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2017 No. 130

DEMOGRAPHIC AND HEALTH SURVEYS

July 2017

Working Paper WP130

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July 2017

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Acknowledgments

We would like to thank our colleagues in the Population Institute for their support, especially Dr. Josefina N. Natividad for her inputs in preparing the concept paper. Shireen Assaf and Tesfayi Gebreselassie provided insightful comments. We appreciate also the patience and commitment of Wenjuan Wang, Bupe Bwalya, and Mulenga Chonzi during the 2017 DHS Fellows Data Users and Report Writing Workshops. We also thank our fellow workshop participants for their comments on the earlier version of our paper.

Funding support for this analysis is provided by USAID through the 2017 DHS Fellows Program implemented by ICF.

Editor: Nancy Johnson
Document Production: Joan Wardell

The DHS Working Papers series is a prepublication series of papers reporting on research in progress that is based on Demographic and Health Surveys (DHS) data. This research is carried out with support provided by the United States Agency for International Development (USAID) through The DHS Program (#AID-OAA-C-13-00095). The views expressed are those of the authors and do not necessarily reflect the views of USAID or the United States Government.

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Recommended citation:

Marquez, M. P. N., M. Kabamalan, and E. Laguna. 2017. *Ten Years of Traditional Contraceptive Method Use in the Philippines: Continuity and Change*. DHS Working Papers No. 130. Rockville, Maryland, USA: ICF.

Abstract

The Philippines has a contraceptive prevalence rate of 55%, based on the 2013 Philippines National Demographic and Health Survey (NDHS). Most contraceptive users rely on modern methods, but over the past 10 years traditional method use has continued to comprise about a third of all contraceptive users in the country. This study examines recent levels, patterns, and determinants of traditional contraceptive method use, based on pooled data from the 2003, 2008, and 2013 Philippines DHS surveys.

Results from the multinomial logistic regression analyses show that among users of traditional rather than modern contraceptive methods, women in 2003 and 2008 were more likely to use rhythm over modern contraceptive methods compared with women in 2013, while withdrawal rather than modern contraceptive methods were preferred more by women in 2013 than in 2003. The results identify several factors that are significant in predicting use of either rhythm or withdrawal rather than modern contraceptive methods. Women in the lowest wealth quintile relative to those in the highest (wealthiest) quintile, as well as women who want more children relative to those who do not, are more likely to use either of the two traditional rather than modern contraceptive methods. Furthermore, women who are undecided about whether to have another child are more likely to use the rhythm method compared with modern contraceptives. Having correct knowledge of the fertile period increases the relative risk of a woman using rhythm than using modern contraceptive methods.

The characteristics of women who use traditional methods have changed little over the past decade. While most program efforts have focused on new acceptors of modern contraception, many Filipino women continue to rely on traditional methods. Knowing the characteristics of traditional contraceptive method users can help policies and programs to promote more effective contraceptive use, including encouraging users of traditional contraceptive methods to switch to the more effective modern methods.

Keywords: Philippines, Traditional Contraceptive Use, Rhythm, Withdrawal

1. Introduction

1.1. Background

In 2013, according to the most recent survey data available, 55% of currently married Filipino women of reproductive age (15-49) were using any form of contraceptive method. This continues the upward trend in use found in earlier Philippines National Demographic and Health Surveys (NDHS), from 49% in 2003 to 51% in 2008 (Philippine Statistics Authority and ICF International 2014). The increase in contraceptive use across the surveys is attributed to an increase in both modern and traditional contraceptive use, although there has been higher uptake of modern contraceptive methods. In 2013, 38% of currently married women were using a modern contraceptive method compared with 17% who reported traditional contraceptive method use (PSA and ICF International 2014; NSO and Macro ORC 2009; NSO and Macro ORC 2004).

Notwithstanding the improvement in the level of contraceptive use in the Philippines, unmet need for family planning remains substantial. In 2013, about 18% of currently married Filipino women, roughly 5.5 million, wanted to limit or space their pregnancies but were not currently using any family planning method (PSA and ICF International 2014). If traditional contraceptive method use is classified as nonuse, the level of unmet need for modern family planning methods is estimated to be higher, at 33% among married/in-union women (FP2020 2015).

Recognizing the importance of family planning, the Sustainable Development Goals (SDGs) have incorporated as targets the attainment of universal access to sexual and reproductive health and reproductive rights (Goal 3.7), as well as reproductive health care services (Goal 5.6). Under these targets are indicators such as contraceptive prevalence and the proportion of women of reproductive age who have their need for family planning satisfied with modern methods. The Philippines is committed to the attainment of the SDGs, as well as earlier international commitments such as the Millennium Development Goals (MDGs).

With regard to the promotion of family planning and contraceptive use, several administrations have taken different directions on the implementation of the population program. The enactment of the Population Act (Republic Act 6365) in 1971 formally established the official family planning program of the country under the Commission on Population. However, beginning in the 1980s the family planning program was transferred to the Department of Health and became one of the components of the public health program. During the administration of President Gloria Macapagal-Arroyo (2001-2010), there was a strong focus on natural family planning (NFP) methods endorsed by the Catholic Church. In general, the shifts and turns in the direction of the family planning program are attributed to the position of the incumbent President on artificial contraception, the strong influence of the Catholic Church, the devolution of health services to local government units, and the reproductive health framework and commitment

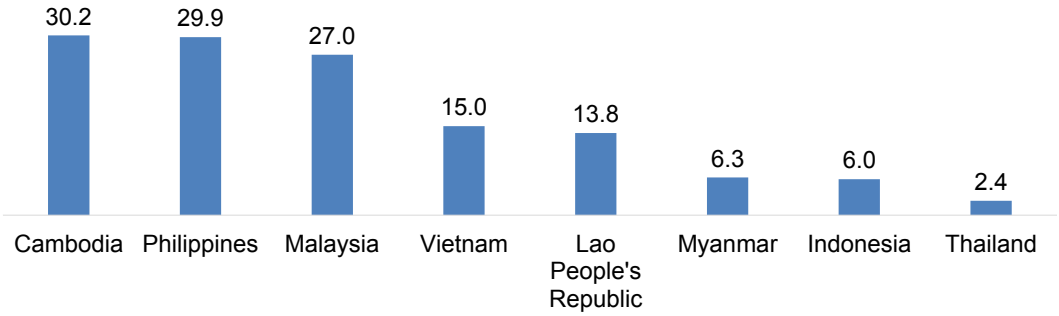
made at the International Conference on Population and Development (ICPD) in Cairo in 1994 (Melgar et al. 2012). Moreover, external factors such as the gradual withdrawal of support of the United States government on the provision of contraceptive commodities also influenced the course of action taken by the government on the family planning program. The passage of Republic Act RA 10354, or the Responsible Parenthood and Reproductive Health Act (RPRH Law) in 2013, despite strong opposition from the Catholic Church, civil society, and other organizations, is considered a major achievement toward the provision of comprehensive reproductive health services and programs, including family planning.

Both modern and traditional contraceptive methods contribute to overall contraceptive use, but there is more emphasis given to the promotion of modern contraceptive methods because of their greater effectiveness in preventing unintended pregnancies. An analysis of data from 43 countries shows that 12-month contraceptive failure rates are highest for traditional methods such as withdrawal and periodic abstinence, with 13.9 and 13.4 failures per 100 episodes of use, respectively (Polis et al. 2016).

In comparison, longer-acting modern contraceptive methods such as implants, IUDs, and injectables have the lowest failure rates, while short-term resupply methods such as pills and male condoms have intermediate failure rates. Use of traditional contraceptive methods has also been associated with increased odds of having undesired pregnancy (Sullivan et al. 2006). In the Philippines, unintended pregnancy accounts for around half of the reasons why use of rhythm and withdrawal was discontinued, evidence of their low level of effectiveness (Abejo et al. 2006).

Despite the clear distinction in effectiveness between modern and traditional contraceptive methods, a significant number of Filipino women still use traditional family planning methods. When the first demographic survey in the Philippines was conducted in 1968, 81% of all contraceptive users were using traditional contraceptive methods (Abejo et al. 2006; NSO and Macro ICF 2009). Currently, about one in every three women who are currently using a contraceptive method rely on traditional contraceptive methods, a level that has remained nearly constant over the past 10 years. Across Southeast Asia, the Philippines ranks second to Cambodia in the share of traditional contraceptive method use among currently married women using contraceptive methods (Figure 1).

