ORIGINAL ARTICLE

The Influence of Personal Factors on Contraceptive Use Among Women of Childbearing Age

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ABSTRACT

Introduction: Unmet need for family planning refers to women of childbearing age who wish to delay or limit pregnancy but do not use contraception. Kebonsari Village has the highest rate in Jember Regency (12%). This study aimed to identify factors associated with unmet need among women in the village. **Methods:** Analytical cross-sectional study was conducted among 83 randomly selected respondents. The dependent variable was women's decision regarding contraceptive use, and independent variables included sociodemographic factors (age, education, employment, type of work, income, number of children, child mortality history) and behavioral factors (observational learning, outcome expectation, self-efficacy, self-regulation), as well as husband's support, access to information, and access to health services. Analysis included univariate, chi-square for bivariate, and backward Wald logistic regression for multivariate, with a 5% significance level. **Results:** Of 83 respondents, 69.9% had met needs and 30.1% had unmet needs for family planning. Most were aged 20–35 years (53.0%), had 1–2 living children (57.8%), secondary education (47.0%), were unemployed housewives (65.1%), and had income above the regional minimum wage (54.2%). High observational learning was found in 47.0%, moderate outcome expectations in 56.6%, high self-efficacy in 37.3%, and moderate self-regulation in 42.2%. Bivariate analysis showed significant associations between unmet need and age, education, observational learning, outcome expectation, and self-regulation ($p<0.05$). Multivariate analysis identified observational learning as the most influential factor (OR=1.191). **Conclusion:** Improving access to accurate information and promoting positive role models through peer learning approaches may reduce unmet need for family planning in urban communities.
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Keywords: Unmet Need, Family Planning, Women of Childbearing Age, Personal Factor, Cross Sectional Study

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INTRODUCTION

Indonesia is the fourth most populous country in the world, contributing 3.49% to the global population. The population growth rate in Indonesia has increased steadily each year. The population census from 2015 to 2017 indicated a growth of 2.5%, from 255.5 million to 261.9 million people (1). According to Article 56 of Law No. 52 of 2009, persistent population growth poses a serious problem for the country and can hinder development in various sectors (2). The main drivers of population growth include a high total fertility rate (TFR), low contraceptive prevalence rate (CPR), high age-specific fertility rate (ASFR) among women aged 15–19 years, and a significant unmet need for family planning. In response, the government has implemented several measures to manage population growth, one of which is the national family planning program aimed at controlling fertility. Family planning enables individuals or couples to make informed decisions regarding contraceptive use to delay, limit, or space pregnancies and to regulate the number of children in a family (3).

Bandura's Social Cognitive Theory (1997) posits that decision-making behavior is shaped by three interacting factors: personal, environmental, and behavioral influences (4). Within this framework, contraceptive use can be understood as a health behavior influenced by a woman's self-efficacy, observational learning from peers, perceived social norms, and expected outcomes. In the context of family planning, unmet need refers to women of childbearing age who wish to delay or limit pregnancy but are not using any contraceptive method, whereas met need refers to those who do use contraception to achieve these reproductive intentions (5).

Kebonsari Village is one of the urban villages located in the center of Jember Regency. Among the seven villages

in the area, Kebonsari records the highest proportion of unmet need for family planning at 12%, equivalent to approximately 648 women of childbearing age out of the total eligible couples. The village is situated close to the center of Jember City and is served by eight health facilities, including two public health center (Puskesmas Sumbersari and Geladak Pakem), one auxiliary health center (Pustu), and several private midwifery clinics. This finding is noteworthy, as urban areas where residents generally have a relatively higher socioeconomic status tend to have greater access to contraceptive services. In such settings, health facilities are usually more accessible in terms of distance, time, and cost, which should theoretically encourage greater utilization of family planning services (6). Therefore, the aim of this study to analyze the factors associated with decision making behavior of women of childbearing age in making decisions about unmet need for family planning in Kebonsari Village, Sumbersari Subdistrict.

