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ORIGINAL ARTICLE

Unmet need for family planning among women visiting community health

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Abstract

The unmet need for family planning is a significant reproductive health issue, particularly in developing countries. This study aimed to identify the factors associated with the unmet need for family planning among women visiting puskesmas in Medan City. This study used a cross-sectional design and included 186 participants. Data were collected using questionnaires. Data were analyzed using the chi-squared test and logistic regression. The results showed that age, education, knowledge, and perception of family planning were significantly associated with an unmet need for contraception ($p<0.05$). The younger the age, the lower the level of education, the lower the knowledge and perception of family planning, and the higher the likelihood of an unmet need for contraception. In contrast, family income and parity were not significantly associated with the unmet need for family planning. Satisfaction with family planning services was also not significantly associated with unmet need for contraception. The results highlight the importance of comprehensive interventions to address the unmet need for family planning. Educational programs targeting younger age groups, especially those with low educational levels, need to be improved. Additionally, efforts to improve knowledge and change community perceptions of family planning are crucial.

Keywords: unmet need for family planning, education, family income, parity, knowledge

Introduction

World Health Organization (WHO) defines unmet need for family planning as the condition of being fertile and sexually active but not using any method of contraception, while reporting either not wanting to have any more children or wanting to postpone childbearing. This indicator is crucial for measuring the extent of universal access to and reach of reproductive health services [1]. Many women of reproductive age in low- and middle-income countries (LMICs) wish to avoid or delay pregnancy, but are unable to access family planning (FP) methods [2]. Among the many facets of women's rights, family planning is the cornerstone of reproductive health [3]. Over 200 million women in developing countries lack access to family planning [4]. Of the 1.11 billion women of reproductive age in need of family planning services in 2019, 842 million used modern contraceptive methods, while 270 million had an unmet need [5]. In Southeast Asia, Indonesia has the fourth highest percentage of unmet need for family planning (11%) [6].

Numerous factors influence unmet needs among married women of reproductive age. Several studies have explored the factors associated with contraceptive use among married women of reproductive age. Age, education, monthly income, and number of living children are associated with unmet contraceptive needs [7]. Findings from 13 demographic and health surveys indicated that women are less likely to use contraception due to a lack of awareness, fear of side effects, and partner disapproval [8,9]. Research in Ethiopia found that the unmet need for family planning among postpartum mothers was attributed to unmet needs related to birth spacing, residence, place of delivery, and the availability of radio and/or television [10].

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A study based on data from the Integrated Health and Demographic Surveillance System (IHDSS) in Papua New Guinea reported that women's age, education, and household wealth were the most significant determinants of unmet contraceptive needs [11]. Other studies have demonstrated the presence of an unmet need for family planning among married women with HIV infections. Factors such as place of residence, women's educational status, women's knowledge and perceptions of family planning, client satisfaction with family planning services, women's decision-making power, and family planning counseling services within ART were identified [12]. A study in Saudi Arabia showed that unmet contraceptive need was significantly associated with the husband's education level, occupation, family income, age at marriage, gestational age, number of pregnancies, and parity [13].

Several studies in various regions of Indonesia have identified numerous factors related to unmet contraceptive needs. Factors influencing the unmet need for family planning in Bandung include age at marriage, family income, experiencing child mortality, number of living children, women's decision-making power, and media exposure [7]. Research by Nuryana *et al.* (2023) indicated that health issues, factors related to service provision, and opposition to family planning all contribute to unmet family planning needs [14].

North Sumatra still requires a significant amount of family planning services. This is reflected in the data from the North Sumatra Provincial Population Control and Family Planning Agency, which recorded an unmet need of 556,291 in 2021. Meanwhile, the unmet need in Medan City was 65,708 (11.81%) [15]. This figure has not yet met the BKKBN target of 8.30% outlined in the 2020-2024 strategic plan [16]. Therefore, this study aimed to analyze the factors associated with unmet need for family planning among women in Medan City.

