

Knowledge, Attitudes, And Adherence Of Mothers To Contraceptive Use

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Abstract: This study determined the knowledge, attitude, and adherence of mothers to contraceptive use. It dealt with the profiles of the mothers like their age, civil status, highest educational attainment, number of years using the contraceptive, and the type of contraceptive use. A descriptive research design was used in the study utilizing different statistical tools like frequency and percentage, t-test, weighted mean, and analysis of variance (ANOVA). The respondents were young adults, who had their own families, did not pursue tertiary education, had jobs earning an average amount, with an average number of children, mostly used pills, used contraceptives for few years, and all of them got their supply in the health center. The respondents were knowledgeable on the use of contraceptives, and moderately observed the different instructions provided by the health care providers. Mothers below 20 years old, with more children and longer years of using contraceptives, have higher levels of adherence. Younger mothers perceived that adherence to the use of contraceptives will help them prevent unwanted pregnancies. No significant difference was detected in adherence to the use of contraceptives as indicated in the computed t-value of -1.125. Significant differences exist in knowledge and attitude. College undergraduates whose family income is between 10,001-20,000 pesos have a significantly higher extent of knowledge and a more positive attitude. Employed mothers have a higher extent of knowledge on the use of contraceptives as compared to unemployed ones. towards the use of contraceptives. Those with higher educational attainment, and longer use of contraceptives, have more positive attitudes towards the use of contraceptives. Further studies can be replicated in a wider perspective to further improve the knowledge, attitudes, and adherence of mothers on contraceptive use.

Keywords: adherence, attitudes contraceptive, knowledge, perspective

1. Introduction

Family planning involves intentionally limiting or spacing the number of children a couple has through contraceptive methods. Spacing out births can lead to an improved quality of life, avoiding unwanted pregnancies and abortions, and preventing sexually transmitted diseases for the mother, fetus, and family [9].

Maternal health problems remain a primary global concern since pregnancy and childbirth are the leading causes of morbidity and mortality among reproductive-age women. Evidence has shown that encouraging early antenatal care visits, institutional deliveries, postnatal care, and contraceptive adoption are the key elements in improving safe motherhood. As the first pillar of safe motherhood and an essential component of primary health care, contraceptives are crucial in reducing maternal and newborn morbidity and mortality by preventing unintended pregnancy and close birth intervals.

Knowledge of family planning is considered the first stage toward adopting a contraceptive method. Lack of adequate knowledge and awareness is associated with a lack of contraceptive use among young women.

Its use is associated with having previously been pregnant, meaning it is only after pregnancy that young women are educated about and subsequently offered contraceptive services. Lack of awareness and poor knowledge of contraceptive methods is common among young women seeking abortion. Many reported familiarities with contraceptives to be having misinformation, and very few knew the correct use timing. Lack of detail and accurate information on contraceptives has resulted in a reluctance to adopt the family planning method as some will want to know

its side effect and contraindications [17].

Community health centers and public health departments involving primary care physicians can be essential partners in expanding the existing network of family planning providers and ensuring women obtain the reproductive health care they need. However, the more limited scope of family planning services currently offered by many of these agencies suggests that they will only be successful if they provide technical assistance to enhance and strengthen these services, such as skills training to provide a full range of contraceptive methods and education about evidence-based practices that will facilitate women's timely access to care. Using contraceptives can help prevent unintended pregnancies and unsafe abortions, preventing at least 25% of all maternal deaths. Additionally, contraceptives can protect against sexually transmitted infections (STIs). It is essential to be aware of these benefits, which include the Human Immunodeficiency Virus (HIV), which can transmit through sexual contact. Severe health concerns, Chlamydia, Syphilis, a lack of knowledge of contraceptive methods, source of supply, cost, or poor accessibility are the barriers in developing countries. [16].

In their study, [9] found that the level of knowledge and attitude toward the usage of family planning was rare, and its utilization level could have been higher than many studies. Study participants' residence, marital status, educational level, occupation, age, knowledge, attitude, family size, and monthly average income were associated with the Family planning utilization habit of reproductive-age women. Every health worker should holistically teach the community about family planning to increase awareness and enhance family planning utilization. Besides, more studies are needed to investigate thoroughly. This article explores why some

individuals may choose not to use family planning methods. Are necessary.

The oral contraceptive pill is the most widely used method of contraception and, when adhered to perfectly, is 99% effective at preventing pregnancy. However, adherence to the pill is relatively low. Knowledge is essential in continuing the pill, and previous research shows the importance of health literacy in adhering to medication for chronic illnesses. However, its role has yet to be in this behavior. Results showed a strong positive correlation between health literacy and adherence and moderate associations between health literacy and knowledge and knowledge and adherence. It concluded that Family planning clinics should consider assessing the patient's health literacy before prescribing the pill to ensure patients fully understand the requirements. [10].

[8] study showed women's proper knowledge, attitude, and practice toward family planning (FP). This study found that various factors were linked to family planning, including where individuals lived, marital status, education level, age, occupation, knowledge and attitude towards family planning, number of children, and monthly household income. The study aimed to evaluate the knowledge and attitude toward family planning and the practice of family planning among women of reproductive age in the South Achefer District of Northwest Ethiopia. In this study, the level of knowledge and attitude toward family planning was relatively low, and the level of family planning utilization was relatively low compared to many studies. Every health worker should holistically teach the community about family planning to increase awareness and enhance family planning utilization.

Most reproductive-age women have limited or inaccurate knowledge about family planning methods, even if they know some contraceptives' names. They do not know where to get them or how to use them. These women have a negative attitude toward family planning, while some have heard false and misleading information [9].

[17] conducted a study on the knowledge, Attitude, and Practice of Contraceptive use among post-partum women in Ethiopia. Only 98 (92.5%) respondents had heard about family planning. About 65.7% of respondents have good knowledge, and 34.3% have poor knowledge. Out of 106 respondents had a positive attitude towards contraceptive, and the remaining 32 (30.2%) had a negative attitude. Of 106 respondents, 62 had a safe practice, and the remaining 44 were unsafe practices towards contraceptives.