MATERIALS AND METHODS

This type of research is a type of quantitative research that is observational analytic in nature which explains the influence between variables without providing treatment. Analytical research is research that explains the influence between one variable and another (7). This study used a cross-sectional design and was conducted in Kebonsari Village, Jember Regency, from January to February 2020. This study received ethical approval from The Ethical Committee of Medical Research, Faculty of Dentistry, University of Jember with approval number No.660.1/UN25.8/KEPK/DL/2026. Written informed consent was obtained from all participants before data collection. The population in this study comprised all women of childbearing age in Kebonsari Village, Sumbersari Subdistrict, Jember Regency, who did not wish to have additional children or intended to postpone pregnancy, total 5,588 women of childbearing age. The sample proportion from each area was predetermined, and sampling within each area was conducted using a simple random sampling method, resulting in a total of 83 women of childbearing age. The variables in this study consisted of two types: independent variables and the dependent variable. The independent variables included age, education level, employment status, type of occupation, income, number of living children, observational learning, outcome expectation, self-efficacy, self-regulation, husband's support, access to information, and access to health services. The dependent variable was the decision of women of childbearing age to use family planning methods. Data were collected using a structured questionnaire consisting of three sections: socio-demographic characteristics, personal and environmental factors, and family planning use and decision-making. Validity and reliability tests were conducted in Sumbersari Village, which has similar characteristics to Kebonsari Village and ranks second in unmet family planning needs. Reliability was assessed using Cronbach's alpha, with values ≥ 0.6 considered acceptable. Data analysis included univariate analysis to describe variable distributions, bivariate analysis using the chi-square test ($\alpha = 0.05$, 95% CI), and multivariate analysis with multiple logistic regression. The null hypothesis was accepted if $p \geq 0.05$ and rejected if $p < 0.05$.

RESULTS

Contraceptive Needs among Women of childbearing age

The analysis of contraceptive needs provides an overview of the extent to which women of childbearing age in Kebonsari Village meet their family planning requirements. Table I shows the distribution of contraceptive needs among women of childbearing age in Kebonsari Village. More than two-thirds of respondents (69.9%) had a met need for family planning, while 30.1% had an unmet need.

Table I: Distribution of contraceptive needs among women of childbearing age (n = 83)

Need for Family Planning	n	%
Met Need	58	69,9%
Unmeet Need	25	30,1
Total	83	100

Note: n = number of respondents; %= percentage.

Socio-demographic and Behavioral Characteristics of Respondents

The sociodemographic characteristics of respondents conducted in this study aim to determine the description of the characteristics of women of childbearing age (PUS) which includes age, education level, employment status, type of work, income, number of children and history of child death. Table II presents the socio-demographic and behavioral characteristics of respondents. The majority were aged 20–35 years (53.0%), had 1–2 living children (57.8%), history of no child death in the family is 86,7%. At the respondents' education level, most were at the senior high school at 47%. Regarding employment status, the majority of respondents were unemployed and worked as housewives (65.1%). In terms of family economic status, most respondents (54.2%) had a monthly income above the minimum wage of Jember Regency. For the learning process (Observational Learning) in using contraception, where respondents were influenced by seeing and hearing the experiences of others, the majority had high motivation (47%). In the process of expecting the value of benefits and losses (Outcome Expectation), most respondents had moderate expectations in using contraception (56.6%). Self-efficacy analysis showed that most respondents had high confidence in their ability to use contraception (37.3%). Meanwhile, in terms of self-regulation, most respondents felt moderately confident in managing their contraceptive use (42.2%). (Table II)

Table II: Distribution of respondent characteristics (n = 83)