Figure 1. **Percentage of traditional contraceptive method use among currently married women who are using contraceptives, Southeast Asia, 2015**



Source: Calculated from United Nations Department of Economic and Social Affairs, Population Division (2015) Annex Table III

1.2. The use of traditional contraceptive methods

Traditional contraceptive methods include periodic abstinence or rhythm, withdrawal, and folkloric methods. Periodic abstinence or the calendar method (rhythm) has been widely used among Filipino couples. Earlier studies on family planning behavior have noted that even without any effort from the government to promote periodic abstinence as part of the family planning program, it was a popular method among Filipino couples (Laing 1987). It was often practiced in combination with withdrawal and with modern methods such as condom or foam. In a study on contraceptive use in 1978, more than a quarter of Filipino couples were practicing one form or another of this method (Verzosa et al. 1984).

Alongside periodic abstinence, there was also high reliance on withdrawal as a family planning method. This stems from the fact that withdrawal does not entail cost and can be used spontaneously by couples. Withdrawal as a method also upholds the belief of men's power in reproductive decision-making (Verzosa et al. 1984).

More recent studies have looked into the reasons why women or couples shy away from more effective modern methods of contraception (e.g., Abejo et al. 2006; Williamson et al. 2009; PSA and ICF International 2014; Cruz, Marquez, and Kabamalan 2016). The most common reasons are fear of their side effects, lack of knowledge on different methods, and inconvenience of use, in contrast to the relative ease in adopting traditional contraceptive methods. A study of urban poor women in Manila found that traditional contraceptive methods, particularly withdrawal, are preferred because of their absence of side effects, safety, agreeability with partner, and ease of

use (Cruz, Marquez, and Kabamalan 2016). Similarly, in a study of the use of periodic abstinence among Beti women in Cameroon, Johnson-Hanks (2002) found that women preferred the method because of the absence of negative side effects as well as a perception that periodic abstinence is an indicator of one's self-discipline.

A review of qualitative studies on nonuse of modern contraceptive methods among young women in developing countries pointed to factors such as lack of knowledge and poor access to services, a common perception that modern family planning methods and services are only for married women, as well as the negative social norms around premarital sexual activity. The difficulties that young women often encounter in accessing modern contraceptive methods lead many to use traditional methods instead (Williamson et al. 2009). Such observations are pertinent to the Philippines, where social norms discourage sexual activity outside of marriage. In addition, reproductive health services are provided mainly to married women/couples. The RPRH Law requires parental consent for women below age 18 to access family planning services from public health facilities. Thus, it is not surprising to find that a larger proportion of sexually active unmarried women than currently married women are using traditional contraceptive methods (PSA and ICF International 2014).

An analysis of traditional contraceptive method use in India found higher likelihood of traditional contraceptive method use among highly educated, urban, non-poor women (Ram, Shekhar, and Chowdhury 2014). Similar characteristics have been associated with use of rhythm in Bangladesh, where older, more educated women, those with higher socioeconomic status (SES), and those with at least one living son are more likely to use rhythm as a family planning method (Kamal et al. 2005). Such a pattern debunks a common assumption that traditional contraceptive methods are preferred more by poor and less educated women. The choice of traditional contraceptive methods among educated women indicates their understanding of how methods such as rhythm work, as well as their knowledge of the ovulation cycle. In contrast, withdrawal use in Turkey was found to be associated with rural women, and women with less education, lower socioeconomic status, and living in more crowded households (Cindoglu, Sirkeci, and Sirkeci 2008).

A similar study by Hubacher and colleagues in Honduras in 1996, found that among women using contraception, the choice of withdrawal versus modern contraceptive methods was significantly predicted by their distance from a health facility, marital status, residence, age, number of living children, and education. The decision to use rhythm relative to modern methods was associated with distance from a health facility. Also, women who wanted another child were more likely than women who did not want more children to prefer rhythm than modern methods (Hubacher et al. 1996).

With this as background, a study on the levels, patterns, and determinants of traditional contraceptive method use can provide valuable information on the dynamics of contraceptive use

in the Philippines. In this paper, we focus on traditional contraceptive method use and explore why its prevalence has remained substantial over the past 10 years. By using data from three DHS surveys, the paper attempts to capture the effect of time as well as a different family planning program focus on contraceptive method use.

1.3. Research questions

While contraceptive prevalence has increased in the Philippines, the rise has been gradual. This has led to a steady but slow decrease in fertility. Results from the Philippines NDHS surveys show that use of both modern and traditional contraceptive methods increased across survey years. Among current contraceptive users, however, the share of traditional contraceptive method use has been consistent, at around 30%. With the present administration's focus on addressing unmet need for modern family planning methods, an understanding of the trends and levels of traditional contraceptive method use is imperative. No study in recent years has looked into this specific topic.

In this paper, we explore the following research questions:

1) What characteristics of women are associated with the use of traditional contraceptive methods?

2) Given that the share of traditional contraceptive method use among all contraceptive users has remained the same in the last 10 years, have the characteristics of traditional contraceptive method users been similar throughout the years?

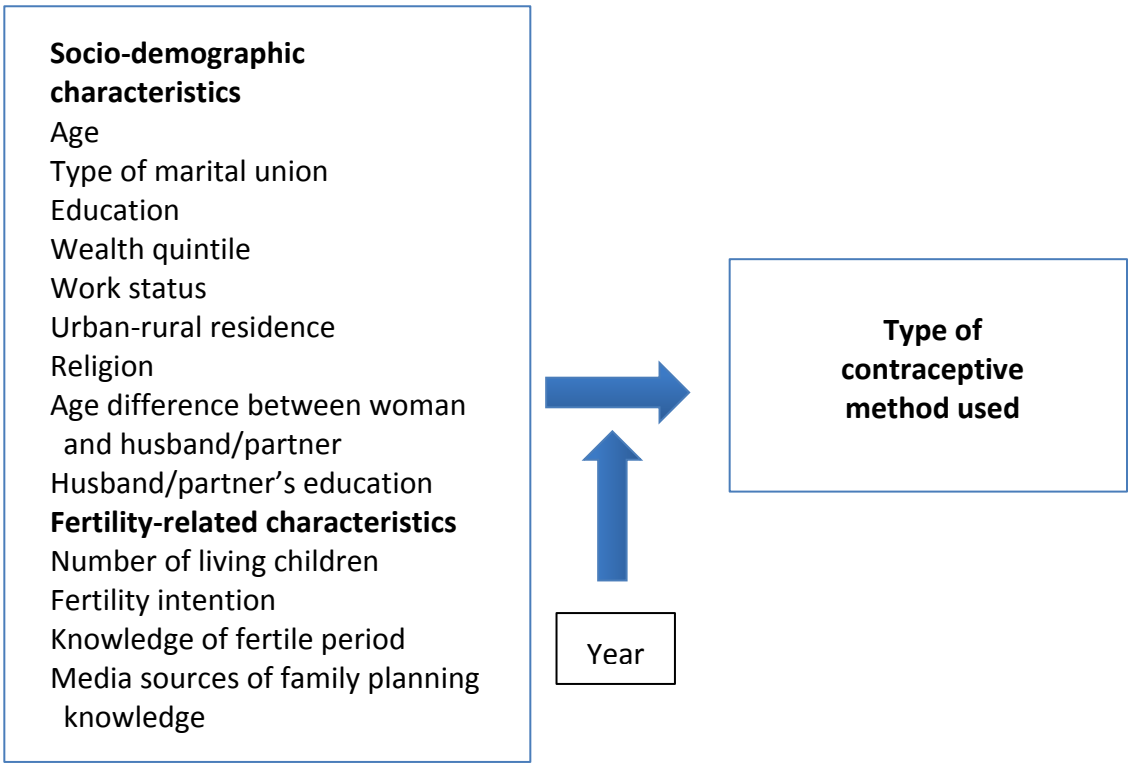
Understanding the characteristics of traditional contraceptive method users provides a valuable input to the development and implementation of programs, particularly information education and communication (IEC) campaigns that address the needs of these users. Moreover, this information is important for designing programs and policies that could encourage couples to switch from traditional contraceptive methods to more reliable and efficient modern methods.

