

DETERMINANTS OF CONTRACEPTIVE USE AMONG MARRIED WOMEN IN THE PHILIPPINES: EVIDENCE FROM THE 2017 NATIONAL DEMOGRAPHIC AND HEALTH SURVEY

By

Jordan A. Agudilla and Lincoln A. Bautista, Ph. D.

Polytechnic University of the Philippines

Presented by

Jordan A. Agudilla

Polytechnic University of the Philippines

INTRODUCTION

- Fertility is expected to decline through the implementation of family planning programs.
- According to Makau et al. (2016), contraceptive use is the most effective method of reducing unwanted pregnancies and induced abortions.
- The use of contraceptive methods like condom could also prevent the transmission of HIV/AIDS and other sexually transmitted diseases.

Statement of the Problem

This study determined the factors of contraceptive method use among married women in the Philippines. Specifically this study seek to answer the following questions:

- What is the prevalence rate of contraceptive use among married women in the Philippines?
- Is there a significant association between contraceptive use or non-use and the background characteristics of the married women in the Philippines?
- What are the determinants of contraceptive use among married women in the Philippines?

METHODS

Source of Data

The data would be the results of the National Demographic and Health Survey (NDHS) conducted on 2017 by the Philippine Statistics Authority (PSA).

Statistical Treatment

The data used were weighted and took into consideration the complex survey design in the analyses, using the SVY command in Stata. The steps on building the logistic regression model was adopted from the book entitled “Applied Survey Data Analysis” by Heeringa et al. (2010).

METHODS (continued)

Statistical Treatment

- Rao-Scott F-Test
- Test of Multicollinearity
- Logistic Regression Analysis of Survey Data

According to Heeringa et al. (2010), the four stages in logistic regression modeling of survey data are as follows:

1. Model specification;
2. Estimation of model parameters and their standard errors;
3. Model evaluation and diagnostics; and
4. Interpretation of results and inference based on the final model.

RESULTS

Out of **15 016** married women, **54%** are using **any contraceptive method**

Wherein **40%** are using **modern contraceptive method**

14% are using **traditional method**

Contraceptive Use or Non- use and Access to Family Planning Information of the married women

Variable	Category	Using Any Contraceptive use?		Rao-Scott F-Test Statistic	P-value	Interpretation
		No	Yes			
Heard Family Planning on Radio Last Few Months?	No	4 362 (46.33%)	5 053 (53.67%)	1.2535	0.2631	Not Significant
	Yes	2 507 (44.76%)	3 094 (55.24%)			
Heard Family Planning on TV Last Few Months?	No	2 642 (48.58%)	2 796 (51.42%)	10.1851	0.0015	Significant
	Yes	4 227 (44.13%)	5 351 (55.87%)			

Contraceptive Use or Non- use and Access to Family Planning Information of the married women (continued)

Variable	Category	Using Any Contraceptive use?		Rao-Scott F-Test Statistic	P-value	Interpretation
		No	Yes			
Heard Family Planning in Newspaper/Magazine Last Few Months?	No	5 482 (45.55%)	6 554 (54.45%)	0.1622	0.6872	Not Significant
	Yes	1 387 (46.55%)	1 593 (53.45%)			
Heard Family Planning by Text Messages on Mobile Phone?	No	6 448 (45.73%)	7 652 (54.27%)	0.0061	0.9378	Not Significant
	Yes	421 (45.94%)	495 (54.06%)			
Read Information about Contraception on the Internet?	No	4 776 (44.84%)	5 876 (55.16%)	4.4044	0.0361	Significant
	Yes	2 094 (47.96%)	2 271 (52.04%)			

Contraceptive Use or Non- use and the Demographic & Behavioral Characteristics of the married women

Variable	Category	Using Any Contraceptive use?		Rao-Scott F-Test Statistic	P-value	Interpretation
		No	Yes			
Age Group	15 to 19 years old	269 (64.15%)	150 (35.85%)	26.3297	0.000	Significant
	20 to 24 years old	761 (44.30%)	957 (55.70%)			
	25 to 29 years old	1 140 (43.40%)	1 487 (56.60%)			
	30 to 34 years old	1 015 (38.11%)	1 648 (61.89%)			
	35 to 39 years old	1 117 (40.25%)	1 658 (59.75%)			
	40 to 44 years old	1 087 (44.49%)	1 356 (55.51%)			
	45 to 49 years old	1 481 (62.44%)	891 (37.56 %)			

Contraceptive Use or Non- use and the Demographic and Behavioral Characteristics of the married women (continued)

Variable	Category	Using Any Contraceptive use?		Rao-Scott F-Test Statistic	P-value	Interpretation
		No	Yes			
Number of Living Children	0	1 109 (92.36%)	92 (7.64%)	117.3322	0.000	Significant
	1 to 2	3 201 (44.49%)	3 993 (55.51%)			
	3 to 4	1 663 (36.46%)	2 897 (63.54%)			
	5 plus	896 (43.49%)	1 165 (56.51%)			
Ideal Number of Children	0	49 (49.31%)	50 (50.69%)	5.7696	0.0007	Significant
	1 to 2	2 639 (43.96%)	3 364 (56.04%)			
	3 to 4	3 366 (45.66%)	4 006 (54.34%)			
	5 plus	816 (52.88%)	727 (47.12%)			