Nearly two-thirds of respondents were knowledgeable. More than two third of respondents were a positive attitude towards contraceptives. More than four-fifths were interested to know about family planning. More than half of the respondents had a safe practice, and about four-fifth of respondents used contraceptives to prevent unwanted pregnancy [17].

[13] study focused on predictors of contraceptive adherence and related outcomes among women in the reproductive age

group. Women with primary or no education reported having short birth intervals of less than two years. In addition, women with primary or no education were more likely to be non-adherent to contraceptives. Education empowers women; at higher education levels, women are more likely to conceptualize better the benefits of child spacing concerning their health choices, their children's health, and their family size goals. They are more likely to negotiate contraceptive use with their partners. They could partly explain why women with primary or no education were more likely to report a lack of partner support, a short birth interval of less than two years, and discontinued contraceptive use for reasons other than pregnancy. Multiple studies support the findings that education was associated with self-efficacy and increased the chances of understanding contraceptive information. Both literature and the findings indicate that side effects are a significant factor in discontinuing contraceptive use. Women with high education levels are probably better placed to understand the meaning and management of these side effects. In addition, of several participants, 65.4% reported switching contraceptive methods mainly due to side effects and convenience.

It concluded that low levels of education, lack of male partner support, low perceived benefit from contraceptive adherence, and self-efficacy were associated with poor adherence and related outcomes. The findings of this study have important implications for the development of effective family planning programs that encourage contraceptive adherence, especially targeting specific groups like the male partner.

[2] conducted a study on the knowledge, attitudes, and practices on the use of contraceptives. Most participants had undergraduate and graduate levels of education, were employed, earned more than 5000 riyals, were married for more than five years, and about one-third had not been pregnant. It showed good knowledge about oral contraception due to the higher levels of education among the majority of participants. However, knowledge did not significantly affect the use pattern, revealing that women in the Jazan region had a positive attitude toward Oral Pill use. They found that pills are considered adequate and preferred over all other methods of contraception. Side effects were the most feared. However, the results of this study indicate that attitude, knowledge, and prior experience with Oral Pills have no significant effect on the usage pattern of OCP among women in the Jazan region.

The study of [6] on adherence to oral contraceptive use confirmed that different beliefs and psychological processes were involved in adherence to oral contraception. More psychological processes were involved in non-adherence. Psychological reactance contributed most to explaining non-adherence in women who used the Oral Contraceptive Pill (OCP) to prevent unintended pregnancies. Conversely, women with gynecological problems reported difficulties in adherence, mainly due to their beliefs about contraceptive pills. The findings indicate that attitudes toward medication and psychological processes can play an essential role in adherence to OCP, including reasons for using the pill. Identifying the psychological factors and beliefs linked with

contraception could guide health professionals to provide counseling to women, thus increasing their adherence to medication and maximizing their health and well-being.

Conceptual/Theoretical Framework

The study utilized the theory of [1] on The Theory of Planned Behavior (TPB). Originally called the Theory of Reasoned Action, its purpose was to forecast an individual's intention to engage in a particular behavior at a specific time. The theory intends to explain all behaviors over which people can exert self-control. The main factor that drives this model is behavioral intent. People's behavior is influenced by their attitude toward the expected outcome and how they evaluate the associated risks and benefits.

This affects their intention to act at a specific time and place. The Theory of Planned Behavior (TPB) was created to explain behaviors that people can control. TPB has successfully predicted and explained different health

behaviors and intentions. According to TPB, success in behavior depends on motivation (intention) and ability (behavioral control). TPB also divides beliefs into three types: behavioral, normative, and control.

The study dealt with mothers' knowledge, attitudes, and adherence to contraceptive use in the City Health Office IV, Urdaneta City. Box number 1 is the input that includes the respondents' profile has been evaluated based on their age and civil status, highest educational attainment, occupation, monthly family income, number of children, number of years using contraceptives, type of contraceptive used, and source of contraceptive. It also deals with mothers' knowledge, attitudes, and adherence to contraceptive use. Box number two dealt with the Process that includes data gathering, interpretation, and analysis of data. Box number three dealt with the proposed Output to improve mothers' knowledge, attitudes, and adherence to contraceptive use.

Research Paradigm

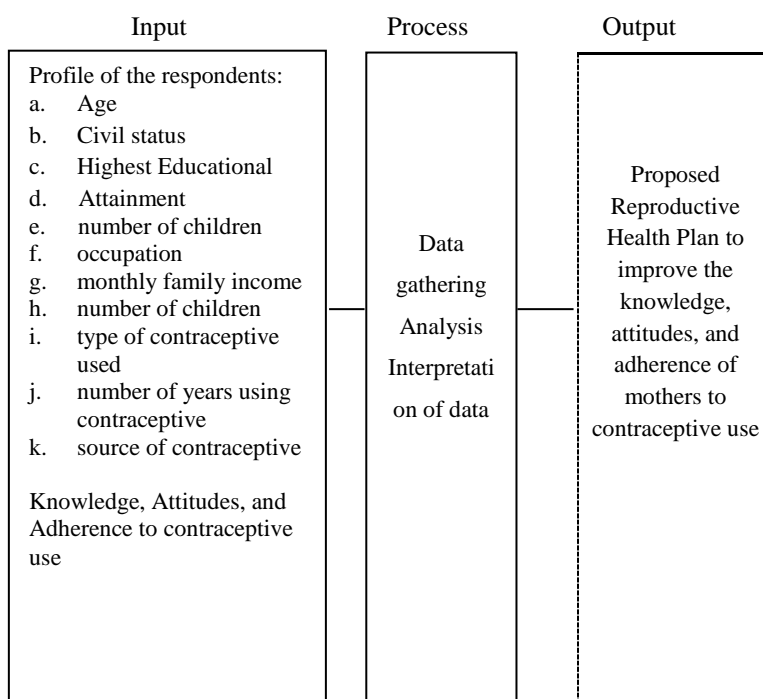


Figure 1. A schematic illustration of the variables used in the study.

Statement of the Problem

The study determined the knowledge, attitudes, and adherence to contraceptives among mothers registered at the Family Planning clinic at the City Health Office IV, Urdaneta City.