1.4. Conceptual Framework

This study considers contraceptive method use, and in particular preference for traditional contraceptive methods, to be a function of several factors: the background characteristics of the woman herself, those of her husband or partner, her fertility intentions, and her exposure to family planning messages. Figure 2 graphically presents the link between these factors and the choice of contraceptive method.

In addition, we explore the possible association of these factors to type of contraceptive method used within the changing context of family planning program implementation in the Philippines, as measured in the recent DHS surveys.

Figure 2. **Conceptual framework examining the association between women's socio-demographic and fertility-related characteristics and type of contraceptive method used**



2. Data and Methods

2.1. Data

This study used pooled data from the 2003, 2008, and 2013 Philippines National Demographic and Health Surveys (NDHS), particularly the women's file, which contains information on background characteristics, fertility, and family planning practices of women of reproductive age 15-49. The 2003 NDHS was a sample of 13,633 respondents, while the 2008 and 2013 surveys covered 13,594 and 16,155 respondents, respectively.

The two earlier surveys used a stratified three-stage sampling design, first, by selecting primary sampling units (PSUs) and second, by selecting enumeration areas (EAs), both using probability proportional to size. At the third stage, housing units were then selected with equal probability within sampled EAs. The 2013 NDHS used a stratified two-stage sampling design involving the systematic selection of EAs distributed by stratum (region, urban/rural) at the first stage and then the selection of sample housing units from each sample EA, using systematic random sampling at the second stage. Both designs provide data that is representative of the country and each of the 17 administrative regions. All three surveys were conducted by the Philippine Statistics Authority (NSO and ORC Macro 2004; NSO and ICF Macro 2009; PSA and ICF International 2014).

The analytic sample is restricted to fecund, currently married (formally or consensually), sexually active women (those who reported having had sexual intercourse in the four weeks prior to the survey) of reproductive age 15-49 and who were currently using any contraceptive method at the time of the survey. Such women are assumed to be exposed to the chance of pregnancy and are therefore likely to need a family planning method if they want to space or limit births. Women who reported using folkloric methods (98 cases for all survey years) were excluded from the analytic sample. These criteria resulted to a total of 11,815 women in the study, distributed as follows: 3,613 women in 2003, 3,663 women in 2008, and 4,539 women in 2013. Before the datasets were merged, all variables used in the analysis were harmonized across the three survey years.

2.2. Key Variables and Measures

The outcome variable is type of contraceptive method currently used, which was derived from the following question: "*Are you or your husband/partner currently doing something or using any method to delay or avoid getting pregnant?*" A positive response leads to the follow-up question on the particular contraceptive method used. In case there is more than one method reported, the more effective method is recorded. Contraceptive methods are classified into modern and traditional methods. Modern contraceptive methods include female sterilization, male sterilization, pill, IUD, injectables, male condom, and natural family planning (NFP) methods. The modern NFP methods include fertility awareness-based methods such as cervical

mucus/Billing's ovulation method, basal body temperature, symptothermal method, standard days method, and lactational amenorrhea method (LAM)[1].

Traditional contraceptive method use refers to use of any of the following: rhythm or periodic abstinence, withdrawal, and folkloric methods (e.g., use of herbs). Since the focus of the study is on traditional contraceptive methods and also due to the small number of women using folkloric methods, the outcome variable includes only three categories: the use of rhythm, withdrawal, and modern contraceptive methods.

Explanatory variables are categorized into socio-demographic and fertility-related characteristics of women as outlined in the conceptual framework. The socio-demographic characteristics that are likely to be associated with the type of contraceptive method use were measured as follows: *Age* refers to the age of the woman as of her last birthday. For this analysis, age is treated as a categorical variable, thus the 5-year age groups 15-19, 20-24, 25-29, 30-34, 35-39, 40-44 and 45-49 are used. *Type of marital union* distinguishes between formal union and cohabitation (live-in arrangement or consensual union). *Highest educational attainment* refers to the highest level of schooling completed by the respondent and is categorized into no education, elementary, high school, and college or higher. *Wealth quintile* is an aggregate measure of the socioeconomic status of the household where the woman resides. It is measured in quintiles: lowest, second, middle, fourth, and highest. *Work status of the woman* is a bivariate measure on whether or not she has done any work in the past seven days. *Urban-rural residence* refers to whether the woman's place of residence is an urban or a rural area. *Religio*n refers to the woman's religious affiliation, whether Catholic or non-Catholic.

Some basic characteristics of the husband/partner were also identified as possible factors that could affect the contraceptive method used. *Husband/partner's age* refers to the age as of last birthday and grouped into five broad categories: 15-19, 20-29, 30-39, 40-49, and 50 years and over. This variable, however, was excluded in the multivariate analysis since it is highly correlated with the woman's age. *Age difference between the woman and her husband/partner* was grouped into three categories: husband/partner is older by at least four years, husband/partner is of the same age or older by up to three years, and woman is older than husband/partner. *Husband/partner's education* follows the same four categories as for women's educational attainment.

Fertility-related characteristics of the women were also identified as factors associated with contraceptive method use. The couple's *number of living children* is grouped into none, 1-2, 3-4, and 5 and over. *Fertility intention* is a measure of the woman's desire for additional children, with three categories: want no more children, undecided, and want more children. *Knowledge of*

[1] This classification of NFP methods is based on Administrative Order No. 125 s. 2002 issued by the Secretary of the Department of Health, which outlines the national strategy for the implementation of natural family planning in Year 2002 - 2006.

fertile period measures awareness of the fertile window in the menstrual cycle and is dichotomized into two categories: correct knowledge and incorrect knowledge. Women with correct knowledge refers to those who answered that a woman is more likely to get pregnant halfway between two menstrual cycles, while women with incorrect knowledge refers to those who mentioned otherwise or responded that they do not know when the fertile period is.

Finally, exposure to family planning messages was also included, particularly *women's exposure through the radio, television, and print media, such as newspaper or magazine, poster, or leaflet or brochure in the past few months*. It should be noted that the variable representing print media for the year 2003 is a composite variable from three questions inquiring about family planning exposure through newspaper or magazine, poster, or leaflet or brochure separately, whereas all these were included as one question in the 2008 and 2013 surveys. The 2013 survey also asked about the Internet as a source of family planning messages but, although the Internet has become an important media form, these data are not included in the analysis because there are no comparable data from the two earlier surveys.

Survey *year* is included as a factor in analyzing use of traditional contraceptive methods among Filipino women over time.

2.3. Methods of Analysis

Cross-tabulations and tests of proportions were employed in comparing the characteristics of women using traditional and modern contraceptive methods and in ascertaining statistical significance in the differences. Multinomial logistic regression was used to predict the determinants of current use of rhythm (periodic abstinence) or withdrawal (both traditional methods) relative to current use of modern contraceptive method (base group). The relative risk ratios (RRR) are reported. A parameter estimate of RRR more than 1 indicates that the explanatory variable is associated with greater probability of outcome than that of the base group, while RRR of less than 1 indicates smaller probability of outcome than the base group. Prior to the multivariate analyses, the explanatory variables were tested for multicollinearity using variance inflation factor (VIF).

Respondents with missing information were excluded from the analyses. Results from statistical analyses were adjusted for complex survey design. Stata version 14 was used for data management and analysis.

3. Results

3.1. Trends in contraceptive use: 2003-2013

Table 1 shows the contraceptive method mix among the sample of currently married, fecund, and sexually active current users for the three survey years and the percentage point differences for three time periods: 2003-2008, 2008-2013, and 2003-2013. Modern contraceptive methods comprise the largest share of contraceptive prevalence across all survey periods. However, the use of traditional methods also accounts for nearly one-third of contraceptive use from 2003 to 2013.