Contraceptive Use or Non- use and the Socio-economic Characteristics of the married women

Variable	Category	Using Any Contraceptive use?		Rao-Scott F-Test Statistic	P-value	Interpretation
		No	Yes			
Woman Current Working Status	No	3 543 (47.15%)	3 972 (52.85%)	5.2759	0.0218	Significant
	Yes	3 326 (44.34%)	4 176 (55.66%)			
Woman's Educational Attainment	No Education	115 (73.33%)	42 (26.67%)	74.0716	0.000	Significant
	Incomplete Primary	581 (46.78%)	660 (53.22%)			
	Complete Primary	649 (46.63%)	743 (53.37%)			
	Incomplete Secondary	970 (42.82%)	1 295 (57.18%)			
	Complete Secondary	2 126 (42.22%)	2 910 (57.78%)			
	Higher	2 429 (49.31%)	2 497 (50.69%)			

Contraceptive Use or Non- use and the Socio-economic Characteristics of the married women (continued)

Variable	Category	Using Any Contraceptive use?		Rao-Scott F-Test Statistic	P-value	Interpretation
		No	Yes			
Husband's Educational Attainment	No Education	106 (58.94%)	74 (41.06%)	8.9782	0.000	Significant
	Incomplete Primary	1 593 (44.69%)	1 971 (55.31%)			
	Complete Primary	38 (39.75%)	57 (60.25%)			
	Incomplete Secondary	2 721 (42.52%)	3 678 (57.48%)			
	Higher	2 411 (50.47%)	2 367 (49.53%)			
Region	NCR	965 (45.26%)	1 168 (54.74%)	0.6865	0.5475	Not Significant
	Luzon	3 117 (45.56%)	3 725 (54.44%)			
	Visayas	1 099 (44.44%)	1 375 (55.56%)			
	Mindanao	1 687 (47.30%)	1 880 (52.70%)			
Religion	Non-Roman Catholic	949 (41.36%)	1 345 (58.64%)	51.5687	0.0000	Significant
	Roman Catholic	5 393 (45.07%)	6 571 (54.93%)			
	Islam	528 (69.58%)	231 (30.42%)			

Contraceptive Use or Non- use and the Socio-economic Characteristics of the married women (continued)

Variable	Category	Using Any Contraceptive use?		Rao-Scott F-Test Statistic	P-value	Interpretation
		No	Yes			
Residence	Rural	3 711 (44.99%)	4 537 (55.01%)	1.2712	0.2598	Not Significant
	Urban	3 159 (46.66%)	3 610 (53.34%)			
Wealth Index	Poorest	1 367 (44.98%)	1 672 (55.02%)	7.7785	0.0000	Significant
	Poorer	1 225 (40.39%)	1 808 (59.61%)			
	Middle	1 337 (44.15%)	1 691 (55.85%)			
	Richer	1474 (47.72%)	1615 (52.28%)			
	Richest	1 466 (51.85%)	1 361 (48.15%)			

Logistic Regression Analysis of Contraceptive Among Married Women in the Philippines

Variables	Full Model	Reduced Model
	Coefficients (Standard Error)	
Intercept	-3.678 (0.5492)**	-3.7479 (0.3347)**
Woman Current Working Status (reference category is No)		
Yes	0.3109 (0.0610)**	0.2844 (0.0604)**
Woman's Educational Attainment (reference category is No Education)		
Incomplete primary	0.9756 (0.226)**	1.0211 (0.2156)**
Complete primary	0.9143 (0.2355)**	0.9788 (0.2243)**
Incomplete secondary	0.9939 (0.2309)**	1.0553 (0.2233)**
Complete secondary	1.0694 (0.2248)**	1.1118 (0.216)**
Higher	1.0621 (0.229)**	0.965 (0.2254)**
Religion (reference category is Non Roman Catholic)		
Roman Catholic	-0.1749 (0.0798)**	-0.1693 (0.0798)**
Islam	-1.1974 (0.124)**	-1.3113 (0.1207)**
Heard Family Planning on tv last few months? (reference category is No)		
Yes	1.1716 (0.0688)**	0.1276 (0.0598)**

Logistic Regression Analysis of Contraceptive Among Married Women in the Philippines (continued)

