fear of side effects [24].

Education may also accelerate a decline in fertility. Longer and higher education can encourage women's empowerment, prolonged marriage, later onset of childbearing, and smaller family sizes [25], [26]. This research shows that women who have completed basic education in Indonesia (12 years of basic education) exhibit good family planning behavior. Although the bivariate analysis did not show a significant relationship, further multivariate analysis showed a significant relationship with family planning behavior. This is in line with research conducted by Kasa *et al.* [27], which stated that women with good knowledge will practice family planning by taking birth control pills and having their reproductive health checked regularly. Adjacent to education, economic factors may contribute to family planning behavior. The smaller size of the family may be due to the increased income. This also affects the number and quality of children [28], and this study supports this statement. In addition, women with an income greater than the regional minimum wage will be considered independent women who have more autonomy to define their rights in reproductive health. This will lead to positive knowledge, attitudes, and practices regarding family planning. However, studies on barriers to contraceptive use among multiparous women in Indonesia have shown that women who live in urban areas, have low education, and are unemployed are more likely not to use contraception or family planning [29].

Parity is also an influential factor in family planning behavior. Women with fewer children were more likely to use contraception [30]. The decision to not use contraception or family planning can be related to desired fertility or the desire to have more children. This condition is consistent with myths widely believed in

Indonesia. In addition, the philosophy, including situations such as when it will be considered against God's decree by using contraception, still exists. People believe that children have fortune, and they are also viewed as eternal binders in their parents' relationship [31]. Hence, family planning is allowed if the purpose of family planning is related to birth spacing or delayed pregnancy and not the pure intention of fertility decline. Parity and family planning are also related to pregnancy intention. Women whose many children will have no intention of pregnancy will therefore consider applying family planning [32]. Pregnancy intention is also related to the number of children desired. In Indonesia, the average desired number of children is 2.46, which means that people want to have 2 or three children [33]. Contraceptive use behavior is also significantly affected by family support, especially from husband [34]. Generally, family members are ready to support and assist in choosing the contraceptive method that they use. Thus, with family support, women can easily decide on contraceptive methods [35].

In this study, culture represents how women express their autonomy in family decision-making. If the patriarchal culture is strong, women generally obey their husbands. Culture believed by people, such as husbands or other family members, will affect women's ways of thinking and decisions to use contraception [36]. This study shows that most women do not live in strong patriarchal situations. They have decision-making autonomy regarding their bodies, including reproductive health. Therefore, this condition leads to better family planning behavior [37]. However, women living in urban areas were mostly independent of socioeconomic factors. Further analysis also shows that culture becomes the most dominant factor in family planning behavior, and it is feasible to correlate it with other variables, such as education, income, parity, and family support [38]. Women with lower patriarchal norms in the family can attain higher education, earn more income, and have the authority to determine how many children they want [39].

The limitation of this study was that it was only conducted in one place, namely the city of Samarinda. If the research was conducted in different locations, the results might be slightly different. Therefore, this research only provides a comprehensive picture of the culture and behavior of using contraceptives in the city of Samarinda, so it needs to be carried out simultaneously in all regions of Indonesia so that conclusions can be drawn nationally. The strength of this study was that it focused on family planning behavior comprehensively, not only on their practice of using contraceptives but also on measuring their knowledge and attitude towards family planning as an aggregate. Researchers believe that behavior is the whole of knowledge, attitudes, and practices. This result will also lead to a comprehensive intervention that covers all behavioral changes. This study provides evidence of the determinants that affect family planning behavior. The fact that culture is moving and women have the autonomy to access contraception and a bargaining position in family planning will make the future of family planning more optimistic. Family planning has been widely promoted as a basic reproductive health measure for married women. Health providers should facilitate accessibility of contraception as a basic intervention in family planning.

4. CONCLUSION

The determinants of contraceptive behavior are education, income, culture, family support, and parity. Culture is the most influential factor for contraceptive use. Women who have a supporting culture and a low patriarchal system will be 2 times exhibit good behavior in family planning. Future research should develop variables that may affect behavior, such as media influence, healthcare facilities, and provider services. The impact of this research will be very useful for the government in making policies and making regulations related to family planning from the regional to the national level. With this research, government can find out the most suitable approach to improve services and satisfaction with family planning programs by intervening on determining factors and contraceptive behavior.

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