Characteristics	n	%
Age		
Young reproduction (<20 years)	13	15,7
Healthy reproduction (20-35 years)	44	53,0
Old reproductive age (>35 years)	26	31,3
Number of living children		
>5	7	8,6
3-4 Children	28	33,7
1-2 Children	48	57,8
History of child deaths		
Ever	11	13,3
Never	72	86,7
Education Level		
Low (Elementary-Middle school)	10	12,0
Secondary (Senior High School)	39	47,0
Higher (Academic, university)	34	41,0
Employment Status		
Not Working	54	65,1
Work	29	34,9
Type of work		
Housewife	54	65,1
Self-employed	3	3,6
Private	23	27,7
Civil servant	3	3,6
Revenue		
Low (< MSE)	38	45,8
High (> MSE)	45	54,2
Personal		
Observational Learning		
Low	12	14,5
Medium	32	38,6
High	39	47,0
Outcome Expectation		
Low	17	20,5
Medium	47	56,6
High	19	22,9
Self Efficacy		
Low	30	36,1
Medium	22	26,5
High	31	37,3
Self Regulation		
Low	23	27,7
Medium	35	42,2
High	25	30,1

Note: n = number of respondents; % = percentage; MSE = Minimum Standard of Earnings.

Bivariate Analysis of Factors Associated with Unmet Need for Family Planning

The results of the bivariable test used the chi-square test between age, education level, employment status, type of work, income, number of children, history of child death, observational learning, outcome expectation, self efficacy, and self regulation. Based on the results of Table 3 explains that there are several variables associated with the need for contraceptive use in Kebonsari Village, Sumbersari Subdistrict, namely the variables of age, education level, observational learning, outcome expectation, and self regulation, with a p-value <0.05.

Table III: Bivariate analysis of factors associated with unmet need for family planning (n = 83)

Independent Variable	Significance	Description
Age	0,017*	Related
Education Level	0,004*	Related
Employment Status	0,526	Unrelated
Type of Work	0,785	Unrelated
Revenue	0,220	Unrelated
Number of live children	0,518	Unrelated
Child Death	0,727	Unrelated
Observational Learning	0,000*	Related
Outcome Expectation	0,002*	Related
Self Efficacy	0,142	Unrelated
Self Regulation	0,037*	Related

Note : p-value calculated using chi-square test; $p < 0.05$ indicates statistical significance

Multivariate Analysis of Influential Factors

Based on the results of bivariate analysis, multivariate test was conducted using multiple logistic regression test with 95% confidence level. Table IV shows that the odds ratio (OR) for observational learning is 1.191, which means that women of childbearing age with low observational learning have a 1.191 times higher risk of experiencing unmet need for family planning compared to those with high observational learning. This shows that observational learning is the most influential variable in making decisions about contraceptive use, so it can be concluded that women of childbearing age with low observational learning have a high risk of 1.191 times choosing unmet need for family planning.

Table IV. Multivariate logistic regression analysis of factors associated with unmet need for family planning (n = 83)

Independent Variable	Sig	Exp (B)
Observational Learning	0,000*	1,191

Note : Exp(B) = odds ratio; $p < 0.05$ indicates statistical significance.

DISCUSSION

Age

The reproductive age of women is divided into three periods, namely young reproduction < 20 years, healthy reproduction 20-35 years, and old reproduction > 35 years. Age affects a person's behavioral factors in decision- making including decision-making to use contraceptives. Women of childbearing age who need contraception are women aged 15–49 years who are married and have had menstrual periods (8). The results showed that there was a relationship between the age of respondents and the incidence of unmet need for family planning in Kebonsari Village with a p-value of 0.017≤ α (0.05). It is concluded that the need for contraceptive use is significantly related to the age of women of childbearing age. Women who have a healthy reproductive age (20-35 years) are at greater risk (95% CI: 0.854-5.343) of experiencing unmet need for family planning. Interviews showed that respondents aged 20–35 years chose not to use contraception, believing it had many disadvantages, with family support reinforcing their decision. This study is in line with the results of Deviana's research explaining that there is a significant relationship between age and unmet need for family planning in Ploso Lor Village, Kediri Regency with a p-value of 0.042 ≤ α (0.05). In Deviana's research, it was revealed that the cause of unmet need for family planning was because women of childbearing age who had an older age had experience in using contraception. In this study, 20-35 years of age are prone to unmet need for family planning because women of childbearing age feel that reproduction and hormones are very good, so they do not want to use contraception (9).

