

# Predictors of Family Planning Practices of Teen Mothers in Manila, Philippines

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## ABSTRACT

**Introduction.** Teen pregnancy in the Philippines is a public health concern. Contraception is viewed as key in controlling teen pregnancy brought by early sexual initiation. Unfortunately, among sexually active teenage girls, 68.7% are not using any form of contraception.

**Objectives.** The study determined the predictors of Family Planning practice among teen mothers in Manila; specifically, regarding knowledge and attitude towards family planning, and social and informational support.

**Methods.** The study utilized a descriptive correlational design. Purposive sampling was used for a target sample size of 188 teenage mothers from the City of Manila. A self-administered questionnaire was used to collect data. Multiple regression was employed to determine predictors of FP practice.

**Results.** Of the 163 teenage mothers who participated, less than one-third (30.7%) were currently using a family planning method. Teen mothers who had two or more pregnancies were four times more likely to report FP practice, and those who received informational support on FP were six times more likely to report FP practice.

**Conclusion.** The rate of FP practice among teen mothers is low. A comprehensive assessment of the physical, psychosocial, and environmental factors that impact teen mothers should be further studied.

*Keywords: teen pregnancy, adolescents, family planning, contraception*

## INTRODUCTION

The Philippines is facing a teenage pregnancy crisis. According to the World Health Organization (2019), 95% of the total 16 million births to teenage mothers (15-19 years old) occur in low- and middle-income countries like the Philippines.<sup>1</sup> The 2017 National Demographic and Health Survey reported that 9% of teens have begun child-bearing: 2% are pregnant with their first child,<sup>2</sup> with 17% on a repeat pregnancy.<sup>3</sup> Early pregnancy and motherhood are also more common among those less-educated and belonging to poorer households.

Teenage pregnancy brings a multitude of adverse health outcomes for the child and the mother.<sup>1</sup> Across the world, pregnancy and childbirth complications are the second leading cause of death among girls 15-19 years old. Teen mothers are more likely to experience preterm delivery, stillbirth, fetal distress, spontaneous abortions, eclampsia, puerperal endometritis, and systemic infections.<sup>1,4,5</sup> Infants born to mothers under 20 years of age face a 50% higher risk of fetal or neonatal death compared to infants of older mothers.<sup>2</sup> Social and economic consequences include stigma,

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rejection, and/or violence by partners, parents, and peers.<sup>1</sup> Teenage mothers are often school dropouts facing jeopardy in their future education and employment opportunities.

In the Philippines, the maternal mortality ratio has decreased from 139 to 121 deaths per 100,000 live births between 2012 and 2017.<sup>6</sup> This ratio is far from the Sustainable Development Goal III target (less than 70 maternal deaths per 100,000 live births in 2030).<sup>7</sup> Maternal mortality is preventable through adequate antenatal care and effective family planning methods.<sup>8</sup> Community- and facility-based educational programs providing emergency obstetric care markedly reduce adolescent pregnancy, improve birth outcomes, and increase contraceptive use.<sup>9</sup>

Data from the 2013 Young Adult Fertility and Sexuality Survey shows that more teens are becoming sexually active at a young age.<sup>10</sup> Contraception is key in controlling teen pregnancy from early coitus. Modern contraceptive use increased from 25.3 to 27.7% from 2017 to 2019.<sup>11</sup> Unfortunately, among unmarried sexually active teen girls, 68.7% are not using any form of contraception.<sup>12</sup> Legal barriers hinder Filipino adolescents from accessing contraceptives; fear of side effects is another common reason.<sup>2</sup>

There are 214 million women of reproductive age in developing countries who would like to avoid pregnancy but are not using modern contraceptive methods.<sup>8</sup> Family planning (FP) is essential in educating and encouraging contraceptive use among women and couples. FP involves an individual or a couple making decisions on whether to have children, when to have children, how many children they want to have, and how they are spaced;<sup>13</sup> it reduces maternal and infant mortality by spacing births to optimize the mother's recovery;<sup>1</sup> it ensures that women have access to their preferred contraceptive methods; and it prevents unintended pregnancies. All women of reproductive age should have access to sexual and reproductive healthcare services, including FP information and education.

Since barriers to contraception use should be addressed, we must examine predictors of FP use among teen mothers to improve its implementation. This study determined the predictors of FP use among teen mothers in Manila, specifically regarding knowledge and attitude towards family planning, social and informational support, and prenatal care services received.