Table 1. Percent distribution of currently married women age 15-49 who are using a contraceptive method by type of contraceptive method currently used and percentage point difference, Philippines 2003, 2008, and 2013

	Percentage			Percentage point difference		
Contraceptive method	2003	2008	2013	2003-2008	2008-2013	Overall 2003-2013
Traditional method	**31.8**	**32.7**	**32.0**	**0.9**	**-0.7**	**0.2**
Rhythm (Periodic abstinence)	13.4	12.4	9.3	-1.0	-3.1	-4.1
Withdrawal	17.2	19.4	22.2	2.2	2.8	5.0
Folkloric method	1.2	0.9	0.4	-0.3	-0.5	-0.8
Modern method	**68.2**	**67.3**	**68.0**	**-0.9**	**0.7**	**-0.2**
Female sterilization	18.5	16.2	14.0	-2.3	-2.2	-4.5
Male sterilization	0.2	0.1	0.2	-0.1	0.1	0.0
Pill	29.2	32.9	36.5	3.7	3.6	7.3
IUD	8.5	7.2	6.3	-1.3	-0.9	-2.2
Injectables	6.7	5.3	6.4	-1.4	1.1	-0.3
Male condom	4.3	4.8	3.5	0.5	-1.3	-0.8
Natural family planning (NFP) method[1]	0.8	0.9	1.0	0.1	0.1	0.2
Other modern method	0.1	0.0	0.1	-0.1	0.1	0.0
Total	**100.0**	**100.0**	**100.0**			
Number of women	3,657	3,696	4,560			

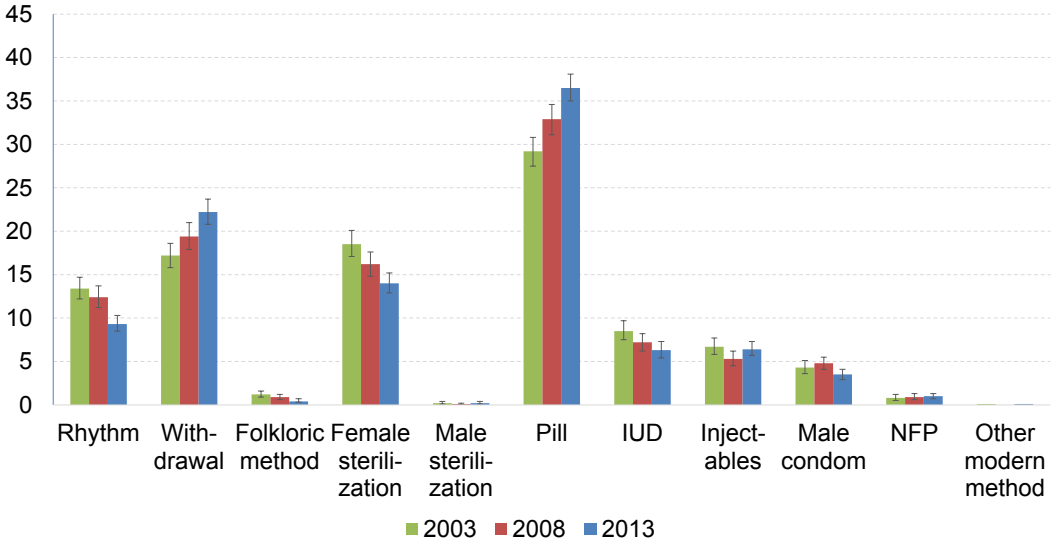
Note: Excludes women who declared themselves as infecund, pregnant or who were not sexually active in the 4 weeks preceding the survey

[1] Includes Mucus/Billings/Ovulation method, Standard Days Method, Lactational amenorrhea method (LAM), basal body temperature (BBT), and symptothermal methods

As Figure 3 illustrates, the contraceptive method mix has changed little from 2003 to 2013, with only the pill posting statistically significant changes over the 10-year period. The pill is the most widely used contraceptive method in all survey years and recorded the largest increase in both 5-year survey intervals, with an overall increase of 7.3 percentage points from 2003 to 2013. Next to the pill, the most preferred method is withdrawal; its prevalence increased from 17% in 2003 to 22% in 2013—an increase of 5 percentage points over the 10-year period, with the largest share of the increase occurring between 2008 and 2013. In contrast, use of rhythm decreased in

prevalence, from 13% in 2003 to 12% five years later and further to 9% in 2013. After female sterilization, rhythm use recorded the highest decline, at 4.1 percentage points.

Figure 3. Percentage and 95% confidence intervals of currently married women age 15-49 by contraceptive method currently used, Philippines 2003, 2008, and 2013



Note: Excludes women who declared themselves as infecund, pregnant or who were not sexually active in the 4 weeks preceding the survey

The use of natural family planning (NFP) methods posted a 0.2 percentage point increase from 2003 to 2013, while the IUD, injectables, and male condom recorded modest decreases in prevalence. Male sterilization remains negligible, at a level even lower than that of folkloric methods.

In all survey years, use of withdrawal is more prevalent than the rhythm method. From a 3.8 percentage point difference in 2003, the gap between these two methods widened such that by 2013, prevalence of withdrawal (22%) is more than twice than that of rhythm (9%).

3.2. Distribution of women who are current contraceptive users: 2003-2013

The succeeding analyses are on a total of 11,815 cases. As mentioned in the data section, women who reported use of folkloric methods were excluded because of the small number of cases in all survey years (98).

The distribution of fecund, currently married (formally or consensually), sexually active contraceptive users has not changed substantially from 2003 to 2013 (Table 2). Most of these women were in the peak of childbearing age 25-34, while a few were teenagers. Over the survey period, however, the percentage of cohabiting women more than doubled, from 9% in 2003 to 22% in 2013.

Table 2. Percent distribution of currently married women age 15-49 who are currently using a contraceptive method, by sociodemographic characteristics, Philippines 2003, 2008, and 2013

Sociodemographic characteristic	Survey year 2003 %	2003 Number of women	2008 %	2008 Number of women	2013 %	2013 Number of women
Age						
15-19	1.6	57	1.8	64	2.4	108
20-24	11.6	419	11.7	429	12.0	545
25-29	19.7	711	19.8	724	17.0	770
30-34	21.7	784	21.8	800	22.1	1,004
35-39	22.0	794	20.2	740	19.7	894
40-44	14.9	538	16.0	586	17.1	775
45-49	8.6	310	8.7	319	9.8	444
Mean, s.d.	33.5, 7.5		33.5, 7.7		33.8, 7.8	
Type of marital union						
Formally married	91.0	3,287	85.4	3,128	77.8	3,530
Cohabiting	9.0	326	14.6	535	22.2	1,010
Education						
No education	*	16	*	16	(0.8)	35
Elementary	25.6	925	20.9	765	19.5	886
High School	43.7	1,580	46.9	1,716	50.8	2,307
College or higher	30.2	1,093	31.8	1,165	28.9	1,312
Wealth quintile						
Lowest	14.7	533	15.9	584	18.5	840
Second	20.8	752	21.0	769	21.2	963
Middle	22.2	802	22.2	812	21.9	993
Fourth	22.7	821	22.3	818	21.6	978
Highest (Ref.)	19.5	705	18.5	679	16.9	765
Work status[1]						
Working	50.5	1,820	55.0	2,007	53.7	2,430
Not working	49.5	1,780	45.0	1,641	46.3	2,098
Residence						
Urban	53.5	1,934	53.1	1,946	49.4	2,243
Rural	46.5	1,679	46.9	1,717	50.6	2,297
Religion[2]						
Catholic	81.7	2,951	80.7	2,956	80.1	3,631
Non-Catholic	18.3	659	19.3	706	19.9	905
Husband/partner's age[1]						
15-19	*	16	*	12	*	19
20-29	22.3	806	21.9	803	21.5	976
30-39	41.3	1,490	41.2	1,506	40.1	1,815
40-49	30.6	1,104	30.1	1,101	30.3	1,372
50 and over	5.4	194	6.5	237	7.7	351
Mean, s.d.	36.4, 8.2		36.7, 8.5		36.9, 8.5	
Age difference between woman (W) and husband/partner (H)						
H older than W by 4+ years	37.8	1,366	41.6	1,520	41.2	1,869
Same age or H older than W by 1-3 years	42.9	1,550	39.3	1,439	40.4	1,832
W older than H	19.2	694	19.1	699	18.3	831
Mean, s.d.	2.9, 4.9		3.1, 5.1		3.1, 5.0	
Husband/partner's education[2]						
No education	(0.9)	31	(0.6)	22	(0.9)	43
Elementary	30.3	1,094	26.8	977	27.2	1,232
High School	38.9	1,404	41.0	1,495	44.5	2,018
College or higher	29.9	1,077	31.7	1,156	27.4	1,243
Total	**100.0**	3,613	**100.0**	3,663	**100.0**	4,539

Note: Excludes women who declared themselves as infecund or pregnant or not sexually active in the 4 weeks preceding the survey;

[1] Excludes "No information"

Numbers in parentheses are based on 25-49 unweighted cases; an asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

Among current users of a contraceptive method, the percentage of women who have finished at least the basic education (high school) increased between 2008 and 2013, while the percentage with college or more declined. There was also an increase between 2003 and 2008 in the percentage of women working, but the percentage then declined slightly, from 55% in 2008 to 54% in 2013. Between 2003 and 2013, the percentage of women in rural areas using contraception increased, while it decreased slightly among followers of the Catholic religion.