The study aimed to address these specific sub-problems:

1. What is the profile of the respondents in terms of their;
 - a. age;
 - b. civil status;
 - c. highest educational attainment;
 - d. occupation;
 - e. monthly family income;
 - f. number of children;
 - g. number of years using contraceptives;
 - h. type of contraceptive used; and

- i. Source of contraceptive?
2. What is the extent of the respondent's knowledge of contraceptives?
3. What are the attitudes of the respondents towards the use of contraceptives?
4. What are the reasons for the respondent's adherence to contraceptive use?
5. Is there a significant difference between mothers' knowledge, attitudes, and practices and their profile variables?
6. Is there a significant relationship between the respondents' knowledge, attitudes, and practices across their profile variables?
7. What proposed reproductive health plan can be

formulated to improve their knowledge, attitudes, and adherence to contraceptive use?

Null Hypotheses

This study was tested in its null form at 0.05 level of significance that:

1. There is no significant difference between the knowledge, attitudes, and practices of mothers and their profile variables
2. There is no significant relationship between the knowledge, attitudes, and practices of the respondents across their profile variables

2. Methodology

This chapter presents the research design, the research methods and techniques used, the population and locale of the study, the data gathering instrument and procedures, and the statistical tools used to treat data.

2.1 Research Design

The study utilized descriptive quantitative as the research design. It determined the profiles of the respondents, the knowledge, attitudes, and adherence of mothers on contraceptives.

According to [3], descriptive research is the Process that goes beyond gathering and tabulating data. It involves an element of interpretation of the meaning and the significance of what is described. Thus, description is often combined with comparison and contrast involving the measurements, classifications, interpretation, and evaluation.

2.2 Population and Locale of the Study

The study's respondents were the mothers who were family planning acceptors in the City Health Office IV-Camanang of Urdueta City. It was limited to the mothers registered with the CHO IV Camanang and regularly submitted for check-up. The respondents were selected through convenience sampling.

2.3 Data Gathering Instrument

The instrument used in gathering the data was a survey questionnaire adapted from related studies and readings on the use of contraceptives. In Part I, we discussed the respondents' demographic profile, including their age and civil status, highest educational attainment, occupation, monthly family income, number of years using the contraceptive, type of contraceptive method used, and source of contraceptive. Parts II, III, and IV focused on the knowledge, attitudes, and reasons for mothers' adherence to contraceptive use.

2.4 Data Gathering Procedure

Before data gathering, the researcher prepared a letter of approval addressed to the City Health Officer thru the Public Health Nurse to administer questionnaires. After approval, questionnaires were administered to the respondents. Instructions were integrated for them to accomplish clearly. Furthermore, the confidentiality of the personal information gathered from and given by the respondents and the anonymity of their identities was strictly observed throughout the study.

Data collected were subjected to statistical treatment. The responses were tallied and computed using appropriate statistical treatment, interpreted, and analyzed accordingly.

2.5 Statistical Treatment of Data

Different statistical tests were used in the study. Part I will utilize the frequency counts and percentages.

Formula: $\% = f / n \times 100$

Where: % = is the relative frequency

f = frequency

n = number of respondents

Percentage- is computed to determine the proportional part to a whole, such as given numbers of respondents with the entire population.

Formula: $P = f / n \times 100$

Where: P = percentage

f = frequency

n = total number of respondents

A weighted mean was used for Part II, III, and IV on mothers' knowledge, attitudes, and adherence to contraceptive use. It is determined by multiplying the frequency and weight and by dividing the frequency using the following formula:

Weighted Mean

WM

$$= \frac{\sum wf}{N}$$

Where: WM = weighted mean

wf = the sum of the product of the frequency and unit weight

N = total number of cases

Statistical Limit	Descriptive Equivalent	Transmuted Rating
A 4.50-5.00	Always	Highly Knowledgeable
B 3.50-4.49	Often	Knowledgeable
C 2.50-3.49	Sometimes	Moderately Knowledgeable
D 1.50-2.49	Seldom	Slightly Knowledgeable
E 1.00-1.49	Never	Not Knowledgeable
Statistical Limit	Descriptive Equivalent	Transmuted Rating
A 4.50-5.00	Always	Highly Observed
B 3.50-4.49	Often	Observed
C 2.50-3.49	Sometimes	Moderately Observed
D 1.50-2.49	Seldom	Slightly Observed
E 1.00-1.49	Never	Not Observed
Statistical Limit	Descriptive Equivalent	Transmuted Rating
A 4.50-5.00	Always	Highly Agree
B 3.50-4.49	Often	Agree
C 2.50-3.49	Sometimes	Moderately Agree
D 1.50-2.49	Seldom	Slightly Agree
E 1.00-1.49	Never	Disagree

For the fourth and fifth questions, which pertain to the comparative and correlational study applied to determine the Difference and relationship between the knowledge, attitudes, and adherence to contraceptive use and their profile variables, Analysis of Variance was used to test the Difference. In contrast, Chi-Square was used to test the relationship between variables.

Analysis of Variance (ANOVA)

$$F = \frac{MSb}{MSw}$$

Where:

MSb = Mean Square Between

MSw = Mean Square Within

Chi-Square

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Where: O =observed number of cases

$$E = \frac{(\text{row total})(\text{column total})}{\text{Total}}$$

3. Results and Discussions

This chapter presents the tabulation of the information gathered with the corresponding evaluation and elucidation of the study regarding the following:

Respondents' Profile

The profile of the respondents is displayed in Table 1 in terms of their personal information, namely: age, civil status, highest educational attainment, occupation, monthly family income, number of children, type of contraceptive used, number of years using the contraceptive, and the source of contraceptive with the corresponding frequency count (f), and percentage equivalent (%) of each bracket.

Age. It can be gleaned from the table that most of the respondents are in the age bracket of 21-30 years old, with a frequency of 29, or 48.3%, followed by the age bracket 31-40, with a frequency of 19, or 31.7% and below 20 years old with a frequency of 12 or 20%. It implies that the respondents are in the early adulthood stage of development. According to [5], young adulthood happens between eighteen and forty when people explore personal relationships.