Variables	Full Model	Reduced Model
	Coefficients (Standard Error)	
Age Group (reference category is 15 to 19 years old)*		
20 to 24	0.5119 (0.2008)**	0.4756 (0.2023)**
25 to 29	0.3196 (0.1867)	0.2638 (0.1878)
30 to 34	0.3371 (0.1899)	0.2817 (0.1921)
35 to 39	0.1156 (0.1901)	0.048 (0.1901)
40 to 44	-0.1641 (0.1896)	-0.2271 (0.1917)
45 to 49	-0.9638 (0.1961)**	-1.0356 (0.1971)**
Number of Living Children (reference category is 0)		
1 to 2	2.8423 (0.2243)**	2.8181 (0.2206)**
3 to 4	3.4918 (0.2226)**	3.4131 (0.22)**
5+	3.5295 (0.2447)**	3.4246 (0.2287)**
Husband's Educational Attainment (reference category is No Education)		
Incomplete primary	0.0295 (0.1827)	
Complete primary	0.3421 (0.3587)	
Incomplete secondary	0.0414 (0.188)	
Higher	-0.1235 (0.198)	

Logistic Regression Analysis of Contraceptive Among Married Women in the Philippines (continued)

Variables	Full Model	Reduced Model
	Coefficients (Standard Error)	
Wealth Index (reference category is Poorest)*		
Poorer	0.1544 (0.0752)**	
Middle	0.0388 (0.0838)	
Richer	-0.019 (0.0953)	
Richest	-0.0535 (0.1184)	
Read about Contraception on the Internet? (reference category is No)		
Yes	-0.096 (0.0697)	
Ideal Number of Children (reference category is 0)		
1 to 2	-0.0041 (0.4283)	
3 to 4	-0.2941 (0.423)	
5+	-0.4571 (0.4222)	
Number of Women (weighted)	15 016	15 016
Design df	1,131	1,131
Archer and Lemeshow Goodness-of-Fit-Test (p-value)	0.304	0.362

Note: ** $p < 0.05$

Age* is significant after testing for joint effect

ODDS RATIOS

- The odds of using any contraceptive method of the married women who are of age 20 to 24 are close to twice (AOR = 1.6090) compared to those women who are 15 to 19 years old.
- 25 to 29 years old, 30 to 34 years old and 35 to 39 years old married women have 30.19%, 32.53% and 4.92% higher chance (AOR = 1.3019, 1.3252 and 1.0492) of using any contraceptive method than 15 to 19 years old women, respectively.
- On the other hand, married women of age 40 to 44 and 45 and 49 are 20.31% and 64.50% less likely (AOR = 0.7969 and 0.3350) to use any contraceptive method respectively, compared to those women who are 15 to 19 years old.

ODDS RATIOS (continued)

- The odds of using any contraceptive method among married women having incomplete and complete primary education, incomplete secondary education and higher education are nearly 3 times more likely (AOR = 2.7763, 2.6612, 2.8729 and 2.6248) to use any contraceptive method compared to those married women having no education (reference category).
- Moreover, married women having completed secondary education are 3 times more likely (AOR = 3.0399) to use any contraceptive method compared to those married women having no education (reference category).
- Married women having 1 to 2 children are 16 times more likely (AOR = 16.7443) to use any contraceptive method compared to those married women having no child (reference category).

ODDS RATIOS (continued)

- Married women having 3 to 4 children are 30 times more likely (AOR = 30.3589) to use any contraceptive method compared to those married women having no child (reference category).
- Moreover, married women with five or more children are nearly 31 times more likely (AOR = 30.7115) to use any contraceptive method compared to those married women having no child (reference category).
- Married women who heard about family planning on tv last few months are 13.61% times more likely (AOR = 1.1361) to use any contraceptive method compared to those married women who have not heard about family planning on tv last few months (reference category).

ODDS RATIOS (continued)

- Married women who are currently working are 32.89% times more likely (AOR = 1.3289) to use any contraceptive method compared to those married women who are not currently working.
- Married women who are Roman Catholic and Moslem are 15.58% and 73.05% less likely (AOR = 0.8442 and 0.2695) to use any contraceptive method, respectively, compared to those non Roman Catholic married women (reference category).

Conclusions

1. More than half of the married women are using any contraceptive method.
2. Age, heard family planning on tv last few months, read information about contraception on the internet, ideal number of children, woman current working status, religion, woman educational attainment, husband's educational attainment, number of living children, and wealth index have a statistically significant association with contraceptive usage at 0.05 significant level.
3. The determinants of contraceptive use among married reproductive women in the Philippines are the following variables: age, women educational attainment, number of living children, heard about family planning on tv last few months, woman current working status and religion.

Recommendations

The researcher recommends the following:

1. The statistical model may be compared to other models as to which is better in terms of identifying reproductive women who using or not using any contraceptive method.
2. The researcher suggests to determine the predictors of using any particular modern contraceptive use such as condom, pills, IUD, etc.
3. Determine the correlates of contraceptive use among reproductive women using Multinomial regression analysis or data mining techniques like Classification and Regression Trees (CART), decision trees, etc.
4. Determine the correlates of using long-acting versus short-acting reversible contraceptives among reproductive women.
5. Other socio-economic variables may be included in future studies to determine the correlates of contraceptive use of the reproductive women.

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