Filipino couples are mostly in the same age group, although, on average, men are older than their partners by three years. Nonetheless, in 2013, 41% of women had husbands who were at least four years older, slightly more than the percentage of women whose husbands were the same age. Education level of the husband/partner generally improved over the survey years. High school seems to be the terminal level for most, since the percentage with elementary education and the percentage with college education or more has declined over time.

Across the three survey years, the percentage of women with one or two children increased by 6 percentage points, to 47%, while the average number of children remained at three (Table 3). A large majority of women want no more children. Only about a third of women have correct knowledge of a woman's fertile period. This percentage increased from 2003 to 2008 and then declined from 2008 to 2013.

Table 3. Percent distribution of currently married women age 15-49 who are currently using a contraceptive method, by fertility-related characteristics, Philippines 2003, 2008, and 2013

	Survey year					
	2003		2008		2013	
Fertility-related characteristic	**%**	**Number of women**	**%**	**Number of women**	**%**	**Number of women**
No. of living children						
2	(1.0)	36	(1.2)	44	(1.0)	47
1-2	41.0	1,480	44.0	1,612	47.2	2,144
3-4	39.8	1,439	37.0	1,356	36.1	1,636
5+	18.2	658	17.8	652	15.7	712
Mean, s.d.	3.1, 1.8		3.0, 1.8		2.9, 1.8	
Fertility intention[1]						
Want no more children	70.3	2,540	69.4	2,541	69.5	3,156
Undecided	4.2	150	4.0	147	4.1	185
Want more children	25.5	921	26.6	975	26.4	1,197
Knowledge of fertile period[1]						
With correct knowledge	30.9	1,116	39.8	1,456	34.3	1,558
With incorrect knowledge	69.1	2,497	60.2	2,206	65.7	2,980
Heard about FP on the radio in the past few months[1]						
Yes	63.4	2,289	53.3	1,953	49.7	2,258
No	36.6	1,323	46.7	1,709	50.3	2,282
Seen about FP on TV in the past few months[1]						
Yes	67.7	2,446	79.1	2,897	72.8	3,303
No	32.3	1,165	20.9	766	27.2	1,236
Read about FP in newspaper/ magazine/poster/leaflet in the past few months[1]						
Yes	57.5	2,078	29.9	1,097	32.6	1,478
No	42.5	1,533	70.1	2,566	67.4	3,062
Total	**100.0**	3,613	**100.0**	3,663	**100.0**	4,539

Note: Excludes women who declared themselves as infecund or pregnant or not sexually active in the 4 weeks preceding the survey

[1] Excludes "No information"

Numbers in parentheses are based on 25-49 unweighted cases

The popularity of radio as a source of knowledge of family planning among women has waned, but television remains a popular source. Print media such as newspapers, magazines, posters, leaflets, or brochures are not as popular in 2013 as 10 years earlier, although the change could be due to a measurement issue since the question was asked differently in the earlier survey (see Key Variables and Measures). In 2013, one of every six women reported the Internet as a source of family planning information (data not shown).

3.3. Association between type of contraceptive method used and socio-demographic and fertility-related characteristics

The succeeding bivariate and multivariate analyses were based on pooled data for women currently using a contraceptive method. Generally, the characteristics of these women have not changed significantly over the three survey periods. Additionally, separate analyses were made for rhythm and withdrawal because of the divergent temporal patterns that these methods show in the trend analysis.

Table 4 compares the socio-demographic and fertility-related characteristics of current users of rhythm, withdrawal, and modern methods. Rhythm and withdrawal users are significantly different in all characteristics with the exception of religion, age difference between the woman and her husband/partner, and family planning exposure on television. More importantly, examination of the characteristics of traditional and modern contraceptive method users reveals interesting findings.

Table 4. Percent distribution and 95% confidence intervals (CIs) of currently married women age 15-49 who are using a contraceptive method by sociodemographic and fertility-related characteristics according to contraceptive method currently used, Philippines pooled data

Sociodemographic and fertility-related characteristic	Rhythm		Withdrawal		Modern method	
	%	95% CI	%	95% CI	%	95% CI
Sociodemographic characteristic						
Age						
15-19	1.1	0.7 - 1.8	3.8	3.0 - 4.8	1.6	1.3 - 1.9
20-24	5.9	4.7 - 7.3	14.3	12.9 - 15.9	12.1	11.3 - 12.8
25-29	11.9	10.2 - 13.9	20.2	18.5 - 22.0	19.3	18.5 - 20.3
30-34	19.1	17.0 - 21.4	20.6	18.8 - 22.5	22.8	21.8 - 23.8
35-39	23.3	21.0 - 25.8	17.7	16.1 - 19.3	20.9	20.0 - 21.9
40-44	23.5	21.3 - 26.0	14.9	13.4 - 16.5	15.1	14.3 - 16.0
45-49	15.1	13.2 - 17.3	8.5	7.4 - 9.8	8.2	7.6 - 8.9
Mean, s.d.	36.5, 7.3		32.6, 7.8		33.4, 7.6	
Type of marital union						
Formally married	90.4	88.6 - 92.0	78.2	76.2 - 80.1	84.8	83.9 - 85.8
Cohabiting	9.6	8.0 - 11.4	21.8	19.9 - 23.8	15.2	14.2 - 16.1
Education						
No education	0.8	0.4 - 1.5	0.7	0.5 - 1.1	0.5	0.4 - 0.6
Elementary	21.3	19.0 - 23.7	21.0	19.3 - 22.9	22.1	21.0 - 23.2
High School	38.4	35.7 - 41.1	52.4	50.2 - 54.6	47.5	46.3 - 48.7
College or higher	39.6	36.8 - 42.4	25.8	23.9 - 27.8	29.9	28.7 - 31.1
Wealth quintile						
Lowest	18.4	16.3 - 20.7	16.6	15.0 - 18.3	16.2	15.2 - 17.3
Second	18.5	16.4 - 20.7	21.2	19.4 - 23.1	21.4	20.4 - 22.5
Middle	18.6	16.5 - 20.9	23.7	21.7 - 25.7	22.2	21.2 - 23.2
Fourth	20.1	17.8 - 22.7	22.9	20.9 - 25.0	22.3	21.2 - 23.4
Highest	24.4	21.8 - 27.3	15.7	14.0 - 17.5	17.9	16.8 - 19.0
Work status						
Working	62.1	59.4 - 64.7	45.1	42.9 - 47.4	53.9	52.7 - 55.2
Not working	37.9	35.3 - 40.6	54.9	52.6 - 57.1	46.1	44.8 - 47.3
Residence						
Urban	48.6	45.6 - 51.7	57.4	54.8 - 60.0	50.7	49.2 - 52.3
Rural	51.4	48.3 - 54.4	42.6	40.0 - 45.2	49.3	47.7 - 50.8
Religion[2]						
Catholic	81.0	78.8 - 83.1	83.0	81.3 - 84.6	80.1	79.0 - 81.1
Non-Catholic	19.0	16.9 - 21.2	17.0	15.4 - 18.7	19.9	18.9 - 21.0
Husband/partner's age						
15-19	0.1	0.0 - 0.5	0.8	0.5 - 1.2	0.3	0.2 - 0.5
20-29	12.0	10.3 - 14.0	28.5	26.5 - 30.5	21.7	20.7 - 22.7
30-39	38.5	35.8 - 41.4	37.1	35.0 - 39.2	42.2	41.1 - 43.4
40-49	39.7	37.0 - 42.5	27.6	25.7 - 29.6	29.5	28.4 - 30.6
50 and over	9.6	8.2 - 11.2	6.1	5.2 - 7.2	6.3	5.7 - 6.9
Mean, s.d.	39.1, 7.9		35.6, 9.0		36.6, 8.5	