Civil status. Most respondents were married, with a frequency of 41 or 68.3%, followed by single mothers, with a frequency of 19 or 31.7%. It has been discovered that the mothers are currently in marriages. For young adults, it is essential to establish intimate and affectionate relationships with others. Success in this area can lead to solid and lasting relationships. [5] emphasized the importance of developing close and committed bonds with others, and those who can do so successfully will enjoy secure and lasting relationships.

Table 1

Distribution of Respondents in Terms of Their Profile Variables n=60

Profile Variables	Frequency	Percentage
Age (in years)		
Below 20	12	20.0
21 – 30	29	48.3
31 – 40	19	31.7
Civil Status		
Single	19	31.7
Married	41	68.3
Highest Educational Attainment		
high school graduate	46	76.7
college undergraduate	14	23.3
Occupation		
Unemployed	29	48.3
Employed	31	51.7
Monthly Family Income		
Below P10,000	19	31.7
P10,001 – P20,000	41	68.3
Number of Children		
1 – 2	19	31.7
3 – 4	29	48.3
5 and above	12	20.0
Type of Contraceptive Used		
Pills	38	63.3
Injectables	17	28.3
Implant	5	8.3
Number of Years using the Contraceptive		
Below 1	12	20.0
1 – 3	34	56.7
4 – 6	14	23.3
Source of Contraceptive		
Health center	60	100.0

Highest educational attainment. Most respondents were high school graduates 46, or 76.7%, and college undergraduates with 14, or 23.3%. It implies that the mothers finished the secondary level of education and did not pursue higher learning due to their reasons, mainly when poverty is the main reason for not going to a college education.

Occupation. Most of the mothers were employed, with a frequency of 31 or 51.7%, followed by unemployed, with a frequency of 29 or 48.3%. It showed that most mothers had the work to support their families. Nowadays, because of the hardships in life, heads of families or even the wife will land a job to support their families. The saying before that women are only at home with their children is no longer applied because the family has to survive life and help support the husband.

Monthly family income. Most respondents had an income of P10,001-P20,000/month with a frequency of 41 or 68.3%, followed by those earning below P10,000 with a frequency of 19 or 31.7%. It revealed that mothers earn an average income for their families. As of March 2023, the government's latest poverty rate is 13.2 percent of families. Its criterion is a threshold income of P12,030 per month, for a family of five, in 2021 [11]. The 13.2 percent is based on the 2021 Family Income and Expenditure Survey (FIES). It clearly showed that their income is still at the poverty level.

Number of children. Most mothers had 3-4 children with a frequency of 29 or 48.3%, 1-2 with a frequency of 19 or 31.7%, and five and above with a frequency of 12 or 20%. According to the [14] of the National Demographic and Health Survey (2008), women in the Philippines have an

average of 3.3 children. The average number of children per woman is 2.8 in urban areas and 3.8 in rural areas. It implies that the respondents have a low average number of children.

Monthly family income. Most respondents had an income of P10,001-P20,000/month with a frequency of 41 or 68.3%, followed by those earning below P10,000 with a frequency of 19 or 31.7%. It revealed that mothers earn an average income for their families. The Philippine Statistics Authority reports that the estimated Average Family Income for 2021 is 25 thousand Pesos per month, based on data from the 2021 Family Income and Expenditure Survey. It revealed that mothers earn below-average income for their families.

Type of contraceptive used. Most respondents used pills with a frequency of 38 or 63.3%, injectables with a frequency of 17 or 28.3%, and implants with a frequency of 5 or 8.3%. It revealed that mothers used pills and considered the most convenient contraceptive method.

They also confirmed that the oral contraceptive pill is the most widely used method of contraception and, when adhered to ideally, is 99% effective at preventing pregnancy [10].

Similarly, [2] found that pills are considered adequate and preferred over all other methods of contraception.

The number of years using contraceptives. Most of the mothers were using the contraceptive for 1-3 years with a frequency of 34 or 56.7%, 4-6 years with a frequency of 14 or 23.3%, and below one year with a frequency of 12 or 20%. It revealed that the mothers had used contraceptives for a few years. It only showed that their body had been used to the contraceptive they were using.

Source of contraceptive. It revealed that all the respondents received contraceptives in the health center with a 60 or 100% frequency. It shows that they got this in the health center because it is free of charge. Once the woman is registered as a Family Planning Acceptor of a health center, she is included in the supply of contraceptives given to health centers. As cited by [16], community health centers and public health departments involving primary care physicians and nurses can be essential partners in expanding the existing network of family planning providers and ensuring women obtain the reproductive health care they need.

The Extent of Knowledge of the Respondents on the Use of Contraceptives

Table 2 presents the extent of knowledge of the respondents on the use of contraceptives.

As gleaned from the table, the highest are items 3, 5, and 10, "are effective in preventing pregnancy," "have possible side effects on mothers," and "reduce teenage pregnancy," with a weighted mean of 3.77 and 3.83 or Knowledgeable. It revealed that the mothers knew that contraceptives prevent them from getting pregnant even with side effects to be felt. According to [17], knowledge of family planning is considered the first stage toward adopting a contraceptive method. Lack of adequate knowledge and awareness is

associated with a lack of contraceptive use among young women.

Table 2

The Extent of Knowledge of the Respondents on the Use of Contraceptives n=60

Indicators	Average Weighted Mean
I am aware that contraceptives...	
1. are of different types and available at the health center	
2. can be used to plan when people have children and how many children, they want to have	
3. are effective in preventing pregnancy	
4. are convenient and given free at the health center	
5. have possible side effects on mothers	
6. must be prescribed by a family planning personnel or by the Obstetrician	
7. reducing Pregnancy-Related Risk	
8. reduces the risk of producing unwanted pregnancy	
9. protects against certain cancers	
10. reduces teenage pregnancy	

Legend:

Statistical Range	Descriptive Equivalent	Transmuted Rating
4.50 – 5.00	Always	Highly Knowledgeable (MK)
3.50 – 4.49	Often	Knowledgeable (K)
2.50 – 3.49	Sometimes	Moderately Knowledgeable (MK)
1.50 – 2.49	Seldom	Slightly Knowledgeable (SK)
1.00 – 1.49	Never	Not Knowledgeable (NK)

The lowest items are numbers 1, 2, 6, and 7, "contraceptives are of different types and available at the health center," "can be used to plan when people have children and how many children they want to have," "must be prescribed by a family planning personnel or from the Obstetrician," and "reducing pregnancy-related risk," with a weighted mean of 3.20, 3.45, and 3.48, or Moderately Knowledgeable.

