

Article

Analysis of Factors Associated with the Incidence of Unmet Need in Women of Reproductive Age

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A B S T R A C T

Background: Rapid population growth is a pressing concern with widespread implications, including potential food and energy crises. To address this issue, the Indonesian government has implemented Family Planning (FP) programs. However, the total fertility rate (TFR) continues to rise. A high unmet need for family planning is a significant contributing factor. Unmet need for family planning is defined as the percentage of women of reproductive age, whether married or in a union, who have an unmet need for family planning. **Purpose:** The aim of this study was to determine the factors associated with the incidence of unmet need among women of reproductive age at the Padang City Community Health Center. **Method:** A cross-sectional methodology and analytical observational study design were used. The study included 95 non-pregnant women of reproductive age in Padang City. The sample size was determined using a quota sampling approach. Data were analyzed using the Chi-Square test with a 95% Confidence Interval (CI). **Results:** The results indicated that the p-value was 0.000, which is ≤ 0.05 , indicating a significant correlation between knowledge, attitude, and the incidence of unmet need. **Conclusion:** These findings suggest that addressing these factors could be an effective strategy for decreasing the incidence of unmet need among women of reproductive age. Health providers need to raise awareness about family planning and enhance women's understanding of the importance of utilizing family planning services.

I. INTRODUCTION

All couples of childbearing age who are targeted by family planning programs include some who decide not to participate for various reasons, such as wanting to delay having children or not wanting to have more children. This group is referred to as having an unmet need (Ministry of

Health of the Republic of Indonesia, 2017). The unmet need for family planning is described as the percentage of women of reproductive age, whether married or in a union, who have an unmet need for family planning. Women with an unmet need are those who want to stop or delay childbearing but are not using any method of contraception (United Nations, 2014).

In the multivariable multilevel multinomial model, individual-level factors associated with both the unmet need for spacing and limiting included women's age, women's education, age at cohabitation, exposure to family planning information through media, parity, number of children under five, and knowledge about modern contraceptive methods (Teshale, 2022). Most cases of unmet family planning needs are found among couples of childbearing age who lack adequate information. These studies demonstrate a strong correlation between knowledge and the prevalence of unmet needs. To reduce the prevalence of unmet family planning needs, healthcare providers need to raise family planning awareness and enhance couples' understanding of the importance of utilizing contraceptives (Widiantar & NW, 2023). To increase the rate of contraceptive use in Indonesia, comprehensive education and the availability of contraceptives would be beneficial (Harzif et al., 2022).

Attitude is defined as a reaction or response that remains internal towards a stimulus or object (Maulana, 2009). In order to improve satisfaction and performance, healthcare facilities must pay close attention to this factor (Amrina et al., 2020). The occurrence of unmet need is closely related to individuals' attitudes toward birth control programs. Previous studies have shown that attitudes are significantly related to the incidence of unmet need (Abate et al., 2023). Studies on the reasons for unmet need have found that concerns about side effects and health risks are common, particularly in Asia and Latin America (Sedgh & Hussain, 2014). Based on the 2007 Indonesia DHS, Indonesian women with unmet need who do not plan to use contraceptives in the future frequently mention method-related concerns, like the fear of side effects, as a primary reason for not using contraception (Weaver et al., 2013). Women of reproductive age also require a support network. According to data analysis, the primary support system for women was their family (Yulizawati et al., 2022).

Many women report not using modern contraceptives due to fear of side effects, despite the availability of effective methods and evidence indicating that family planning needs are still unmet. A prior study investigated the use of modern family planning in a rural Ghanaian district, focusing on the impact of side effects on women's decisions to begin or continue using these methods. Qualitative interviews revealed significant concerns about side effects stemming from previous experiences with the methods and/or rumors about the short- and long-term effects of family planning use. The cited side effects included menstrual abnormalities (such as heavier bleeding, amenorrhea, or oligomenorrhea), infertility, and complications during childbirth (Schrumpf et al., 2020).

The novelty of this study lies in its analysis of factors associated with unmet need among women of reproductive age at the Padang City Community Health Center. The aim of the study was to determine the factors contributing to the incidence of unmet need in this population.

II. METHODS

This research consists of four stages: data collection, data tabulation, data analysis and presentation, and drawing conclusions, which will be explained in detail (Figure 1). The following research flow chart illustrates how the faculty's research roadmap is being implemented.