Continued…

Table 4—*Continued*

Sociodemographic and fertility-related characteristic	Rhythm		Withdrawal		Modern method	
	%	95% CI	%	95% CI	%	95% CI
Sociodemographic characteristic						
Age difference between woman (W) and husband/partner (H)						
H older than W by 4+ years	37.4	34.6 - 40.3	39.3	37.2 - 41.4	41.1	39.9 - 42.3
Same age or H older than W by 1-3 years	41.5	38.7 - 44.2	39.6	37.6 - 41.7	41.1	40.0 - 42.2
W older than H	21.1	18.8 - 23.6	21.1	19.4 - 22.9	17.8	16.9 - 18.7
Mean, s.d.	1.8, 0.7		1.8, 0.7		1.8, 0.7	
Husband/partner's education						
No education	1.2	0.7 - 1.9	1.1	0.7 - 1.6	0.7	0.5 - 0.9
Elementary	28.7	26.2 - 31.3	26.4	24.5 - 28.4	28.4	27.2 - 29.6
High School	31.2	28.7 - 33.8	44.8	42.6 - 46.9	42.6	41.4 - 43.8
College or higher	39.0	36.1 - 42.0	27.7	25.7 - 29.8	28.4	27.2 - 29.6
Fertility-related characteristic						
No. of living children						
0	2.0	1.3 - 3.0	2.8	2.2 - 3.6	0.4	0.3 - 0.6
1-2	41.2	38.4 - 44.1	49.4	47.3 - 51.5	43.4	42.2 - 44.6
3-4	36.5	33.9 - 39.2	29.6	27.6 - 31.6	40.0	38.8 - 41.2
5+	20.3	18.2 - 22.6	18.3	16.6 - 20.0	16.2	15.4 - 17.1
Mean, s.d.	3.2, 1.9		2.9, 1.9		3.0, 1.7	
Fertility intention						
Want no more children	69.9	67.3 - 72.3	62.9	60.7 - 64.9	71.7	70.7 - 72.7
Undecided	4.9	3.8 - 6.3	4.4	3.6 - 5.4	3.8	3.4 - 4.3
Want more children	25.2	22.9 - 27.7	32.8	30.8 - 34.8	24.4	23.5 - 25.4
Knowledge of fertile period						
With correct knowledge	46.2	43.5 - 49.0	32.4	30.3 - 34.5	33.8	32.5 - 35.1
With incorrect knowledge	53.8	51.0 - 56.5	67.6	65.5 - 69.7	66.2	64.9 - 67.5
Heard about FP on the radio in the past few months						
Yes	55.6	52.8 - 58.4	50.3	48.0 - 52.6	56.3	55.0 - 57.5
No	44.4	41.6 - 47.2	49.7	47.4 - 52.0	43.7	42.5 - 45.0
Seen about FP on TV in the past few months						
Yes	71.9	69.2 - 74.5	71.4	69.3 - 73.4	73.9	72.7 - 75.1
No	28.1	25.5 - 30.8	28.6	26.6 - 30.7	26.1	24.9 - 27.3
Read about FP in newspaper/ magazine/poster/leaflet in the past few months						
Yes	42.4	39.6 - 45.4	34.9	32.8 - 37.2	40.2	38.8 - 41.6
No	57.6	54.6 - 60.4	65.1	62.8 - 67.2	59.8	58.4 - 61.2
Total	**100.0**		**100.0**		**100.0**	
Number of women	1,375		2,358		8,082	

Note: Excludes women who declared themselves as infecund or pregnant or who were not sexually active in the 4 weeks preceding the survey, and women who are using a folkloric method

Compared with modern contraceptive method users, women who use rhythm are more likely to be older, formally married, college-educated, in the highest wealth quintile, working, with either no children or five or more children, and older than their husbands. Considering characteristics

of the husband, the use of rhythm is more common among women whose husbands are at least age 40 and women whose husbands are college-educated. As expected, proportionately more women with correct knowledge of the fertile period use the rhythm method compared with users of either withdrawal or modern contraceptive methods.

A comparison of users of withdrawal versus users of modern contraceptive methods reveals different patterns than for users of rhythm versus modern contraceptive methods. A higher proportion of withdrawal users than modern contraceptive method users is found among women age 15-29, but the pattern reverses at age 30-44, when modern contraceptive methods become more prevalent. At age 45-49, there is greater preference for withdrawal again. However, only the differences in the use of withdrawal relative to modern contraceptives methods in ages 15-19, 20-24, and 35-39 are statistically significant. Women who reported use of withdrawal tend to be cohabiting, with a high school education, not working, rural, Catholic, married to a husband/partner age 20-39, and older than their husband/partner.

Compared with modern contraceptive method users, users of withdrawal are also more likely to have fewer children (0-2), want additional children, and not to have had exposure to family planning messages on radio or print media in the past few months.

3.4. Determinants of use of traditional contraceptive methods

Tables 5 and 6 present results from the multinomial logistic regression on the use of rhythm and withdrawal compared with modern contraceptive methods by socio-demographic and fertility-related characteristics.

As an initial step towards modeling estimation, explanatory variables were tested for multicollinearity. Using the VIF as indicator, the age of the husband/partner was dropped from the regression model since it is highly correlated with the woman's age. The exclusion of the age of husband/partner resulted to a final mean VIF score of 1.4, which confirms the absence of multicollinearity among the remaining explanatory variables.

Because the analysis is based on pooled data of three survey years, time (with survey year as proxy) was incorporated as an explanatory variable in the regression models. Three models were constructed. Model 1 presents bivariate associations between survey year and the type of contraceptive method used (unadjusted model). Model 2 shows the multivariate association between survey year and the women's characteristics with the type of contraceptive method being used (adjusted model). Model 3 examines the association between the women's characteristics alone (without survey year) and contraceptive method.

The results of Model 2 and Model 3 are similar (i.e., nearly equal RRRs and identical significance levels for almost all explanatory variables), suggesting that the inclusion of the survey year in Model 2 has no effect on the estimates. The only difference between the two

models is that marital union is not statistically significant in Model 2 although the coefficients remained the same. Thus, subsequent analyses are based only on Models 1 and 2.

Comparing Model 1 and Model 2, survey year is significantly associated with rhythm use in both models (Table 5). Women in both 2003 and 2008 surveys have higher risk of using rhythm relative to any modern contraceptive method compared with women in 2013 (RRR = 1.43, 95% CI: 1.22-1.67 for 2003; RRR = 1.34, 95% CI: 1.14-1.58 for 2008). This supports the finding that, over time, rhythm use has been declining in the Philippines. The statistical significance of survey year persisted even when the other background characteristics were incorporated, with relative risk ratios even higher in Model 2 than in Model 1.

Table 5. Unadjusted and adjusted relative risk ratios (RRR) and 95% confidence intervals (CI) of survey year with the type of contraceptive method currently used among currently married women age 15-49 who are using a contraceptive method, Philippines pooled data

	Rhythm vs. Modern method (Ref.)				Withdrawal vs. Modern method (Ref.)			
	Model 1		Model 2		Model 1		Model 2	
Survey year	Unadjusted RRR	95% CI	Adjusted RRR[1]	95% CI	Unadjusted RRR	95% CI	Adjusted RRR[1]	95% CI
2003	1.43***	1.22 - 1.67	1.63***	1.37 - 1.93	0.77**	0.67 - 0.88	0.81**	0.70 - 0.93
2008	1.34**	1.14 - 1.58	1.37**	1.16 - 1.63	0.88	0.77 - 1.00	0.90	0.79 - 1.03
2013 (Ref.)								
Number of women	11,860		11,773		11,860		11,773	

Note: Excludes women who declared themselves as infecund, pregnant or who were not sexually active in the 4 weeks preceding the survey, and women who are using a folkloric method

[1] Adjusted for the sociodemographic and fertility-related characteristics of the woman and her husband/partner (complete results are shown in Table 6)

** p < 0.01, *** p < 0.001

In contrast, only women in 2003 are significantly different from women in 2013 as far as selecting withdrawal over modern contraceptive methods is concerned. This holds true for Model 1 and Model 2, with no difference in the relative risk ratio for both models. Compared with women in 2013, women in 2003 have 23% lower relative risk of using withdrawal as a contraceptive method versus using modern contraceptives (RRR = 0.77, 95% CI: 0.67-0.88).