Educational Level

Based on the results of this study, the majority of respondents in Kebonsari Village had a senior high school education at 47%, followed by a tertiary education at 41%. The results showed that there was a relationship between the respondent's education level and the need for contraceptive use in Kebonsari Village, Sumbersari Subdistrict with a p-value of 0.004 ≤ α (0.05) (OR = 0.138, 95% CI:0.048-0.398) which means that the incidence of unmet need for family planning is related to the level of education of women of childbearing age. This is in line with Zia's research (2019: 154-155) which revealed a dominant relationship between education level and unmet need for family planning in married women in East Java with a p-value of 0.000 ≤ α (0.05) (10). In Mardhiah's research (2019: 94) also showed that out of 95 couples of childbearing age (PUS) there were 41 respondents (43.2%) who had secondary education who chose to use contraceptives and stated that there was a relationship with a p-value of 0.001 ≤ α (0.05) [10]. Positive attitudes towards sexuality can be maintained with comprehensive education on sexuality (11). In this study revealed that the higher a person's education, the greater the incidence of unmet need for family planning. It can be concluded that the more a person knows about contraception and knows how to prevent pregnancy without using contraception (natural) so that respondents do not want to use contraceptives.

Employment Status

The results of this study showed that there were 65.1% of women of childbearing age who did not work and there were 34.9% who worked in Kebonsari Village, Sumbersari Subdistrict, Jember Regency. Based on the results of this study contained in table III shows that there is no significant relationship between the working status of respondents with the need for contraceptive use in Kebonsari Village, Sumbersari Subdistrict with a p- value of 0.526 ≤ α (0.05) which means that the incidence of unmet need for family planning is not related to the employment status of women of childbearing age. Based on the results of this study, it shows that it is in line with Hudha's research (2016: 154-155) which reveals that there is no dominant relationship between employment status and the incidence of unmet need for family planning in women of childbearing age in Padang Barat District with a p- value of 0.743 ≤ α (0.05). Hudha's research revealed no relationship between employment status and the incidence of unmet need for family planning because the proportion of unmet need for family planning in women who work and do not work is high. This is due to the awareness and confidence of women of childbearing age in using contraception (12).

Type of work

The types of work in this study were self-employed, private and civil servants. The results of this study showed that women of childbearing age who worked in Kebonsari Village, Sumbersari Subdistrict, Jember Regency, the majority worked as self-employed and private by 31.3%. Women of childbearing age who are not working (housewife) are 65.1%. Based on the results of this study contained in table IV shows that there is no significant relationship between the type of work of respondents in the use of contraception in Kebonsari Village, Sumbersari Subdistrict with a p-value of 0.785 ≤ α (0.05) which means that the incidence of unmet need for family planning is not related to the type of work of women of childbearing age. The results of this study indicate that it is in line with the research of Sulaiman (2018: 376) in Tallo Village, Makassar City which shows that the majority of women of childbearing age who work are self-employed and private by 12.1% (13).

Revenue

According to Deviana (2018: 8) revealed that high income is strongly associated with an increase in the percentage of contraceptive use. Based on the results of this study contained in table I shows that 54.2% of the majority have high income and 45.8% have low income in Kebonsari Village, Sumbersari District, Jember Regency. The results showed that there was no relationship between income and the need for contraceptive use in

Kebonsari Village, Sumbersari Subdistrict with a p-value of 0.220 ≤ α (0.05) (OR=0.138, 95% CI: 0.048-0.398) which means that the incidence of unmet need for family planning is not related to the income of women of childbearing age. Based on the results of this study, it shows that it is in line with the research of Weni et al., (2019: 9-10) which states a large p-value = 0.297 which means that there is no significant relationship between the income variable and the need for long-term contraceptive use (14). Uljanah et al., (2016: 207) stated that there was no significant relationship (p-value = 1.000) between income below the minimum wage and above the minimum wage with the incidence of unmet need for family planning in Adiwerna Village (15).