Method

This study employed a non-experimental descriptive-analytic design with a cross-sectional approach. The research was conducted across 21 sub-districts (kecamatan) within the administrative area of Medan City. Data collection spanned one month from June 2024 to August 2024. The study population comprised all Eligible Couples (PUS) in Medan City, totaling 13,541 individuals based on routine reports from the National Population and Family Planning Agency (BKKBN) of Medan City. The minimum sample size was calculated using Lemeshow's formula to estimate the minimum sample size for a single-proportion cross-sectional study, which resulted in a minimum of 186 participants. Proportional sampling was employed to ensure representative sampling from each subdistrict. Participants were selected using purposive sampling, with the following inclusion criteria: 1) married women; 2) women of reproductive age (15-49 years); 3) cohabiting with their spouse; and 4) willingness to participate in the study. Women who reported infertility were excluded from the study.

Data collection commenced after the researchers provided a concise explanation of the aims and objectives of the study and obtained informed consent from each participant. Subsequently, the interviews were conducted using structured questionnaires. The Knowledge Questionnaire consisted of 11 items covering key aspects of family planning, including the definition of family planning, contraceptive methods, their advantages and disadvantages, and the goals of family planning. The perception questionnaire focused on the respondents' perceptions of the effectiveness, safety, and convenience of various contraceptive methods. It also explored the reasons behind the participants' choices or avoidance of specific methods. The questionnaire used a Likert scale with the following response options: strongly disagree, slightly disagree, agree, and strongly agree, allowing for measurement of the degree of agreement or disagreement with each statement. This instrument assessed several crucial aspects, including perceptions of family planning needs, insertion procedures, knowledge of contraceptive functions, concerns about side effects, perceptions of natural methods, and the influence of social factors. The family planning service quality questionnaire comprised 10 dichotomous (yes/no) questions designed to assess patient satisfaction with contraceptive services. The questionnaire focused on the quality of information provided by healthcare providers, patient involvement in decision making, and ease of access to follow-up services.

Data entered into a computer were statistically analyzed using the appropriate software. The data analysis consisted of three stages: univariate, bivariate, and multivariate analyses. Univariate analysis

described the frequency distributions of age, education, income, parity (number of births), knowledge, perceptions, satisfaction with family planning services, and unmet needs. Bivariate analysis was used to examine the relationships between the independent and dependent variables using the chi-square test. Owing to the categorical nature of the dependent variables, multivariate analysis was performed using logistic regression. Specifically, multiple logistic regression and predictive modeling were employed. The research findings are presented in tables and narrative form.

Results and Discussion

This study, conducted across 21 sub-districts within Medan City, involved 186 pregnant women. As shown in Table 1, most of the respondents were aged between 20 and 39 years (87.6%). Educational attainment varied, with the highest percentage falling within the secondary education category, suggesting a reasonably adequate educational background.

The respondents' income distribution was relatively balanced, with a slightly higher proportion reporting high income. The majority of respondents were multiparous (62.4%), indicating that they had given birth to more than one child. While most respondents demonstrated positive knowledge and perceptions of family planning, approximately 47% exhibited limited knowledge. Satisfaction with family planning services was relatively high, with approximately 51% of the respondents expressing satisfaction. A significant majority (87.1%) of respondents reported that their family planning needs were met.

Table 1. Respondent characteristic

Variabel	Total (n= 186)	
	n	%
Age (years)		
< 20	12	6,5
20-29	75	40,3
30-39	88	47,3
40-49	11	5,9
Education level		
Low	35	18,8
Medium	79	42,5
High	72	38,7
Income		
Low	87	46,8
High	99	53,2
Parity		
Primiparous	70	37,6
Multiparous	116	62,4
Knowledge		
Poor	87	46,8
Good	99	53,2
Perception		
Negative	57	30,6
Positive	129	69,4
Satisfaction with family planning services		
Dissatisfied	91	48,9
Satisfied	95	51,1
Unmet need		
Yes	24	12,9
No	162	87,1

Statistical analysis (Table 2) revealed several factors associated with the unmet need for family planning. Age demonstrated a significant association (p=0.000), with women aged 20-29 years exhibiting the highest proportion of unmet contraceptive needs, which subsequently tended to decrease with increasing age. Age is a key determinant of unmet needs. This higher proportion in the 20-29 age group highlights a gap in family planning access and information within this demographic. This decreasing proportion with age likely reflects declining fertility or changes in contraceptive preferences. Existing research consistently indicates that younger women (13-29 years) experience higher levels of unmet contraceptive needs compared to older age groups [17,18]. Recent studies have emphasized the importance of targeted interventions to expand access and improve contraceptive knowledge among young Indonesian women [19]. One study suggested that women under 25 years of age express greater interest in future contraceptive use, strongly linked to their educational level and knowledge of contraceptive methods [20].