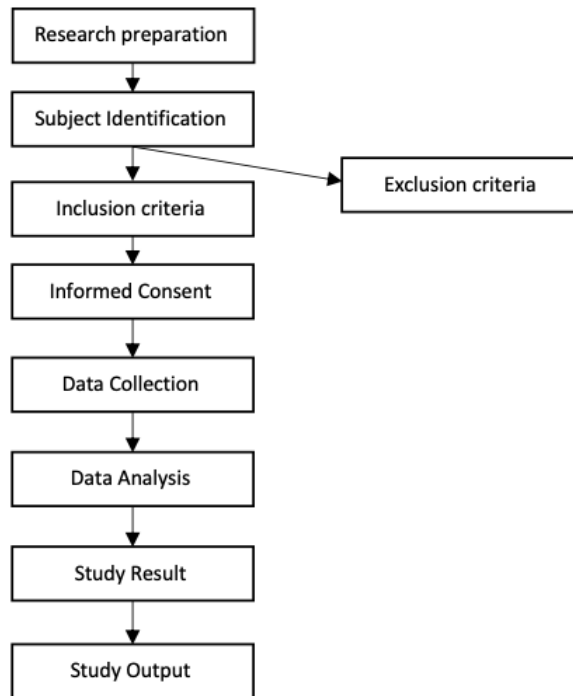


Fig.1 faculty's research roadmap flow chart

Descriptive-analytical research is a type of study that aims to uncover the relationship between independent and dependent variables through a cross-sectional approach. This method involves a simultaneous data collection process for both variables. The study was conducted at the Padang Community Health Center in West Sumatra, in collaboration with Andalas University. The research took place from October 2022 to December 2022.

The quota sampling approach is utilized to determine the number of samples from populations with specific characteristics until the desired number of quotas is met. Based on predetermined criteria, researchers set a sample size of up to 95 participants. The inclusion criteria for this study were women of reproductive age who were married, not pregnant, and willing to participate and provide informed consent. Women of reproductive age who lived separately from their spouses were excluded from the study, as were respondents who did not return to the research area after two visits.

Data collection was carried out using several questionnaires: the unmet need questionnaire, a knowledge questionnaire consisting of 14 questions, an attitude questionnaire consisting of 10 statements, and a side effects questionnaire related to family planning comprising 10 statements. Knowledge levels were assessed and interpreted using a qualitative scale. For categorization, knowledge levels were divided into two groups when studying the general public: a high category if the value was $> 50\%$, and a low category if the value was $\leq 50\%$. Measuring attitude variables

involved having respondents complete a questionnaire provided by the researcher. The Likert scale was employed as a useful tool for assessing individuals' attitudes, opinions, and perceptions toward a specific phenomenon or issue. The Likert scale comprised two forms: positive statements were scored from 5 to 1, while negative statements were scored from 1 to 5. The total score of respondents was calculated by summing up their scores from each statement. To determine the direction of respondents' attitudes, the total respondent score was converted to a T score. Attitudes were ascertained by comparing the T score with the group average using predefined criteria. A negative attitude was indicated when the T score was lower than the average, whereas a positive attitude was indicated when the T score was higher than the average. Utilizing the Guttman scale for measuring side effects involved a strict and consistent scale that provided binary responses: yes or no. A score of 1 was assigned for a correct answer, while a score of 0 was assigned for an incorrect answer.

Researchers initially evaluate hypotheses by conducting normality and linearity tests to determine whether the collected data is normally distributed. Statistical software is applied in the data processing process. The researcher tests assumptions to ascertain whether the obtained data is normally distributed by conducting normality and linearity tests. During the data analysis process, statistical software is utilized by the researcher.

III. RESULT AND DISCUSSION

Based on Table 1, it appears that the majority of women of reproductive age in Padang City fall within the 20-35 age range, with 54 respondents (56.8%). The age range of respondents was broad, with the youngest being 21 years old and the oldest being 47 years old. Most respondents had completed junior high school, with 38 respondents (40.0%) reporting this level of education. Furthermore, 55 respondents (57.9%) had fewer than two children. Out of the 95 respondents, a significant majority of 59 respondents (62.1%) reported an unmet need. Additionally, 40 respondents (42.1%) had a low level of knowledge about family planning, 50 respondents (52.6%) held negative attitudes towards family planning, and 53 respondents (52.8%) reported experiencing side effects from contraceptive use.