Table 6 presents the complete results of Model 2. Age, education, wealth quintile, husband/partner's education, number of living children, fertility intention, and knowledge of fertile period are significant determinants of using rhythm compared with modern contraceptive methods. With the exception of husband/partner's education and knowledge of fertile period, all of these significant predictors for rhythm also significantly explain the variation in use of the withdrawal method. In addition, age difference between the couple, work status of the woman, residence, religion, and family planning exposure on radio are significant predictors of use of withdrawal over modern contraceptive methods.

Table 6. Adjusted relative risk ratios (RRR) and 95% confidence intervals (CI) of survey year and sociodemographic and fertility-related characteristics associated with the type of contraceptive currently used among currently married women age 15-49 who are using a contraceptive method, Philippines pooled data (Model 2)

Sociodemographic and fertility-related characteristic	Rhythm vs. Modern method (Ref.)		Withdrawal vs. Modern method (Ref.)	
	RRR	95% CI	RRR	95% CI
Survey year				
2003	1.63***	1.37 - 1.93	0.81**	0.70 - 0.93
2008	1.37**	1.16 - 1.63	0.90	0.79 - 1.03
2013 (Ref.)				
Age				
15-19	0.17***	0.10 - 0.32	1.12	0.75 - 1.67
20-24	0.13***	0.09 - 0.18	0.68**	0.52 - 0.89
25-29	0.19***	0.15 - 0.25	0.75*	0.59 - 0.94
30-34	0.32***	0.25 - 0.41	0.73**	0.59 - 0.91
35-39	0.50***	0.41 - 0.62	0.76**	0.62 - 0.94
40-44	0.78*	0.63 - 0.97	0.89	0.72 - 1.10
45-49 (Ref.)				
Type of marital union				
Formally married	1.20	0.95 - 1.50	0.89	0.77 - 1.03
Cohabiting (Ref.)				
Education				
No education	0.90	0.41 - 1.96	1.55	0.90 - 2.69
Elementary	0.72**	0.57 - 0.90	1.16	0.97 - 1.40
High School	0.82*	0.68 - 0.98	1.25**	1.09 - 1.43
College or higher (Ref.)				
Wealth quintile				
Lowest	1.61**	1.23 - 2.10	1.27*	1.01 - 1.59
Second	1.13	0.89 - 1.44	1.18	0.97 - 1.45
Middle	1.00	0.80 - 1.24	1.21*	1.00 - 1.46
Fourth	0.88	0.71 - 1.09	1.12	0.94 - 1.34
Highest (Ref.)				
Work status				
Working	1.09	0.95 - 1.23	0.75***	0.67 - 0.83
Not working (Ref.)				
Residence				
Urban	0.89	0.77 - 1.02	1.38***	1.22 - 1.56
Rural (Ref.)				
Religion				
Catholic	1.09	0.93 - 1.28	1.22**	1.07 - 1.39
Non-Catholic (Ref.)				
Age difference between woman (W) and husband/partner (H)				
H older than W by 4+ years	1.02	0.88 - 1.18	0.96	0.86 - 1.07
W older than H	1.02	0.85 - 1.21	1.28**	1.12 - 1.47
Same age or H older than W by 1-3 years (Ref.)				

Continued…

Table 6—*Continued*

Sociodemographic and fertility-related characteristic	Rhythm vs. Modern method (Ref.)		Withdrawal vs. Modern method (Ref.)	
	RRR	95% CI	RRR	95% CI
Husband/Partner's education				
No education	1.10	0.59 - 2.04	1.49	0.88 - 2.54
Elementary	0.75**	0.61 - 0.92	0.87	0.73 - 1.03
High School	0.63***	0.53 - 0.74	0.91	0.79 - 1.05
College or higher (Ref.)				
No. of living children				
0 (Ref.)				
1-2	0.16***	0.09 - 0.30	0.21***	0.14 - 0.34
3-4	0.12***	0.06 - 0.22	0.16***	0.10 - 0.26
5+	0.13***	0.07 - 0.26	0.24***	0.15 - 0.39
Fertility intention				
Want more children	1.81***	1.51 - 2.17	1.42***	1.24 - 1.64
Undecided	1.85***	1.36 - 2.51	1.24	0.96 - 1.59
Want no more children (Ref.)				
Knowledge of fertile period				
With correct knowledge	1.58***	1.40 - 1.79	0.95	0.86 - 1.06
With incorrect knowledge (Ref.)				
Heard about FP on the radio in the past few months				
Yes	0.91	0.79 - 1.05	0.88*	0.79 - 0.98
No (Ref.)				
Seen about FP on TV in the past few months				
Yes	0.97	0.82 - 1.14	0.92	0.80 - 1.05
No (Ref.)				
Read about FP in print media in the past few months				
Yes	0.93	0.80 - 1.09	0.90	0.80 - 1.02
No (Ref.)				
Number of women	11,773		11,773	

Note: Excludes women who declared themselves as infecund, pregnant or who were not sexually active in the 4 weeks preceding the survey, and women who are using a folkloric method

* p < 0.05, ** p < 0.01, *** p < 0.001

For both rhythm and withdrawal, the relative risk ratios of choosing either method over modern contraceptive methods by age have values below 1, suggesting that younger women are less likely to use these traditional methods over modern contraceptive methods compared with women age 45-49, who are approaching the end of their reproductive years. It should be noted however that the relative risk ratio increases with age of the woman. The couple's age difference is not statistically significant for rhythm but is a significant predictor for use of withdrawal. Women who are older than their husband/partners have 28% higher risk of using withdrawal as a method relative to using modern contraceptive methods compared with women the same age or younger than their husband/partner (RRR = 1.28, 95% CI: 1.12-1.47).

Education appears to exert contrasting influences on the use of traditional contraceptive methods. More educated women are more likely to use rhythm but less likely to use withdrawal compared

with modern contraceptive methods. The relative risk of adopting rhythm rather than modern contraceptive methods is significantly lower, by 28% for elementary education (RRR = 0.72, 95% CI: 0.57-0.90) and 18% for high school education (RRR = 0.82, 95% CI: 0.68-0.98), compared with women who have college education. The same pattern holds true for education of their husband/partners. In contrast, women with high school education have a 25% higher relative risk of using withdrawal than using modern contraceptive methods compared with college-educated women (RRR = 1.25, 95% CI: 1.09-1.43).

By wealth quintile, the direction of influence is similar for rhythm and withdrawal, although not all categories show statistically significant estimates. The risks of using rhythm relative to modern methods are 61% higher among women in the lowest quintile than among women in the highest quintile (RRR = 1.61, 95% CI: 1.23-2.10). A similar pattern is apparent for withdrawal, but the relative risk is 27% higher among women in the lowest quintile (RRR = 1.27, 95% CI: 1.01-1.59) and 21% higher among women in the middle quintile (RRR = 1.21, 95% CI: 1.00-1.46) compared with the highest quintile. Similarly, working women have lower risk of using withdrawal relative to use of modern contraceptive methods.

Women's religious affiliation does not influence the use of the rhythm method versus modern contraceptive methods, but Catholic women have 22% higher relative risk of using withdrawal rather than modern contraceptive methods compared with non-Catholics (RRR = 1.22, 95% CI: 1.07-1.39).

Women with no children and those who want more children are significantly more likely to use rhythm or withdrawal relative to use of modern contraceptive methods compared with their counterparts. Relative to women without any children, those who have one or two children already (RRR = 0.16, 95% CI: 0.09-0.30), those with three or four children (RRR = 0.12, 95% CI: 0.06-0.22), and those with at least five children (RRR = 0.13, 95% CI: 0.07-0.26) have 80%-90% lower relative risks, respectively, of using rhythm compared with modern contraceptive methods. For withdrawal, women with children (regardless of how many) have around an 80% lower relative risk of using withdrawal than modern contraception compared with women without any children.

