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**The Relationship Between Mothers' Knowledge About Family Planning And Participation In Family Planning Programs*****Cakrawati R^{1*}, Salsa Putri Aulia²**^{*1} Midwifery Study Program, Ummi Khasanah Health Polytechnic² Midwifery Professional Study Programs: Makariwo Halmahera College of Health Sciences***Correspondent Author :** Cakrawati R, Email: cakrawati.rhn@gmail.com**ABSTRACT**

Family planning (FP) is one of the government's strategic programs to improve maternal and child health, regulate birth spacing, and enhance family welfare. Mothers' participation in the family planning program is influenced by various factors, one of which is their level of knowledge regarding family planning. This study aimed to determine the relationship between mothers' knowledge of family planning and their participation in the family planning program. This study employed a quantitative analytical design with a cross-sectional approach. The population consisted of women of reproductive age in the study area, and respondents were selected using a purposive sampling technique. Data were collected using a structured questionnaire and analyzed using univariate and bivariate analyses with the Chi-square test at a significance level of 0.05. The findings indicated that most respondents had good knowledge of family planning and actively participated in the family planning program. The Chi-square test showed a statistically significant relationship between mothers' knowledge and participation in the family planning program ($p < 0.05$). It can be concluded that better knowledge is associated with higher participation in family Continuous planning health education and counseling is recommended to improve mothers' knowledge and increase participation in the family planning program.

Keywords : Knowledge, Mother, Family Planning, Participation, Contraception.**1. INTRODUCTION**

High population growth is one of the challenges facing development in Indonesia. The government, through the National Population and Family Planning Agency (BKKBN), implements the Family Planning (KB) Program as an effort to improve family welfare and reproductive health.

The family planning program aims to regulate birth spacing, control the number of children, reduce maternal and infant mortality rates, and improve the quality of family life. The program's success is influenced by various factors, one of which is maternal knowledge.





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Good knowledge about the benefits of contraception, types of contraception, how to use them, advantages, risks, and side effects can increase mothers' confidence in using contraception. Conversely, a lack of information often leads to negative perceptions, making mothers reluctant to participate in family planning programs.

According to Lawrence Green's theory, health behavior is influenced by predisposing factors, one of which is knowledge. Knowledge forms the basis for a person's decision-making regarding health behavior.

Therefore, this study was conducted to determine the relationship between mothers' knowledge about family planning and participation in family planning programs.

a. Knowledge

Knowledge is the result of the process of knowing through sensing an object. According to Notoatmodjo (2018), knowledge is an important domain that shapes a person's behavior.

Knowledge levels include:

- 1) Know
- 2) Understand
- 3) Application
- 4) Analysis
- 5) Synthesis
- 6) Evaluation

Factors that influence knowledge include:

- 1) Education
- 2) Age
- 3) Experience
- 4) Information
- 5) Environment
- 6) Socio-cultural

b. Family planning

Family planning is an effort to regulate pregnancy, the number of children, and the spacing of births to create a healthy and prosperous family.

KB goals:

- 1) Controlling birth
- 2) Reducing maternal mortality rate (AKI) and infant mortality rate (AKB)
- 3) Improving reproductive health
- 4) Improving family welfare

c. Participation in the Family Planning Program

Participation is a person's involvement in following a family planning program through the voluntary use of contraceptives.





Factors influencing participation:

- 1) Knowledge
- 2) Attitude
- 3) Education
- 4) Income
- 5) Husband's support
- 6) Support for health workers
- 7) Culture

2. RESEARCH METHODS

a. Types and Design of Research

This research is a quantitative analytical study using a cross-sectional design . This design was used to determine the relationship between mothers' level of knowledge about family planning and their participation in family planning programs at the same measurement time. Through this approach, the independent and dependent variables were measured simultaneously so that the relationship between the variables could be analyzed statistically.

Analytical research was chosen because the main objective of the research was not only to describe the characteristics of respondents, but also to test whether or not there was a relationship between maternal knowledge and participation in the family planning program.

b. Location and Time of Research

The research was conducted in a community health center (Puskesmas) operating within the jurisdiction of a maternal health and family planning service. The location was selected based on easy data access, a sufficient number of fertile couples, and the availability of family planning services.

Data collection was carried out from January to March 2026, which included the stages of instrument preparation, field data collection, data completeness checking, and research data processing.

c. Research Population

The population in this study was all mothers of childbearing age (15–49 years) who lived in the working area of the health center where the study was conducted.