Table 1. Characteristics of Women of Reproductive Age in Padang City in 2023

	Characteristic	f	%
Age	20-35 Years	54	56,8
	>35 Years	41	43,2
Education	Did not finish elementary school	6	6,3
	Graduated from elementary school	24	25,3
	Graduated from junior high school	38	40,0
	Graduated from High School	25	26,3
	Graduated from College	2	2,1
Number of children	Enough (< 2)	55	57,9
	Many (> 2)	40	42,1
Unmet Need	Unmet Need	59	62,1
	Met Need	36	37,9
Knowledge Level	Low	40	42,1
	High	55	57,9
Attitude	Negative	50	52,6

Side Effect	Positive	45	47,4
	Yes	53	55,8
	No	42	44,2
Total		95	100,0

Based on Table 2, demonstrates a correlation between low levels of knowledge and unmet needs. Specifically, among the 40 respondents with low knowledge levels, an overwhelming majority of 32 respondents (80.0%) reported unmet needs. Additionally, statistical analyses utilizing the chi-square test with a 95% confidence level yielded a p-value of 0.004, which is below the critical value of 0.05. This signifies that H_a is supported and H_o is rejected, indicating a significant association between knowledge levels and unmet needs among women of reproductive age in Padang City. The results of this study are in line with the results of a previous study, couples of reproductive age with a high level of education are better able to understand and receive information about unmet needs in family planning (Nur et al., 2021)

The results of a study regarding the determinants of the incidence of unmet need for family planning in the work area of the Peukan Bada Community Health Center, Aceh Besar district in 2019 are also in line with the results of this study. The research results obtained a p-value of 0.018, meaning that there is a relationship between knowledge and the incidence of unmet need for family planning. The results of the analysis also obtained $OR=7.93$, meaning that women with low knowledge have a 7 times higher chance of unmet need for family planning compared to women with high knowledge (Safitri et al., 2019).

Knowledge is a guide in forming actions (overt behavior). Based on experience and studies, behavior that is based on knowledge will last longer than behavior that is not based on knowledge. Knowledge is needed as a psychological boost in developing attitudes and behavior every day, this means that knowledge is a stimulation of action (Verplanken & Orbell, 2022)

According to this study, there is a relationship between the level of knowledge and the incidence of unmet need in women of reproductive age in Padang City because many unmet need respondents have a low level of knowledge and only a few unmet need respondents have a high level of knowledge. So it can be concluded that the lower the knowledge of women of reproductive age about family planning, the weaker the woman's desire to become a family planning participant. It is expected for health workers to conduct health education in the selection of suitable contraceptive. According to Oktova et al. (2023) regarding to the effect of health education interventions on knowledge, The results showed that there were significant differences between knowledge before and after the health education intervention using video. The results of the study concluded that there is an influence of health education using video on knowledge, p-value = 0.024 ($p < 0.05$). So that the information could be easily understood by the respondents (Oktova et al., 2023). For this reason, it is hoped that respondents will increase their motivation and curiosity about family planning programs and contraceptive methods.

Table 2. The Relationship Between Knowledge Level and the Incidence of Unmet Need in Women of Reproductive Age in Padang City in 2023

Knowledge Level	The Incidence of <i>Unmet Need</i>				Total		<i>p value</i>
	Unmet Need		Met Need		f	%	
	f	%	f	%			

Low	32	80,0	8	20,0	40	100	0,004
High	27	49,1	28	50,9	55	100	
Total	59	62,1	36	37,9	95	100	

Table 3. show that out of 50 respondents with Negative attitude, 39 respondents (78.0%) had unmet need. The results of statistical tests using the chi square test with a 95% confidence degree obtained p value = 0.002 this value is small from the α which is 0.05. This means that H_a is accepted and H_o is rejected, there is a significant relationship between attitude and the incidence of unmet need in women of reproductive age in Padang City.

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The results of this study are in line with the results of a previous study. The results of the study show that there is a relationship between attitudes and the incidence of unmet need [AOR: 2.21, 95% CI: 1.12–4.34], meaning that unfavorable attitude toward family planning also increases the risk of having an unmet need for family planning. For this reason, a woman with a favorable attitude towards family planning is more likely to use the services compared to a woman with an unfavorable attitude (Dejene et al., 2021).

A positive attitude influences a person's intention to participate in an activity. Based on knowledge and past experiences, attitudes form in humans with specific feelings in response to an object, which then drives action. Attitude is a way of expressing one's inner mood to others. Feeling optimistic and expecting success leads to a positive attitude. Conversely, feeling pessimistic and expecting negative outcomes can result in a negative attitude (Verplanken & Orbell, 2022).