Overall, the extent of knowledge of the respondents on contraceptive use got a weighted mean of 3.58 or "Knowledgeable." It revealed that the mothers had some information about contraceptive use. This finding contradicts the study of [9], where the level of knowledge about the utilization of family planning was low among families relatively low compared to many studies.

Attitudes of the Respondents on the Use of Contraceptives

Table 3 presents the attitudes of the respondents on the use of contraceptives.

As gleaned from the table, the highest are items 2, 5, 6, and 10, "observe the proper use of the contraceptive prescribed to me," "maintain a positive attitude in my contraceptive use," "provide my contraceptive experience and preferences to the healthcare provider," and "give feedback to the health care provider on untoward effects of the contraceptive," with a weighted mean of 3.52, 3.72, and 3.80 or observed. It revealed that the mothers had a good relationship with the healthcare provider, as manifested by the indicators mentioned.

The lowest items are numbers 1, 3, and 7, "submit for a check-up at the health center regularly," "comply with the instructions given to me during a visit to the health center,"

and "submit for sexual health assessment before availing the contraceptive." with a weighted mean of 3.00, and 3.17 or Moderately Observed.

Table 3

Attitudes of the Respondents on the Use of Contraceptives
n=60

Indicators	Weighted Mean	Descriptive Equivalent
1. submit for a check-up at the health center regularly	3.00	MO
2. observe the proper use of the contraceptive prescribed to me	3.52	O
3. comply with the instructions given to me during a visit to the center	3.17	MO
4. submit for physical examination every time I go to the health center	3.47	MO
5. provide my contraceptive experience and preferences to the healthcare provider	3.52	O
6. maintain a positive attitude in my contraceptive use	3.80	O
7. submit for sexual health assessment before availing of the contraceptive	3.00	MO
8. listen carefully to the instructions given to me on contraceptive use	3.20	MO
9. express my concerns, and beliefs on the use of contraceptive	3.27	MO
10. give feedback to the healthcare provider on the untoward effects of the contraceptive	3.72	O
Average Weighted Mean	3.37	MO

Legend:

Statistical Range	Descriptive Equivalent	Transmuted Rating
4.50 – 5.00	Always	Highly Observed (HO)
3.50 – 4.49	Often	Observed (O)
2.50 – 3.49	Sometimes	Moderately Observed (MO)
1.50 – 2.49	Seldom	Slightly Observed (SO)
1.00 – 1.49	Never	Not Observed (NO)

Overall, the respondents' attitudes on contraceptive use got a weighted mean of 3.37 or "Moderately Observed." It revealed that the mothers had the attitude of not going to the health center for a regular check-up. The study's results are consistent with [9], findings that the overall attitude toward family planning is low, and the utilization of family planning is also relatively low compared to other studies.

Reasons for the Adherence of the Respondents on Contraceptive Use

Table 4 presents the reasons for the adherence of the respondents to contraceptive use. As gleaned from the table, the highest are items 2, 4, and 8, "because clear instructions were readily given by the personnel in charge of Family Planning," "due to my high satisfaction level," and "convenience of use," with a weighted mean of 3.72 and 3.92 or agree. It revealed that the mothers were satisfied with the service of the personnel in charge of FP and its convenience of using the contraceptive.

Table 4

Reasons for the Adherence of the Respondents on Contraceptive Use n=60

Indicators	Weighted Mean	Descriptive Equivalent
I adhere to contraceptive use...		
1. to improve my health and attend to my child's health	3.28	MA
2. because clear instructions were readily given by the personnel in charge of Family Planning	3.72	A
3. since no sexual discomfort was noted while using the contraceptive method	3.52	A
4. due to my high satisfaction level	3.72	A
5. there is no interference with my sexual relationship with my husband	3.37	MA
6. no vaginal discomforts were noted	3.60	A
7. the contraceptive method is readily available in the health center	3.43	MA
8. convenience of use	3.92	A
9. highly effective and highly tolerability	3.37	MA
10. no untoward sensations were noted with contraceptive use	3.52	A
Average Weighted Mean	3.54	A

Legend:

Statistical Range	Descriptive Equivalent	Transmuted Rating
4.50 – 5.00	Always	Highly Agree (HA)
3.50 – 4.49	Often	Agree (A)
2.50 – 3.49	Sometimes	Moderately Agree (MA)
1.50 – 2.49	Seldom	Slightly Agree (SA)
1.00 – 1.49	Never	Disagree (D)

The lowest items are numbers 1, 5, 7, and 9, "to improve my health and attend to my child's health," "there is no interference with my sexual relationship with my husband," "the contraceptive method is readily available in the health center," and "highly effective and high tolerability," with a weighted mean of 3.28, 3.37, 3.43 and 3.37 or Moderately Agree. It showed that mothers are not convinced by the statements mentioned above because of some personal reasons. [6] cited that non-adherence was due to more psychological processes. Psychological reactance contributed most to explaining non-adherence in women who used the Oral Contraceptive Pill (OCP) to prevent unintended pregnancies.

Overall, the respondents' adherence to contraceptive use got an average weighted mean of 3.54 or "Agree." It revealed that the mothers agreed on the items listed on mothers' adherence to contraceptives. The study's findings contradict the results of the study of [13], where women with primary or no education were more likely to be non-adherent to contraceptives. Education empowers women; at higher education levels, women are more likely to better conceptualize the benefits of child spacing with their health choices, children's health, and family size goals.

ANOVA Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Age

Table 5 presents the Difference in mothers' knowledge, attitude, and adherence to contraceptives across ages. The computed F-values of 3.093 and 1.793, along with knowledge and attitudes, indicate that the results are insignificant. This means the extent of mothers' knowledge and attitudes on contraceptives is similar when grouped according to age.