## METHODS

This study used a descriptive correlational design. Purposive sampling was used to select teenage mothers from the City of Manila. The targeted number of participants was 188. As this was part of a larger study, this number was estimated based on several quantitative studies (showing an observed exclusive breastfeeding rate of 57.6% up to 45<sup>th</sup> day postpartum among teenage mothers),<sup>14</sup> with a moderate effect size of 0.5, alpha of 0.5, and precision of 5%. The sample was drawn from those who visit the health center

for a postnatal checkup and immunization of their newborn. Aside from recruiting teen mothers at the health centers, Barangay Health Workers (BHWs) helped identify eligible participants outside the health centers. Eligibility criteria were: 1) mothers two to twelve weeks postpartum and 2) from ten to nineteen years of age.

Questionnaires were used to collect demographic data and FP practice and intention data. The FP Questionnaire contains five parts: Knowledge, Attitude, Support, Practice, and Intention. Pretesting of the questionnaire was done before data collection. It took participants an average of 10 minutes to complete answering the questionnaire. Data collection lasted 4 months, from August to December 2019. Data were summarized and analyzed using descriptive and inferential statistics. Multiple regression was used to determine predictors of FP practice.

Ethics approval was granted by the University of the Philippines Manila Research and Ethics Board (UPM-REB) for the conduct of this study.

## RESULTS

The actual number of those who participated was 163, representing 86.7% of the targeted sample size. This is due to the low number of eligible teen mothers coming to the health centers even after extending the data collection to four months. Consequently, the achieved power for the study outcomes is as follows: practice of family planning = 75.4%, and future practice of family planning = 77.4%. The acceptable power is 80%.

### Demographic Profile

A total of 163 teen mothers participated in the study with an age range of 12–19 years (mean age = 17 years). The majority (64%) were living together with their partners, and 29.5% were married. The majority (60.1%) finished Junior High School. Only 9.8% were currently enrolled in school and studying, while 11.7% were working. In terms of living arrangements, 40% lived in their own parents' homes with their partners. Almost 40% were living in 5-10 member-households, with an average monthly income of Php 11,571 (*SD* ± Php 18,694). The most significant source of income (73.3%) was wages or salaries. Most (68%) had PhilHealth membership, while 10.4% did not have health insurance.

### Obstetrics and Prenatal History

The majority of participants were primigravida (79.8%), most of whom delivered via normal spontaneous delivery (92.6%); 2.5% already had three or more pregnancies. The majority (79.8%) claimed that they planned or wanted their most recent pregnancy.

The majority (69.9%) had a prenatal check-up at a health center in their most recent pregnancy, while 1.2% admitted that they had no prenatal check-up at all. Twenty-two percent had eight or more prenatal visits, while a considerable

**Table 1.** Laboratory Family Planning Practices of Teen Mothers of District V of Manila, 2019

FP Practice	Participants (n = 163)	
	No.	%
<b>Currently using a FP method</b>		
Yes	50	30.7
No	113	69.3
<b>Time decided to practice FP (n = 50)</b>		
During pregnancy	11	22.0
After delivery of baby	29	58.0
Others	1	2.0
<b>FP method currently using (n = 50)</b>		
Pills	9	18.0
Condoms	3	6.0
Injectables	4	8.0
Contraceptive Implant	28	56.0
Lactational Amenorrhea Method (LAM)	1	2.0
Calendar Days Method	1	2.0
Withdrawal	4	8.0
Uses more than 1 method	1	2.0
<b>With History of FP use (Previous FP use) (n = 163)</b>		
Yes	38	23.3
No	125	76.7
<b>Type of FP used (n = 38)</b>		
Contraceptive Implant	1	2.6
Pills	21	55.3
Injectables	5	13.2
Condoms	11	28.9
Withdrawal	7	18.4
IUD	2	5.3
Used more than 1 kind	5	13.2
<b>Reasons for not discontinuation of use (n = 38)</b>		
Experienced side effects	12	31.6
Forgot to use the method	11	28.9
Couldn't acquire or buy the contraceptives	5	13.2
Wanted to get pregnant	2	5.3
Other reasons	4	10.5
Didn't cite any reason for discontinuation	4	10.5

FP = Family Planning

percentage (76.7%) had fewer than eight visits. Of the 161 mothers who had prenatal check-ups, 44.1% had their first prenatal check-up during the first trimester of pregnancy, 44.1% in the second trimester, and 12.6% in the third trimester. Among those who had prenatal visits (n=161), the majority (60.9%) of them received prenatal education on family planning.