Number of living children

The number of children (parity) is the number of children born alive from women during reproduction. Based on the results of this study contained in table I shows that 57.8% of the majority have 1-2 children and 42.3% have more children (> 2) in Kebonsari Village, Sumbersari Subdistrict, Jember Regency. The results of the study contained in (table 4) show that there is no relationship between the number of living children with contraceptive use in Kebonsari Village, Sumbersari Subdistrict with a p-value of 0.518≤ α (0.05). This is due to the number of unmet need for family planning in women of childbearing age who have < 2 (less than) or > 2 (more than) living children have the same high percentage. Based on the results of this study, it shows that in line with Sariyati's research, (2016: 127) revealed that there is no dominant relationship between the number of children and unmet need for family planning in Yogyakarta City with a p-value of 0.061 ≤ α (0.05) (16).

History of child deaths

The history of child death affects women of childbearing age in the decision to use contraceptives. Women who have a history of child death predominantly do not use contraceptives. Based on the results of this study contained in table I shows that 86.7% of the majority of women of childbearing age do not have a history of child death. The results in table IV show that there is no relationship between the history of child death with the incidence of unmet need for family planning in Kebonsari Village, Sumbersari Subdistrict with a p-value of 0.727≤ α (0.05). This is because the majority of respondents who use contraception or do not use contraception do not have a history of child death. Based on the results of this study, it shows that in line with Nzokirishaka's research, (2018: 8-9) revealed no dominant relationship between the history of death of sons and daughters with the incidence of unmet need for family planning in Burundi with a p-value of 0.182 ≤ α (0.05). This study revealed that women of childbearing age (PUS) who made the decision to unmet need for family planning, the majority did not have a history of child death (17).

Observational Learning

Observational Learning is the process of learning from seeing and hearing other people's experiences in behaviour. In this process, a person can learn to create behaviours including making decisions to use contraception. A person's personal factors in behaviour can be seen from the learning process by observing others to achieve goals and accepted by individuals so that it becomes a habit (Glanz 2008: 171). Knowledge about women's personal hygiene behavior can be obtained through social media, health workers, and close people (17). Based on the results of this study, most of the respondents with high observational learning were women of childbearing age who used contraception (met need KB), namely 41%. While low observational learning was found in women who did not use contraception (unmet need for family planning) by 13.3%. This study shows that there is a significant relationship between observational learning and the need for contraceptive use with a p-value of 0.000 ≤ α (0.05) (OR = 3.821, 95% CI: 1.350-10.820).

Based on the results of this study, it shows that it is in line with the research of Sulaiman et al., (2018: 377) which states that there is a relationship between the learning process of other people's experiences in the decision to use contraception with a p-value of 0.006 ≤ α (0.05). In Sulaiman's research, the experience of others can motivate them to use or not use contraception. This study shows that respondents who have high motivation mostly use contraceptives (met need) while respondents who have low motivation do not use contraceptives (unmet neet). It was concluded that respondents who chose not to use contraceptives were due to lack of motivation in the process of learning from others.

Outcome Expectation

Outcome Expectation is the expectation of value, benefits and possible losses obtained by oneself towards the behavior of using contraception. The behavior of each individual is influenced by outcome expectation which shows the expectation or desire of the expected benefits compared to losses. Someone will take action if the expected benefits are greater than the losses. The results of this study showed that most respondents who used contraception had sufficient outcome expectation of 44.6%. In respondents who decided not to use contraception, the majority had a low outcome expectation of 13.3%. This study shows that there is a significant relationship between outcome expectation and the need for contraceptive use of respondents with a p-value of 0.002 ≤ α (0.05) (OR = 1.252, 95% CI: 0.461-3.399). It was concluded in this study that the majority of women of childbearing age in Kebonsari Village, Sumbersari Subdistrict, Jember Regency had low expectations of contraceptive use. Based on the results of this study, it shows hat it is in line with the research of Sulaiman et al., (2018: 378) which states that there is a relationship between the experience felt by

respondents in using contraceptives with a p-value of 0.000 ≤ α (0.05).