Table 5

ANOVA Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Age

	Source of Variation	Sum of Squares	df	Mean Squares	F-value	Sig	Remarks
Knowledge	Between Groups	.095	2	.047	3.093	.053	Not Significant
	Within Groups	.875	57	.015			
	Total	.970	59				
Attitudes	Between Groups	.086	2	.043	1.798	.175	Not Significant
	Within Groups	1.370	57	.024			
	Total	1.457	59				
Adherence	Between Groups	.304	2	.152	3.548	.035	Significant
	Within Groups	2.443	57	.043			
	Total	2.747	59				

*Significant at .05 level

On the other hand, there is a significant difference in mothers' adherence to contraceptives, as revealed in the F-value of 3.548. The following table shows the results of the Scheffe test on this aspect. The findings confirmed by [13] that women with primary or no education reported having a short birth interval of fewer than two years. In addition, women with primary or no education were more likely to be non-adherent to contraceptives.

Scheffe Test Results on the Significant Difference in the Adherence of Mothers on the Use of Contraceptives across Age

Table 6 displays the result of the Scheffe Test on the Significant Difference in mothers' adherence to contraceptives across ages.

Table 6

Scheffe Test Results on the Significant Difference in the Adherence of Mothers on the Use of Contraceptives across Age

Aspect	Compared Groups	Mean Difference	Sig
Adherence	Below 20 vs 21-30	.187	.038

*Significant at .05 level

The adherence of mothers below 20 years old differs significantly from those in the 21-30 age bracket. The positive mean Difference indicates that the mothers who belong to the age bracket below 20 years old have a higher level of adherence to contraceptives than the other age group. It showed that younger mothers perceived that contraceptive adherence would help prevent unwanted pregnancies. At a young age, mothers knew that child spacing is essential to give attention to the growth of their children before getting another pregnancy. The findings of this study have important implications for the development of effective family planning programs that encourage contraceptive adherence, especially targeting specific groups like male partners [13].

t-Test Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Civil Status

Table 7 reveals the t-test results on the Difference in the mothers' knowledge, attitudes, and adherence to contraceptives across civil status.

Table 7

t-Test Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Civil Status

Aspect	Civil Status	N	Mean	Mean Difference	Standard Error Difference	df	t-value	Sig	Remarks
Knowledge	Single	19	3.63	.065	.035	58	1.875	.066	Not Significant
	Married	41	3.56						
Attitudes	Single	19	3.42	.082	.043	58	1.924	.059	Not Significant
	Married	41	3.34						
Adherence	Single	19	3.62	.106	.059	58	1.804	.076	Not Significant
	Married	41	3.51						

*Significant at .05 level

The computed t-values with significance values higher than the set .05 level of significance indicate that the results are insignificant. Hence, no significant difference exists in the knowledge, attitude, and adherence to contraceptives when the respondents are grouped regarding civil status.

t-Test Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across the Highest Educational Attainment

The results regarding the Difference in knowledge, attitude, and adherence of mothers toward contraceptive use across different educational levels are presented in Table 8.

Table 8

t-Test Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across the Highest Educational Attainment

Aspect	Educational Attainment	n	Mean	Mean Difference	Standard Error Difference	df	t-value	Sig	Remarks
Knowledge	HS graduate	46	3.56	-.089	.038	5	2.36	.021	Significant
	College undergrad	14	3.65						
Attitudes	HS graduate	46	3.34	-.111	.046	5	2.40	.019	Significant
	College undergrad	14	3.45						
Adherence	HS graduate	46	3.53	-.074	.066	5	1.12	.265	Not Significant
	College undergrad	14	3.60						

*Significant at .05 level

No significant difference was detected in contraceptive adherence, as indicated in the computed t-value of -1.125. However, significant differences exist in knowledge and attitude. The significant negative mean differences in these two areas suggest that college undergraduates have a significantly greater extent of knowledge and more positive attitudes toward contraceptives than those who finished high school. Multiple studies support that education was

associated with self-efficacy and increased the chances of understanding contraceptive information [13]. This relates to the present study that education has a role in mothers' adherence to contraceptive use.

t-Test Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives Across Occupation

Table 9 displays the t-test results in mothers' knowledge, attitude, and adherence to contraceptives across occupations. No significant difference exists in the attitude and adherence to contraceptives between the employed and unemployed, as indicated in the computed t-values of -1.298 and -1.026.

Table 9
t-Test Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives Across Occupation

Aspect	Occupation	n	Mean	Mean Difference	Standard Error Difference	df	t-value	Sig	Remarks
Knowledge	Unemployed	29	3.48	-.216	.018	58	-	.000	Significant
	Employed	31	3.69						
Attitudes	Unemployed	29	3.34	-.052	.040	58	-1.298	.199	Not Significant
	Employed	31	3.39						
Adherence	Unemployed	29	3.51	-.057	.056	58	-1.026	.309	Not Significant
	Employed	31	3.57						

*Significant at .05 level

A significant difference exists in the extent of knowledge on the use of contraceptives between unemployed and employed mothers. The negative mean Difference indicates that employed mothers have a greater extent of knowledge on the use of contraceptives as compared to unemployed ones. According to the study, the knowledge and attitude toward family planning could have been higher, resulting in low utilization of family planning. One factor identified is the occupation of the respondents [9].

t-Test Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Monthly Family Income

Table 10 presents the t-test results on the Difference in mothers' knowledge, attitudes, and adherence to contraceptives across monthly family income. As shown in the table, no significant difference exists in the attitudes and adherence of the mothers on contraceptives when grouped in terms of monthly family income.

On the other hand, the computed t-value of 2.871 and knowledge provide enough evidence that a significant difference exists in the extent of mothers' knowledge across family income.

Table 10
t-Test Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Monthly Family Income

Aspect	Income	n	Mean	Mean Difference	Standard Error Difference	Df	t-value	Sig	Remarks
Knowledge	Below 10,000	19	3.52	-.096	.034	58	2.871	.006	Significant
	10,001-20,000	41	3.61						
Attitudes	Below 10,000	19	3.35	-.026	.044	58	-.588	.559	Not Significant
	10,001-20,000	41	3.37						
Adherence	Below 10,000	19	3.54	-.002	.060	58	-.030	.976	Not Significant
	10,001-20,000	41	3.54						

*Significant at .05 level

On the other hand, the computed t-value of 2.871 and knowledge provide enough evidence that a significant difference exists in the extent of mothers' knowledge across family income. The negative mean Difference indicates that the mothers whose family income is within 10,001-20,000 pesos have a significantly greater extent of knowledge than those who earn below 10,000 pesos. [2] findings corroborated the findings of this study that higher income showed good knowledge about oral contraception due to the higher levels of education.