### FP Practice and Future Intention

Among the 163 participants, only 30.7% were practicing FP, with more than half of these using contraceptive implants (Table 1). Of those practicing FP, the majority claimed that they decided to practice FP after giving birth, while the rest decided on it as early as during their most recent pregnancy. The majority were not using any FP method,

**Table 2.** Future Intention to Practice Family Planning of Teen Mothers Not Currently Using Family Planning of District V of Manila, 2019

FP Intention	Participants (n = 113)	
	No.	%
<b>Plans to use an FP method</b>		
Yes	101	89.4
No	12	10.6
<b>FP method intended to use</b>		
Pills	29	28.7
Condoms	2	2.0
Injectables	26	25.7
Contraceptive Implant	44	43.6
Withdrawal	1	1.0
At least 2 of the methods above	7	6.9
<b>Time to delay pregnancy</b>		
Within 2 years	4	3.7
More than 2 years	102	90.2
Other	7	6.1

most commonly due to not having resumed sex and lacking knowledge of FP methods, with only 1.8% wanting to get pregnant again.

When asked about previous FP practice, meaning before the most recent pregnancy, the majority claimed that they have never tried any form of family planning method (Table 1). Of those who experienced using the FP method already, the most common was the use of contraceptive pills. The most common reason for discontinuing FP was experiencing side effects.

Of the 113 who were not using any FP method, 89.4% intended to use an FP method to delay pregnancy (Table 2). Out of those who intend to use an FP method, almost half intend to use a contraceptive implant, and a quarter each intended to use pills and injectables. Almost all of these planned to delay the pregnancy for more than two years.

### Knowledge and Attitude on FP

Knowledge of FP was determined using ten questions on basic information about FP methods and their benefits. The mean score for knowledge was 5.4 points, 2 as the lowest and 9 as the highest. Only 43.6% of participants obtained scores higher than the mean. The top three items that participants correctly answered were: FP services are offered free in the health centers and government hospitals (93.9%), abortion is a form of FP (87.12%), and exclusive breastfeeding for six months can be a natural form of family planning (75.5%). In contrast, the top three items that were incorrectly answered were: artificial FP has several side effects (89.6%), withdrawal is a form of natural FP (80.4%), and FP use should be immediately stopped on the first sign of side effects (78.5%).

To determine FP attitude, nine statements exploring the attitude on the practice of family planning were asked

using a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The mean score for attitude on FP was 33 points with 0 as the lowest and 41 as the highest. Only 46% of teen mothers obtained scores higher than the mean. The top three statements that the participants strongly agreed on were: FP is a shared responsibility of both the man and woman (49.7%), it is important to know FP methods (47.9%), and FP methods are proven safe and effective (37.4%). In contrast, the top three items that participants strongly disagreed with were: minors (teens) should not practice FP (19.0%), use of the FP method affects the relationship of partners or couples (14.7%), and FP may inhibit sexual spontaneity (14.1%).

### Support for FP Use

To determine support received for FP, five questions were asked. Of the 163 participants, 87.7% received information about FP, most of whom (80.5%) got information from health facilities, with the rest getting information from home (30.0%), from the internet (7.7%), from television (5.6%), from newspapers (1.4%), and other sources (1.8%). Information about FP were mostly given by their doctors (56.6%), nurses (49.0%), parents (30.8%), husband or partner (9.1%), relatives (7.7%), midwives (1.8%), and others (9.8%). The top 5 FP methods they heard about were: contraceptive implants (87.4%), contraceptive injection (85.3%), pills (75.5%), intrauterine devices (44.1%), and condoms (44.1%). The majority of the participants (90%) were supported by their families to practice FP, 4.3% were not supported, and 5.5% were unsure.

### Factors Affecting FP Practice and Future Intention to Practice FP

Bivariate and multivariate analyses were done to determine the relationship between family planning practice, future intention to use FP, modifying variables, predisposing factors, reinforcing factors, and enabling factors. Those factors that were found to be significantly related to FP

outcomes were cross-tabulated to examine the relationship between subgroups.