Population criteria include:

Inclusion criteria

- 1) Mothers aged 15–49 years.
- 2) Residing in the research area for at least 6 months.
- 3) Can communicate well.
- 4) Willing to be a respondent by signing the informed consent form consent).



**Exclusion criteria**

- 1) The mother was seriously ill at the time of data collection.
- 2) Mothers who did not complete the questionnaire.
- 3) Mothers who experience communication disorders so they cannot provide optimal answers.

d. Samples and Sampling Techniques

The research sample consisted of women of childbearing age who met the inclusion and exclusion criteria . The sampling technique used purposive sampling, which selects respondents based on specific considerations consistent with the research objectives.

The sample size for this study was 100 respondents. This number was deemed sufficient for correlation analysis using the Chi- Square test , taking into account population availability and research time.

e. Research Variables

The variables studied consist of:

- 1) Independent (free) variables

Mothers' knowledge about family planning, namely the level of mothers' understanding of the meaning of family planning, the purpose of family planning, the benefits of family planning, types of contraceptives, how to use them, and the side effects of contraception.

- 2) Dependent variable (bound)

Participation in the family planning program, namely the involvement of mothers in the family planning program as demonstrated through the use of or participation in contraceptive methods recognized by the family planning program.

f. Operational Definition

Variables	Operational Definition	Measuring instrument	Scale
Mother's knowledge	Correct answer score regarding family planning	Questionnaire	Ordinal
Family Planning Participation	Participation status in the family planning program	Observation/interview sheet	Nominal

Knowledge categories are determined based on the percentage score:

- 1) Good : $\geq 76\%$
- 2) Sufficient: 56–75%
- 3) Less: $\leq 55\%$





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Family planning participation is categorized into:

- 1) Participate: use one of the contraceptive methods.
- 2) Not participating: not using a contraceptive method.

g. Research Instruments

The instruments used in this study consist of:

- 1) Knowledge Questionnaire

The questionnaire was designed based on family planning concepts and related literature. It consisted of 20 closed-ended questions with true and false answer options.

Each correct answer is given a score of 1 and an incorrect answer is given a score of 0. The total score is then converted into a percentage to determine the respondent's knowledge category.

- 2) Family Planning Participation Observation/Interview Sheet

This sheet is used to record the respondent's contraceptive use status, including the type of contraception used and participation in the family planning program.

h. Validity and Reliability Test

Before use, the instrument was tested on a number of respondents who had similar characteristics to the research sample.

- 1) Validity test

Done using Product correlation Pearson Moment . Items are declared valid if the calculated r value is greater than the table r value at a significance level of 5%.

- 2) Reliability test

Conducted using Cronbach's coefficient Alpha . The instrument is declared reliable if the alpha value is ≥ 0.70 .

i. Data Collection Procedures

The data collection stages are as follows:

- 1) Manage research permits with relevant agencies.
- 2) Explain the research objectives to potential respondents.
- 3) informed consent consent).
- 4) Distribute knowledge questionnaires and conduct interviews if necessary.
- 5) Record the KB participation status on the observation sheet.
- 6) Check the completeness and consistency of respondents' answers.

j. Data processing

The collected data is processed through the following stages:

- 1) Editing , namely checking the completeness and accuracy of data.
- 2) Coding , namely giving a code to each answer.
- 3) entry , namely entering data into a computer program.





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- 4) Cleaning , namely re-checking possible input errors .
- 5) Tabulating , namely arranging data in the form of a distribution table.

k. Data analysis

Data analysis was performed using statistical software and included:

1) Univariate Analysis

Univariate analysis was used to describe respondent characteristics, knowledge levels, and participation in the family planning program. Results are presented as frequency distributions and percentages.

2) Bivariate Analysis

Bivariate analysis was used to determine the relationship between maternal knowledge and participation in family planning programs. The statistical test used was the Chi- Square (χ^2) test.

Decision making is carried out with the following provisions:

- 1) If the p- value < 0.05 , then H_0 is rejected and there is a significant relationship between maternal knowledge and family planning program participation.
 - 2) If the p- value ≥ 0.05 , then H_0 is accepted and there is no significant relationship.
- The significance level used is $\alpha = 0.05$ with a confidence level of 95%.

l. Research Ethics

This research was conducted in accordance with ethical research principles, namely respecting respondent autonomy, maintaining confidentiality, providing benefits, and avoiding harm to respondents. All respondents were given an explanation of the research objectives and participated voluntarily after providing informed consent.