Educational level also demonstrated a highly significant association (p=0.000), indicating that women with lower education levels are more likely to face barriers to meeting their contraceptive needs, such as limited information, restricted access, and sociocultural stigma. Women with lower educational attainment are more likely to encounter obstacles in accessing family planning information and services. They often possess limited knowledge of contraceptive methods and their benefits, potentially leading to misconceptions and reduced likelihood of effective contraceptive use [21,22]. Higher educational level is associated with improved knowledge of contraceptive methods and increased utilization of sexual and reproductive health services [23,24]. Therefore, enhancing access to formal and informal education on contraceptive methods has the potential to increase effective contraceptive use. Access barriers such as negative attitudes, myths, and institutional challenges also need to be addressed [25].

Conversely, income level did not exhibit a significant influence on unmet needs (p=0.734), with similar percentages observed between the low- and high-income groups. However, the analysis suggested a trend towards a slightly higher likelihood of unmet need among high-income individuals (OR=1.160), with

16% greater odds. Previous studies support these findings even after the implementation of the National Health Insurance program (JKN), which provides free contraception [26,27]. While JKN implementation has increased modern contraceptive use, the Contraceptive Prevalence Rate (CPR) has actually decreased, despite a slight increase in long-acting contraceptive (LAC) use [28]. JKN utilization for family planning remains low because of various challenges, including institutional readiness and system integration [29].

Table 2. Association of predictors with unmet need

Variable	Unmet need				*p*	OR	95% CI	
	Yes		No				*Lower*	*Upper*
	n	%	n	%				
Age (years)								
< 20	4	2,2	8	4,3				
20-29	16	8,6	59	31,7	0,000	-	-	-
30-39	2	1,1	86	46,2				
40-49	2	1,1	9	4,8				
Education level								
Low	18	9,7	17	9,1	0,000	-	-	-
Medium	3	1,6	76	40,9				
High	3	1,6	69	37,1				
Income								
Low	12	6,5	75	40,3	0,734	1,160	0,492	2,735
High	12	6,5	87	46,8				
Parity								
Primiparous	11	5,9	59	31,7	0,374	1,477	0,622	3,506
Multiparous	13	7,0	103	55,4				
Knowledge								
Poor	17	9,1	70	37,6	0,011	3,192	1,255	8,118
Good	7	3,8	92	49,5				
Perception								
Negative	14	7,5	43	23,1	0,002	3,874	1,602	9,371
Positive	10	5,4	119	64,0				
Satisfaction with family planning services								
Dissatisfied	13	7,0	78	41,9	0,582	1,273	0,539	3,008
Satisfied	11	5,9	84	45,2				

Parity status (primiparous/multiparous) also did not show a significant difference (p=0.374), although multiparous women had 1.477 times greater odds of unmet needs, which was not statistically significant. A study in Ethiopia found parity to be an important predictor of unmet needs, but the relationship is complex and influenced by various socio-demographic factors, including education [30]. Similarly, research in sub-Saharan Africa suggests that while multiparous women may have a higher likelihood of unmet needs, the difference is not always statistically significant when controlling for other variables [31]. This suggests that factors such as access to education, healthcare services, and socioeconomic status play crucial roles in determining unmet needs, regardless of parity.

Knowledge of family planning demonstrated a significant association (p=0.011) with individuals with limited knowledge having a 3.192 times greater risk of experiencing unmet needs (OR=3.192). Knowledge of family planning is crucial for individuals to make informed decisions regarding reproductive health. Individuals with poor family planning knowledge were at a significantly higher risk of experiencing unmet needs. Research indicates that higher levels of knowledge regarding contraceptive methods are associated with increased utilization, with education playing an important role [32,33]. Improving the quality and coverage of family planning education is crucial for reducing unmet needs. Health education programs, counseling, lectures, the role of female healthcare workers, and media exposure can enhance family planning knowledge [34,35]. However, it is important to note that increased knowledge does not always guarantee increased utilization, necessitating efforts to bridge the gap between knowledge and practice [32,36].