Attitude is key to the acceptance of family planning, as various attitudes can prevent individuals from using family planning methods. Based on the analysis conducted by the researchers, it was concluded that there is a relationship between attitudes and the incidence of unmet needs in women of reproductive age in Padang City. This conclusion is supported by the observation that many respondents with unmet needs had negative attitudes, while only a few had positive attitudes. Knowledge, which influences the attitudes of women of reproductive age towards the family planning program, is a significant factor. Therefore, it is expected that the community will further enhance their knowledge about family planning programs and contraceptive methods.

Table 3. The Relationship Between Attitude and the Incidence of Unmet Need in Women of Reproductive Age in Padang City in 2023

Attitude	The Incidence of <i>Unmet Need</i>				Total		<i>p value</i>
	Unmet Need		Met Need		f	%	
	F	%	f	%			
Negative	39	78,0	11	22,0	50	100	0,002
Positive	20	44,4	25	55,6	45	100	
Total	59	62,1	36	37,9	95	100	

Table 4. shows that out of 53 respondents who have problems with the side effects of contraceptive use, 47 respondents (88.7%) had unmet need. The results of statistical tests using the chi square test with a 95% confidence degree obtained p value = 0.000 this value is small from the α which is 0.05. This means that H_a is accepted and H_o is rejected, there is a significant relationship between the side effects of contraceptive use and the incidence of unmet need in women of reproductive age in Padang City.

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Table 4. The Relationship Between Side Effects of Contraceptive Use and the Incidence of Unmet Need in Women of Reproductive Age in Padang City in 2023

Side Effects	The Incidence of <i>Unmet Need</i>				Total		<i>p value</i>
	Unmet Need		Met Need		f	%	
	f	%	f	%			
Yes	47	88,7	6	11,3	53	100	0,000
No	12	28,6	30	71,4	42	100	
Total	59	62,1	36	37,9	95	100	

The results of this study are in line with the results of previous studies on the effect of side effects of contraceptive use on the incidence of unmet need in Ghana. The results of statistical tests shows that there is an influence of side effects of contraceptive use and the risk of unmet need is greater than mothers who do not experience side effects of contraceptive use (Krakowiak-Redd et al., 2011).

Every contraceptive has side effects, especially hormonal contraceptives such as injectable birth control, birth control pills and implants. Hormones contained in hormonal contraceptives can be progestins and estrogens or progestins only. These hormones can cause different side effects for each person. Eight main categories emerged as reasons for rejecting hormonal contraception: issues related to physical side effects, changes in mental health, negative impact on sexuality, concerns about future fertility, the preference for natural methods, concerns about menstruation, fears and anxiety, and the invalidation of the side effects of hormonal contraceptives (Le Guen et al., 2021).

However, a person's negative perception of an object tends to make someone avoid the object. The results of the 2012 Indonesian Health Demographic Study (IDHS) stated that one of the reasons someone does not use contraceptives is worry or fear of side effects (BPS RI, 2012). This also happened in Padang City. After conducting interviews with respondents, it was found that there are still many respondents who are afraid to use contraceptives because of side effects and there are also respondents who do not get permission from their husbands to use contraceptives because of these side effects. The use of educational media can be done to improve output. The study highlights how mobile applications can be useful tools for educating people, which will

ultimately help women make better decisions and have better health outcomes (Yulizawati et al., 2023).

Therefore, this study concludes that there is a relationship between side effects of contraceptive use and the incidence of unmet need in women of reproductive age in Padang City due to the large number of unmet need respondents who have problems with side effects produced by contraceptives and only a few respondents who do not have problems with side effects produced by contraceptives. So it is expected for couples of reproductive age and health workers to conduct counseling in the selection of suitable contraceptives.

IV. CONCLUSION

The rising prevalence of unmet need is a concerning trend. The study's results underscore a significant relationship between knowledge levels, attitudes, the side effects of contraceptive use, and the incidence of unmet need among women of reproductive age. These findings suggest that addressing these factors could serve as an effective strategy for reducing the incidence of unmet need among women of reproductive age in Indonesia. To mitigate the prevalence of unmet family planning needs, there is a critical need for health providers to enhance family planning awareness and improve understanding of the importance of utilizing family planning among women of childbearing age. By prioritizing education and awareness-raising efforts, we can empower women to make informed decisions about their reproductive health and ultimately improve health outcomes for both individuals and communities.

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