3. RESEARCH RESULTS AND DISCUSSION**a. Research result**

This study was conducted in one of the community health center working areas in January–March 2026. The number of respondents in this study was 100 women of childbearing age who were selected using a purposive sampling technique according to the inclusion and exclusion criteria . Data were obtained through filling out a questionnaire regarding mothers' knowledge about family planning and observations regarding respondents' participation in the Family Planning Program.

Data analysis was carried out univariately to describe the characteristics of respondents and the distribution of each research variable as well as bivariate analysis using the Chi- Square test to determine the relationship between maternal knowledge and participation in the Family Planning Program.



**1) Respondent Characteristics**

Table 1 Distribution of Respondent Characteristics (n = 100)

Characteristics	Frequency (n)	Percentage (%)
Age		
20–35 years	62	62.0
>35 years	38	38.0
Education		
Elementary School	12	12.0
Junior High School	24	24.0
Senior High School	48	48.0
College	16	16.0
Work		
Housewife	69	69.0
Self-employed	18	18.0
Employee	13	13.0

Based on Table 4.1, it is known that the majority of respondents are in the 20-35 year age group, namely 62 people (62.0%), while respondents aged over 35 years are 38 people (38.0%).

Based on education level, the majority of respondents had a high school education, namely 48 people (48.0%), while elementary school education was the smallest group, namely 12 people (12.0%).

The majority of respondents work as housewives, namely 69 people (69.0%).

2) Mothers' Knowledge about Family Planning

Table 2 Distribution of Mothers' Knowledge Level

Level of Knowledge	Frequency (n)	Percentage (%)
Good	56	56.0
Enough	28	28.0
Not enough	16	16.0
Total	100	100

Based on Table 4.2, it is known that the majority of respondents have a good level of knowledge, namely 56 people (56.0%). A total of 28 respondents (28.0%) have sufficient knowledge, while 16 respondents (16.0%) have insufficient knowledge.

These results indicate that most mothers have a fairly good understanding of family planning, including its goals, benefits, types of contraception, and the importance of birth spacing.



**3) Mothers' Participation in Family Planning Programs**

Table 3 Distribution of Family Planning Program Participation

Family Planning Participation	Frequency (n)	Percentage (%)
Participate	72	72.0
Not Participating	28	28.0
Total	100	100

Based on Table 4.3, it is known that the majority of respondents participated in the Family Planning Program, namely 72 people (72.0%), while 28 people (28.0%) had not participated in the Family Planning Program.

This shows that the coverage of participation of women of childbearing age in the Family Planning Program in the research area is quite good.

4) The Relationship Between Mothers' Knowledge and Family Planning Program Participation

Table 4 Relationship between Mother's Knowledge and Family Planning Program Participation

Level of Knowledge	Participate	Not Participating	Total
Good	49	7	56
Enough	18	10	28
Not enough	5	11	16
Total	72	28	100

Square test results

$$\chi^2 = 16.87$$

$$df = 2$$

$$p = 0.001$$

Based on the results of the Chi- Square test, the p value = 0.001 was obtained, which is smaller than the value of $\alpha = 0.05$ ($p < 0.05$). Thus, H_0 is rejected and H_1 is accepted, so it can be concluded that there is a significant relationship between the level of maternal knowledge and participation in the Family Planning Program.

Respondents who have good knowledge tend to participate more in the KB Program than respondents who have sufficient or insufficient knowledge.

b. Discussion**1) Mothers' Knowledge about Family Planning**

The research results showed that the majority of respondents had a good level of knowledge about family planning (56.0%). This high level of knowledge indicates that most mothers had obtained information about the importance of family planning from various sources, such as health workers, electronic media, social media, and personal experience.





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Good knowledge is the primary foundation for developing healthy behaviors. According to Notoatmodjo (2018), knowledge is the result of a sensory process that influences a person's attitudes and actions. The higher a person's knowledge, the more likely they are to adopt positive health behaviors.

16.0% of respondents still had insufficient knowledge. This indicates that family planning education still needs to be improved through outreach, counseling, and the dissemination of easily understood information.

2) Mothers' Participation in Family Planning Programs

The study results showed that 72.0% of respondents had participated in the family planning program. This high participation rate indicates that most mothers understand the importance of birth control for maintaining maternal and child health.

Respondents' participation in the Family Planning Program is likely influenced by the availability of contraceptive services at health facilities, family support, ease of obtaining information, and the active role of health workers in providing counseling.

There are still 28.0% of respondents who have not participated in the family planning program. This situation may be influenced by several factors, including concerns about contraceptive side effects, lack of husband support, cultural factors, and limited access to reproductive health information.