In terms of FP practice, the results of the bivariate analysis showed that the number of pregnancies, informational support, number of known FP methods, partner or parents' support, and history of FP use were significantly associated with FP practice. The majority of those who were practicing FP were primiparous (68%), received informational support in FP (96%), have known two or more FP methods (42%), and received support from partners or parents in their use of FP method (100%), and had no history of FP use (56%).

A multivariate logistic regression model was created, accounting for only 26.36% of the variability in the likelihood of reporting a high likelihood of family planning practice from the sample (LR  $\chi^2 = 48.77, p < 0.01$ ). The model displayed the contribution of select measured predictors in estimating this likelihood. Women who had two or more pregnancies were at least four times more likely to report family planning practices (Table 3). Participants who received informational support on FP were about six times more likely to report FP practice. Surprisingly, participants who were students or currently enrolled were nine times less likely to report FP practice. Participants who knew two or more FP methods were ten times less likely to inform FP practice.

In terms of future intention to practice FP, results of the bivariate analysis showed that civil status, partner or parents' support on FP use, place of prenatal visit, and prenatal services received were found to be significantly related to future intention to practice FP. The majority of those intending to use an FP method in the future were living together with their partners (70%), had partner or parent support on their choice of FP method (88%), had prenatal check-ups at the health center (75%), and received any two (34%) or all three (28%) of the prenatal services during prenatal visits.

Multivariate analysis for this outcome cannot be performed since not all assumptions were met for the model to compute effect measures. Since those who were currently

**Table 3.** Logistic Regression for Factors Affecting Family Planning Practice of Teen Mothers (n = 163) of District V of Manila, 2019

Predictors	Univariate		Multivariate	
	OR (95% CI)	p-value	OR (95% CI)	p-value
<b>Modifying variables</b>				
Occupation				
Currently studying	0.29 (0.06–1.35)	0.12	0.11 (0.01–0.92)	0.04*
Currently working	1.77 (0.66–4.70)	0.26	1.54 (0.41–5.75)	0.52
Total number of pregnancies				
1	1.00		1.00	
2	2.64 (1.15–6.02)	0.02*	4.27 (1.47–12.44)	0.01*
3 and more	2.82 (0.38–20.83)	0.31	5.71 (0.31–10.43)	0.24
<b>Reinforcing factors</b>				
Received informational support	4.55 (1.01–20.41)	0.05*		
At least 1 FP method known	1.00		1.00	
2 or more methods known	0.16 (0.06–0.45)	0.01*	0.05 (0.01–0.24)	0.01*

\*p-value < 0.05

**Table 4.** Logistic Regression for Factors Affecting Family Planning Intention of Teen Mothers (n = 113) of District V of Manila, 2019

Predictors	Univariate		Multivariate	
	OR (95% CI)	p-value	OR (95% CI)	p-value
<b>Modifying variables</b>				
Marital status				
Single/Separated/Widow	1.00		-	-
Married/Living together	0.16 (0.04–0.73)	0.02*	-	-
<b>Reinforcing factors</b>				
Received informational support	3.72 (1.03–13.48)	0.05*	-	-
Family planning				
At least 1 FP method known	1.00		-	-
2 or more methods known	0.67 (0.08–5.47)	0.71	-	-
<b>Family planning support from partner/parents</b>				
Absent	1.00		-	-
Present	5.11 (1.37–19.08)	0.02*	-	-
<b>Enabling factors</b>				
Sources of FP information				
Home	0.23 (0.06–0.86)	0.03*	-	-
Health facility	3.67 (1.00–13.50)	0.05*	-	-
Media and others	0.67 (0.13–3.37)	0.62	-	-
Any one	1.00		-	-
Any two or more	0.46 (0.11–1.91)	0.28	-	-
Place of prenatal consult				
Health center	1.00		-	-
Out-patient department	1.75 (0.21–14.67)	0.60	-	-
Private physician/lying-in	0.16 (0.04–0.63)	0.01*	-	-
Services received during PNC				
Free prenatal vitamins	2.65 (0.78–8.98)	0.12	-	-
Free lab exams	4.23 (1.33–13.47)	0.02*	-	-
Free dental check-up	0.93 (0.30–2.90)	0.90	-	-
Only one	1.00		-	-
Any two	2.13 (0.54–8.48)	0.28	-	-
All three	2.67 (0.54–13.21)	0.23	-	-