ANOVA Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives Across Number of Children

Table 11 shows the analyzed variance results to test the Difference in mothers' knowledge, attitude, and adherence of mothers on the use of contraceptives across several children. Insignificant results are seen along with knowledge and attitudes, as indicated in the F-values of .728 and 2.783, respectively. Meanwhile, a significant difference exists with adherence with a computed F-value of 5.485 and a significance value of .007. Hence, further test has to be performed with the results in the following table.

Table 11
ANOVA Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives Across Number of Children

	Source of Variation	Sum of Squares	Df	Mean Squares	F-value	Sig	Remarks
Knowledge	Between Groups	.024	2	.012	.728	.487	Not Significant
	Within Groups	.946	57	.017			
	Total	.970	59				
Attitudes	Between Groups	.130	2	.065	2.783	.070	Not Significant
	Within Groups	1.327	57	.023			
	Total	1.457	59				
Adherence	Between Groups	.443	2	.222	5.485	.007	Significant
	Within Groups	2.304	57	.040			
	Total	2.747	59				

*Significant at .05 level

Scheffe Test Results on the Significant Difference in the Adherence of Mothers on the Use of Contraceptives Across Number of Children

Table 12 reveals the specific groups that registered significant differences in adherence to the use of contraceptives across the number of children.

Table 12

Scheffe Test Results on the Significant Difference in the Adherence of Mothers on the Use of Contraceptives Across Number of Children

Aspect	Compared Groups	Mean Difference	Sig
Adherence	1-2 vs 5 and above	-.232	.011

*Significant at .05 level

The significant negative mean Difference specifies that the second group in the set has a higher mean than the first group. Therefore, mothers with five and more children have shown more adherence to contraceptives than those with 1-2 children. This showed that the number of years the mothers used the contraceptive, the more they adhered to using it. The mothers had experienced the effectiveness of the contraceptive, so they continuously used it for contraception.

ANOVA Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Types of Contraceptives Used

Table 13 shows the results of the analysis of variance for the Difference in the knowledge, attitude, and adherence of mothers on the use of contraceptives across a type of contraceptive used.

Table 13

ANOVA Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Types of Contraceptives Used

	Source of Variation	Sum of Squares	df	Mean Squares	F-value	Sig	Remarks
Knowledge	Between Groups	.486	2	.243	28.676	.000	Significant
	Within Groups	.483	57	.008			
	<i>Total</i>	.970	59				
Attitudes	Between Groups	.290	2	.145	7.087	.002	Significant
	Within Groups	1.166	57	.020			
	<i>Total</i>	1.457	59				
Adherence	Between Groups	.679	2	.340	9.365	.000	Significant
	Within Groups	2.068	57	.036			
	<i>Total</i>	2.747	59				

*Significant at .05 level

Significant differences have been detected in all aspects being considered, namely knowledge, attitude, and adherence, considering the type of contraceptive used by the mothers. Table 14 reveals the additional test results to identify the significantly different groups.

Scheffe Test Results on the Significant Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Types of Contraceptives Used

Table 14 displays the results of the Scheffe Test on the

Significant Difference in the knowledge, attitude, and adherence to contraceptives across a type of contraceptive used.

Table 14

Scheffe Test Results on the Significant Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Types of Contraceptives Used

Aspect	Compared Groups	Mean Difference	Sig
Knowledge	Pills vs injectables	-.187	.000
	Pills vs contraceptive patch	-.187	.000
Attitude	Pills vs injectables	.127	.013
	contraceptive patch vs Injectables	.235	.008
Adherence	Pills vs injectables	.239	.000

*Significant at .05 level

As to knowledge, the negative mean differences indicate that the second groups provide higher means than the first group. It implies that the mothers that use injectables and contraceptive patches have a greater extent of knowledge on the use of contraceptives as compared to the mothers that use pills.

Regarding attitude, the positive mean differences reveal that the first groups have higher means than the second groups. It implies that the mothers who use pills and contraceptive patch claim to have a more positive attitude towards contraceptives than those who use injectables.

ANOVA Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives Across Number of Years Using the Contraceptive

Table 15

ANOVA Results on the Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across Number of Years Using the Contraceptive

	Source of Variation	Sum of Squares	df	Mean Squares	F-value	Sig	Remarks
Knowledge	Between Groups	.418	2	.209	21.617	.000	Significant
	Within Groups	.552	57	.010			
	<i>Total</i>	.970	59				
Attitudes	Between Groups	.350	2	.175	9.004	.000	Significant
	Within Groups	1.107	57	.019			
	<i>Total</i>	1.457	59				
Adherence	Between Groups	.988	2	.494	16.002	.000	Significant
	Within Groups	1.759	57	.031			
	<i>Total</i>	2.747	59				

*Significant at .05 level

Table 15 shows the results of the test of differences in the knowledge, attitudes, and adherence of mothers on the use of contraceptives across several years using the contraceptive

All the computed F-values have significance values lower than the set .05 significance level. Hence, significant differences exist. This suggests the need for a further test, with results in the following table. This showed that the respondents' knowledge, attitudes, and adherence affected their contraceptive use.

Scheffe Test Results on the Significant Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives Across Number of Years Using the Contraceptive

Table 16 displays the Scheffe Test results on the significant difference in the knowledge, attitude, and adherence regarding the number of years using the contraceptive.

Table 16

Scheffe Test Results on the Significant Difference in the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives across several Years of Using the Contraceptive

Aspect	Compared Groups	Mean Difference	Sig
Knowledge	Below 1 vs 1-3	.183	.000
	Below 1 vs 4-6	.242	.000
Attitude	Below 1 vs 4-6	-.208	.002
	1-3 vs 4-6	-.165	.002
Adherence	Below 1 vs 1-3	-.297	.000
	Below 1 vs 4-6	-.358	.000

*Significant at .05 level

In terms of knowledge, the positive mean Difference indicates that the mothers using the contraceptive for less than a year have significantly greater knowledge than those using the contraceptive for 1-3 and 4-6 years.