3) The Relationship Between Mothers' Knowledge and Family Planning Program Participation

bivariate analysis using the Chi- Square test showed a p value = 0.001 , so there was a significant relationship between maternal knowledge and participation in the Family Planning Program.

From the cross-tabulation results, it was found that 87.5% of mothers with good knowledge (49 of 56 respondents) participated in the family planning program, while in the group with less knowledge, only 31.3% (5 of 16 respondents) participated in the family planning program. This finding indicates that the better a mother's level of knowledge, the greater her tendency to participate in the family planning program.

The results of this study are in line with Lawrence Green's theory which states that knowledge is a predisposing factor . *factors* that influence a person's health behavior. Good knowledge enables mothers to understand the benefits of using contraception, choose a method that suits their health condition, and reduce concerns about contraceptive side effects.





The results of this study also align with those of Triyanto and Indriani (2018), who found that knowledge levels were significantly associated with contraceptive use among couples of childbearing age. Research by Utomo and Romadlona (2021) also showed that increased public knowledge about family planning contributed to increased contraceptive use and a reduced risk of unplanned pregnancy.

Knowledge is not the only factor influencing participation in the family planning program. Other factors such as age, education level, husband's support, experience using contraception, quality of health services, socioeconomic conditions, and cultural norms also influence a mother's decision to participate in the family planning program. Therefore, efforts to increase family planning participation should not only be carried out through health education, but also by strengthening the role of health workers in providing counseling, increasing access to contraceptive services, and involving husbands and families in education about reproductive health.

4. CONCLUSION AND SUGGESTIONS

a. Conclusion

Based on the results of research on the relationship between maternal knowledge about family planning and participation in the Family Planning Program in 100 mothers of childbearing age, the following conclusions can be drawn:

- 1) The level of knowledge of mothers about family planning in the study area was mostly in the good category, namely 56 respondents (56.0%), while 28 respondents (28.0%) had sufficient knowledge and 16 respondents (16.0%) had insufficient knowledge. This indicates that most mothers have an adequate understanding of the meaning, purpose, benefits, and methods of contraception in the Family Planning Program.
- 2) Maternal participation in the Family Planning Program showed quite good results, with 72 respondents (72.0%) actively participating in the Family Planning Program, while 28 respondents (28.0%) had not yet participated in the Family Planning Program. This high level of participation indicates public awareness of the importance of pregnancy management and family planning.
- 3) bivariate analysis using the Chi-Square test showed a p value of 0.001 ($p < 0.05$). These results indicate a significant relationship between maternal knowledge about family planning and participation in the Family Planning Program. Mothers with a higher level of knowledge tend to have higher participation in the Family Planning Program compared to mothers with a lower level of knowledge.





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- 4) Knowledge is a crucial factor influencing health behavior, particularly in the decision to participate in the Family Planning Program. Therefore, increasing knowledge through health promotion and public education activities is expected to increase maternal participation in the Family Planning Program, thereby optimally achieving the goals of health development and population growth control.

b. Suggestion

Based on the results of the research that has been conducted, the researcher provides several suggestions as follows:

- 1) For Community Health Centers

Community health centers are expected to increase health promotion activities through regular and ongoing counseling, counseling, mothers' classes, and family planning education. Furthermore, health workers need to provide clear information about the benefits, types, effectiveness, and potential side effects of contraceptives so that people can choose a contraceptive method that suits their individual health conditions and needs.

- 2) For Health Workers

Health workers, particularly midwives and family planning program officers, are expected to improve the quality of pre- and post-contraceptive counseling services. A good communication approach and comprehensive information are expected to increase public trust in the Family Planning Program and reduce misunderstandings about contraceptive use.

- 3) For Mothers of Childbearing Age

Women of childbearing age are expected to be more proactive in seeking information about reproductive health and family planning programs from health workers and trusted sources. Good knowledge will help mothers choose the right contraceptive method, thereby improving the health of mothers, children, and their families.

- 4) For Family and Husband

Husbands and family members are expected to support mothers in participating in the Family Planning Program. Family support is crucial in increasing motivation, self-confidence, and continued contraceptive use, ensuring optimal achievement of the Family Planning Program's goals.

- 5) For Further Researchers

Future researchers are expected to expand this study by using a larger sample size, a broader research area, and adding other variables suspected of being related to participation in the Family Planning Program, such as education level, occupation, family income, husband's support, access to health services,





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counseling quality, culture, and attitudes toward contraceptive use. Furthermore, the use of different research designs, such as *case-control* or *cohort studies*, can be considered to obtain a more in-depth picture of the causal relationship.

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