Self Efficacy

Self Efficacy is a person's belief and ability to use contraception. Each individual has their own beliefs in doing something including the belief in using contraceptives. Self Efficacy Most respondents who used contraceptives had high self efficacy at 28.9%. Respondents who did not use contraceptives had low self-efficacy of 15.7%. Based on the results of this study showed that most of the respondents with high Self Efficacy were the largest in women of childbearing age (PUS) who used contraception (met need KB), namely 24.1% then low Self Efficacy was the largest in women who used contraception also (met need KB) by 15.7%. So it is concluded that high, sufficient and low confidence in women of childbearing age (PUS) in this study showed no significant relationship with a p-value of 0.142 ≤ α (0.05). In this study, respondents who used contraception or did not use contraception had low self-efficacy with the same percentage.

The results of this study are in line with Aini's research, (2018: 6) revealing that there is no dominant relationship between Self Efficacy and decision making on contraceptive use in women of childbearing age in Genteng District with a p-value of 0.782 ≤ α (0.05) (18). This study revealed that not all respondents who had sufficient confidence used contraception. Whereas respondents who had high confidence ensured that respondents were confident in their ability to use contraception. In contrast to the research of Sulaiman et al., (2018: 380) which states that there is a significant relationship to contraceptive use with a p- value of 0.000 ≤ α (0.05). This study revealed that respondents who have low self-efficacy tend to believe contraception has a negative effect.

Self Regulation

Self regulation is the key to setting goals and orienting one's goals, which drives and plans achievement strategies by coordinating the potential of one's thoughts, emotions and behaviour for a set goal. Self Regulation is a belief or decision to change behaviour with its own rules in the need for contraceptive use in respondents (Glanz 2008: 171). In this study the majority of respondents had sufficient self-regulation of 34.9% in respondents using contraception and there was a majority of low self-regulation of 14.5% in respondents not using contraception. The results of this study indicate that there is a significant relationship between self regulation and the incidence of unmet need for family planning in women of childbearing age (PUS) in Kebonsari Village, Sumbersari District, Jember Regency with a p-value of 0.037 ≤ α (0.05). Based on the results of the above research, it shows that it is in line with the research of Sulaiman et al., (2018: 379) which also states that there is a relationship between self-decision to use contraceptives with a p-value of 0.000 ≤ α (0.05). In this study, most respondents were categorised as less at 53.7%. Less high self-regulation in couples of childbearing age will reduce the desire and confidence to use contraception.

The findings highlight the need for family planning programmes in Kebonsari Village to move beyond service availability and focus on behavioural and psychosocial determinants. Interventions should strengthen observational learning through peer educators, improve outcome expectations with accurate and culturally appropriate information, and enhance women's self-regulation through counselling that includes goal-setting and partner negotiation skills. These strategies align with Indonesia's national family planning goals and could be adapted for similar urban communities. This study's results are consistent with recent research from Southeast Asian urban settings, which indicate that psychosocial factors such as knowledge, attitudes, and social learning have greater influence on contraceptive uptake than purely economic variables (19). Differences in income effects across studies may reflect variations in access to free or subsidized contraceptive services, as suggested by broader analyses on policy impacts on contraception use

The cross-sectional design limits causal inference, and the reliance on self-reported data introduces potential recall and social desirability biases. Furthermore, the study was conducted in a single urban village, limiting generalisability to other settings with different socio-cultural contexts. Longitudinal or mixed-methods studies are recommended to explore causal pathways and the cultural dimensions of contraceptive decision-making. Intervention studies evaluating the impact of peer-led education, partner-inclusive counselling, and self-regulation training on unmet need reduction would provide valuable evidence for program design.

CONCLUSION

This study found that age, education level, observational learning, outcome expectation, and self-regulation were significantly associated with the unmet need for family planning, with observational learning emerging as the most influential factor. Employment status, type of work, income, number of living children, history of child deaths, and self-efficacy showed no significant association. For policymakers and practitioners, strengthening access to accurate information and leveraging positive role models are essential strategies. Comparing experiences of women who successfully use contraception with those who face challenges due to non-use can enhance awareness, shape attitudes, and reduce the unmet need for family planning in similar urban settings.

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