Regarding attitude, the negative mean Difference reveals that mothers who have been using the contraceptive for 4-6 years now are more optimistic about contraceptives than those who have been using the contraceptive for less than a year and 1-3 years.

Finally, regarding adherence, the negative mean differences indicate that the mothers who have been using the contraceptive for 1-3 and 4-6 years have shown more adherence to contraceptives than those who have been using the contraceptive for less than a year.

Relationship Between the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives and their Profile Variables

Table 17 presents the relationship between mothers' knowledge attitude and adherence to contraceptives and their profile variables.

As to knowledge, significant positive R-values are shown with the highest educational attainment, occupation, monthly family income, and type of contraceptive used. This indicates a direct relationship. A higher education level increases a person's knowledge; the more the mother is engaged with work, the higher the monthly earnings and the greater the knowledge. However, the negative R-value under the number of years using the contraceptive reveals that the smaller the contraceptive use, the greater the extent of knowledge.

Table 17

Relationship Between the Knowledge, Attitude, and Adherence of Mothers on the Use of Contraceptives and their Profile Variables

Profile Variable	Knowledge		Attitudes		Adherence	
	r-value	sig	r-value	sig	r-value	sig
Age	-.198	.129	-.174	.183	-.220	.091
Civil Status	-.239	.066	-.245	.059	-.231	.076
Highest Educational Attainment	.297*	.021	.301*	.019	.146	.265
Occupation	.848*	.000	.168	.199	.134	.309
Monthly Family Income	.353*	.006	.077	.559	.004	.976
Number of Children	-.116	.377	-.158	.229	.396*	.002
Type of Contraceptive Used	.651*	.000	-.059	.654	-.384*	.002
Number of Years Using the Contraceptive	-.611*	.000	.451*	.000	.535*	.000
Source of Contraceptive	-	-	-	-	-	-

*Significant at .05 level

Regarding attitude, positive R-values are shown with the highest educational attainment and years of contraceptive use. This shows a direct relationship, which means that the higher the educational attainment, the longer the years of use of contraceptives, and the more positive the attitude towards contraceptives. This finding is similar to the study of [2] which showed good knowledge about oral contraception due to the higher levels of education among the majority of participants.

Regarding adherence, positive R-values are under the number of children and years of contraceptive use. Hence, the more children and longer the number of years of contraceptive use, the greater their adherence to contraceptives. The negative R-value is shown under a type of contraceptive used. As mothers use pills over other contraceptives, they become more adherent.

Table 18
Reproductive Health Plan

Area	Objectives	Activities	Persons Involved	Expected Outcome
Reproductive health awareness	To orient mothers about sexual and reproductive health	-Giving lectures and answering questions from mothers -video presentations for better understanding	Public Health Nurse Midwife Mothers	To increase knowledge and to make healthy choices throughout their life
FP counseling and information	To help them decide how many children they want and when to have them or birth spacing	-Schedule counseling sessions in the health center -giving them FP brochures to read	Public Health Nurse Midwife Mothers Husbands	Voluntary decision on what method to use
Fertility and cervical screening	To know the condition of the cervix	-discuss the importance of cervical check-ups and screening -undergo free Pap smear	Social hygiene staff Mothers	Cervical cancer will be prevented or identified at an earlier stage
Prevention and Management of Sexually transmitted infections	To be aware of the different Sexually transmitted infections and their causes, symptoms, and prevention	-Lectures on Sexually transmitted infections -video presentations	Public Health Nurse Public Health Midwife Mothers	Awareness of different Sexually transmitted infections and their management
Proper use of contraceptives	To orient them on methods of FP for them to have a free choice on what to use	Lecture/discussions Video presentation -use of posters -giving fliers on FP methods	Public Health Nurse Public Health Midwife Mothers	Absolute freedom to choose Family planning method
Pre-conception counseling	To discuss many aspects of pregnancy and plan for a healthy pregnancy	-Recommend regular moderate exercise - Counsel to maintain a healthy weight Assess the risk of nutritional deficiencies - no alcohol consumption, quit smoking and other tobacco use, or improving mental health	Public Health Nurse Public Health Midwife Mothers	Healthy pregnancy without complications
Sex education	To provide information about body development, sex, sexuality, and relationships	Lecture Video presentations	Public Health Nurse Public Health Midwife Mothers	Exercise responsibility in sexual relationships, use of contraception, and other sexual health measures

4. Conclusions

Based on the findings of the study, the following conclusions are drawn.

The respondents were young adults with their own families, did not pursue tertiary education, had jobs earning an average amount, with an average number of children, mainly used pills, used contraceptives for few years, and all got their supply in the health center.

The respondents were knowledgeable about the use of contraceptives and moderately observed the different instructions provided by the health care providers.

Mothers below 20 years old, who have more children and longer years of using contraceptives, have higher levels of adherence.

College undergraduates whose family income is between 10,001-20,000 pesos have a significantly greater extent of knowledge and more positive attitudes toward the use of contraceptives.

The higher the educational attainment, and the more prolonged use of contraceptives, the more positive the

attitude towards contraceptives.

A proposed program will be proposed to improve the knowledge, attitude, and adherence to using contraceptives.

5. Recommendations

Based on the conclusions, the following are now recommended. Mothers must continue using contraceptives to prevent further pregnancies and improve their quality of life. They must continue to follow the advice given by the health worker to prevent problems related to contraceptive use.

They must enrich themselves with other facts on contraceptive use to understand what they are taking in controlling their pregnancies. They must follow the instructions provided to them. Attend FP seminars intended for FP acceptors.

Mothers must intensify their adherence to contraceptive use to have a safe and healthy life while using the method.

Significant differences had been noted along highest educational attainment, occupation, family income, type of contraceptive use, and number of years using contraceptives.

The proposed program can be recommended for implementation by the City Health Office.

Future studies can be replicated using other variables of the study from a broader perspective.

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