Negative perceptions of family planning also showed a significant association (p=0.002; OR=3.874), indicating that negative perceptions are a barrier to contraceptive use, thus necessitating efforts to change negative public perceptions. The more negative one's view of family planning, the greater the likelihood of not using contraception. Myths and misconceptions surrounding family planning, such as the belief that contraception causes health problems, impairs fertility, and damages the uterus, are major barriers [37–39]. Therefore, it is important to address the misconceptions and stigmas associated with family planning

through multifaceted approaches, including education, community engagement, targeting male partners, addressing sociocultural barriers, and improving service access. Providing accurate information about contraceptive methods, including benefits and potential side effects, and high-quality counseling can foster a better understanding and encourage rational contraceptive use. Understanding and addressing sociocultural barriers are also crucial for increasing family planning use [40,41].

Finally, satisfaction with family planning services was not significantly associated with unmet needs (p=0.582; OR=1.273). This finding indicates that service satisfaction does not directly influence contraceptive use decisions. Satisfaction is multifaceted and does not always correlate with contraceptive use [42,43]. A study in Mexico highlighted that feeling heard and respected during consultations increased satisfaction, but this did not always translate into higher contraceptive use if other barriers existed [44]. Even if users are satisfied with the services they receive, barriers, such as limited access to contraceptive methods, stockouts, or lack of information about available options, can hinder their effective use. Barriers, such as limited access, stockouts, and lack of information, remain problematic even when users report satisfaction with the services provided [45].

Based on bivariate analysis using the chi-square test, it can be concluded that the variables eligible for inclusion in the logistic regression test (p<0.25) were age, education, knowledge, and perception. The results of the logistic regression analysis indicated that educational attainment was the only independent variable that had a statistically significant influence on the likelihood of an individual experiencing unmet needs. The Exp(B) value of 7.422 for the education variable indicates that a one-unit increase on the education level measurement scale is associated with a 7.422 times increase in the odds of experiencing unmet needs. In other words, individuals with higher educational attainment have a much lower probability of having unmet needs than those with lower educational attainment.

Table 3. Dominant factors influencing unmet need

Variable	p	Exp(B)	95% CI	
			Lower	Upper
Age	0,831	0,900	0,343	2,363
Education level	0,001	7,422	2,398	22,966
Knowlwedge	0,998	1,001	0,303	3,314
Perception	0,108	2,289	0,834	6,288

The other independent variables included in the regression model, such as age, knowledge, and perception, did not show a statistically significant influence on the dependent variable. The p-values greater than 0.05 for these variables indicate that we cannot reject the null hypothesis stating that there is no relationship between these variables and unmet needs. Exp(B) values close to 1 for the age and contraceptive knowledge variables indicated that these variables had almost no influence on the odds of experiencing unmet needs. This means that changes in age or knowledge did not significantly alter the odds of an individual having unmet needs.

Several limitations warrant consideration when interpreting these findings. Firstly, data collection relied on self-reported questionnaires, which introduces the potential for recall bias, social desirability bias, and misreporting, particularly concerning sensitive topics such as contraceptive use and sexual activity. Secondly, the study population comprised women attending community health centers (puskesmas) in Medan City, which may not be fully representative of the city's reproductive-age female population, especially those who do not utilize public health services.

Conclusion

This study investigated factors associated with unmet needs for family planning. The results revealed several key findings. Both respondents' age and educational attainment demonstrated a highly statistically significant association with unmet needs (p=0.000 for both). Similarly, knowledge (p=0.011) and perceptions of family planning (p=0.002) showed statistically significant associations with unmet needs, indicating that improved knowledge and positive perceptions of family planning were correlated with a reduced likelihood of unmet needs. Conversely, family income (p=0.734), parity (number of children born, p=0.374), and satisfaction with family planning services (p=0.582) were not significantly associated with unmet family planning needs. Prioritizing the enhancement of knowledge and access to contraception is crucial, particularly among adolescents and women of reproductive ages. This can be achieved through comprehensive sexual education in schools and widespread information campaigns. Geographically and economically accessible family planning services, along with cross-sectoral collaboration among

government agencies, non-governmental organizations, religious leaders, and the media, are necessary to support these initiatives.

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