\*p-value < 0.05

practicing FP were excluded from the FP intention analysis, the sample size became smaller. The small sample size cannot be remedied by other statistical methods to perform multivariate regression analysis. Being married or living together reduced the likelihood of intention to do family planning. The home as a resource of family planning information also decreased the odds of intention to do family planning by around nine times. Women who received prenatal consults at private clinics or lying-in are nine times less likely to report family planning intent than those who receive it from the health centers. Those who received informational support from partners or parents or the health facility, and those receiving free laboratory exams during prenatal visits had higher FP intent by at least four times. (Table 4)

## DISCUSSION

While the national contraceptive prevalence rate is 54%, this study shows that contraceptive use among our participants is lower. Of those who were using an FP method, the

majority were using a long-acting reversible contraceptive (LARC). While national data showed that the majority of women of childbearing age, including teens between 15–19 years old,<sup>2</sup> prefer modern contraception (i.e., pills), some participants still use older methods such as withdrawal or coitus interruptus which is an ineffective form of contraception (with a failure rate of 4–27%).<sup>15</sup>

Less than half of the participants agree that FP methods have been proven safe and effective. This accounts for the low contraceptive use as it is reasonable that participants are convinced about the safety and effectiveness of the contraceptives before they use them. In terms of knowledge and attitude on FP, less than half score higher than the mean. Participants appear to be not fully informed about FP. The majority disagree with the statement that minors like them should not practice FP. Nevertheless, both knowledge and attitude are not significantly related to FP practice. Several other factors may be playing a role such as personal beliefs, family dynamics, access to free or affordable contraceptives, and knowledgeable health professionals

In the Philippines, FP methods have been promoted in health facilities, during healthcare worker visitations, and through mass media campaigns.<sup>16</sup> According to the same study done by PSA and ICF International, 99.2% of women 15-19 years old have heard of at least one contraceptive method, most commonly from television, followed by the internet, radio, newspaper, or magazines, and mobile phone.<sup>2</sup> Participants in this study received information from the same sources.

Women who have had two or more pregnancies and those who received information are likely to report FP practice. Surprisingly, those currently enrolled and who know two or more FP methods are less likely to report FP practice. This is contrary to the idea that a sexually active teenager will avoid getting pregnant to finish school or get a degree. Teen moms may not fully realize the extent of the difficulty of childbearing at a young age while finding one's own identity.

There exists a legal barrier to accessing contraceptives among Filipino teenagers as parental consent is still a requirement as stated in the provisions of the reproductive health law. Being knowledgeable about the different contraceptive methods does not always guarantee practice.

Almost all participants plan to delay pregnancy for more than two years. The majority are not using any FP method at the time of the interview but intend to in the future. Most of these consider implants, pills, injectables, IUDs, and condoms as their methods of choice. Again, based on the result, participants prefer modern rather than traditional methods. Huda et al. identified ease of use, no serious side effects, and no effect on long-term fertility as factors women consider in their choice of FP method.<sup>17</sup> Those who intend to practice FP in the future were found to have received information regarding FP prenatally from healthcare facilities. The top sources of FP information identified were doctors, nurses, and parents. Ayiasi et al. affirm that women who received prenatal education on FP intended to delay their pregnancy and considered using modern family planning methods compared to those who did not receive such education.<sup>18</sup>

The effect of family dynamics cannot be denied in FP practice. Parent or partner support significantly increases the likelihood of intention to use contraceptives. With support and affirmation from their parent/s and/or partner, teen moms are empowered to make the right decision for their health. Support includes both emotional and financial means. Most participants believe that FP is a shared responsibility of both partners. A study done in Cambodia revealed that women who believed that their husbands had a positive attitude toward contraception were more likely to practice FP.<sup>19</sup> Social support from parents or partners has also been a significant predictor of clinic visits and contraceptive use for adolescent females in the United States.<sup>20</sup>

Notably, participants demonstrate lesser intention to practice FP when they were married and living together with partners or had received FP information at home and in private clinics. This may be because contraception is not a

current concern; a young family may want to continue having children until they achieve the desired number.

## CONCLUSION

Health care professionals should continue to explore the needs of teenage mothers. There is a need for better strategies for FP counseling so that teen moms will be able to make informed choices on FP.

## Statement of Authorship

All authors contributed to the conceptualization of work, acquisition and analysis of data, drafting, and revising, and approved the final version submitted.

## Authors Disclosure

All authors have declared no conflict of interest. This is an independent study committed to integrity and fairness in the execution of all research undertakings.

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