Similarly, women who want more children or are undecided have an 80% higher relative risk of using rhythm than modern contraceptive methods compared with women who want more children (RRR = 1.81, 95% CI: 1.51-2.17; RRR = 1.85, 95% CI: 1.36-2.51, respectively). For withdrawal, women who desire additional children are 42% more likely to use withdrawal rather than modern contraceptive methods (RRR = 1.42, 95% CI: 1.24-1.64), but undecided women are not significantly different from women who do not want more children.

As expected, knowledge of fertile period is associated with use of rhythm but not with withdrawal. Compared with women who have incorrect knowledge of the fertility cycle, women

with correct knowledge have 58% higher relative risk of using rhythm rather than modern contraceptive methods (RRR = 1.58, 95% CI: 1.40-1.79).

Exposure to family planning information on various types of media does not appear to be significantly associated with type of contraceptive method used, with the exception of hearing about family planning on the radio, which is associated with a 12% lower likelihood of using withdrawal compared with no exposure to family planning messages on the radio (RRR = 0.88, 95% CI: 0.79-0.98). The type of marital union is not a significant predictor of the use of either of the two traditional contraceptive methods relative to the use of modern contraceptive methods.

4. Discussion and Conclusions

The study shows that prevalence of traditional method use among women who are current contraceptive users has remained the same between surveys in 2003 and 2013, at 30%. A closer examination of traditional contraceptive method use, however, may suggest changing preference across time. Results show that in 2003 and 2008, women were more likely to use the rhythm method than use modern methods of contraception compared with women in 2013. Also, in 2003, women were less likely to use withdrawal relative to using modern methods compared with women in 2013.

The study examined use of traditional contraceptive methods with the aim of identifying the characteristics of women who could be encouraged to switch from rhythm and withdrawal to more effective modern contraceptive methods. The subgroups with higher likelihood of using rhythm are older women, women in the lowest wealth quintile, women who have no children, and women who want more children. In addition, users of rhythm are more likely to be college educated and to have college-educated husbands, as well as having correct knowledge of the fertile period, which is essential in using the rhythm method properly.

Use of withdrawal, on the other hand, is more likely among women who are older, women in the lowest quintile, women without any children, women who want more children, as well as women with a high school education, women who are not working, urban women, Catholics, those older than their husband/partner, and women who have not received family planning messages from the radio.

The analysis underscores that the characteristics of women who reported use of traditional methods have not changed over the years. This implies that there is a group of Filipino women who rely on traditional contraceptive methods who could have been targeted by family planning programs years ago. However, because most program efforts have focused on new acceptors of modern contraceptive methods, this group has been neglected and studies tend to lump them together as “undifferentiated mass” (Kulczycki 2004 p. 1020).

The declining trend of rhythm use across surveys in the Philippines can be framed in several ways. First, it could suggest high discontinuation rates due to method failure and eventually abandonment of the method. Second, it could also mean that rhythm users are switching to more reliable modern contraceptive methods such as pills, which show increasing prevalence over the survey years. Unfortunately, there are limited studies on contraceptive switching behavior of Filipino women, particularly on specific methods that they switched to. In other countries such as Bangladesh, Colombia, Peru, and Jordan, most rhythm users switch to pills (Ali, Cleland, and Shah 2012). Finally, this finding could also imply a modest success of current family planning program efforts that promote modern method use.

The results on withdrawal use are more difficult to explain, probably because it is a male-dependent method and this analysis is limited to women's reports of contraceptive use. In settings where data on men are available, such as in the 1998 Turkey DHS, results show that men have a positive view of the withdrawal method, and its use is an outcome of couple's assessment that withdrawal is a better method than the other alternatives (Kulczycki 2004). While both rhythm and withdrawal involve male cooperation, the increasing prevalence of withdrawal in particular may also imply that men are willing to share in the responsibility for family planning and belies the lack of male involvement in family planning that studies (e.g., Guttmacher Institute and Likhaan 2010) have identified as one of the main barriers to increasing contraceptive use in the Philippines. The Philippine family planning program could, therefore, direct more efforts toward intensifying male involvement. One such effort is through stronger promotion of condom use, which has the added advantage of helping to prevent HIV transmission as well as avoiding pregnancy. Since withdrawal is used as method for birth spacing, the permanent method of male sterilization, which continues to be less preferred by Filipino males, does not appear to be a viable alternative for men who practice withdrawal.

The findings suggest that, in general, both rhythm and withdrawal are being used as a method for spacing rather than limiting births. The use of less effective traditional contraceptive methods suggests that women are open to the possibility of having additional children, or that they have a fatalistic attitude toward childbearing or may view traditional methods as "better than nothing."

The reliance on traditional contraceptive methods among women in the lowest wealth quintile and, for withdrawal, among women who are not working, captures common problems regarding access to contraceptive methods. Compared with modern contraceptive methods, these methods neither entail cost nor require visits to a health facility.

Religion, as measured by data on religious affiliation, does not seem to figure in women's decision to use a particular type of method, except for withdrawal, since Catholics are relatively more likely than non-Catholics to practice withdrawal. While there is the view that the Catholic Church has a strong influence on the reproductive and contraceptive use of Catholics, this is not captured in the study. The Catholic Church has been steadfast in its opposition of modern contraceptive methods. Pastoral letters are often issued by the Catholic Church hierarchy criticizing any effort to promote use of modern contraceptives.

The low proportion of Filipino women who have correct knowledge of the fertile period over the ten years covered in the study suggests that greater efforts should be exerted in education on the fertility cycle, especially among women who are using the rhythm method. Rhythm users can be encouraged to adopt the more scientific NFP methods, particularly the Standard Days Method, which requires similar knowledge of women's fertility cycle. By identifying which subgroups of women are most likely to be using the rhythm method, the task of convincing these women to switch to a similar but more scientific method is already half-done. Toward this end, the heavy

promotion of NFP use from 2001 to 2010 could be revived. NFP use also requires a high level of male involvement since, just like rhythm use, abstention from sexual intercourse in fertile days requires cooperation of both partners. Beyond men's use of male-dependent methods, campaigns on male involvement should also include support for their female partner's use of modern contraceptive methods.

The decline of radio and print media as sources of family planning messages, as well as the absence of the effect of the television and print media on the contraceptive use of women, may point to waning popularity of the traditional media. In general, consumption of traditional media has declined over time (see various NDHS reports). The traditional forms of media such as radio, print, and television do not seem to exert an influence on the contraceptive behavior of women (even if a majority of the women get family planning messages from television). Family planning program managers could therefore explore other platforms such as information communication technology (ICT) and social media such as Facebook, Instagram, and Twitter to promote modern contraceptive methods and dispel apprehensions of women regarding the side effects and other health concerns attributed to the use of modern contraceptive methods.

The identification of the characteristics of women who use traditional contraceptive methods can provide a basis for more targeted policies and programs to promote the more effective modern contraceptive methods, including programs that encourage traditional contraceptive method users to switch to the more effective modern contraceptive methods.

The findings of the study also warrant further research, both quantitative and qualitative, to explore the continued preference for traditional contraceptive methods in the Philippines. With fear of side effects as the dominant reason for nonuse of contraceptives (Abejo et al. 2006; Cruz, Marquez, and Kabamalan 2016) and preference for traditional over modern contraceptive methods, there is a need for systematic study to examine this in depth, for instance to answer such questions as which specific methods women refer to when they say they fear side effects, and what side effects compel women to opt for a traditional contraceptive method over a modern method.

Most studies on contraceptive use focus on women, while the literature on men's contraceptive behavior is more limited. At the national level, only the 2003 NDHS collected data on men and there has been no follow up survey since then. Research about contraception from the point of view of men should merit equal attention in order to fully understand the continuing popularity of traditional contraceptive methods in the Philippines, particularly withdrawal, and the reasons behind the apparent resistance of Filipino men to modern male-dependent methods such as the condom and vasectomy.

While the study looks at traditional contraceptive method use in three survey years and identifies characteristics associated with women's use of rhythm and withdrawal versus modern

contraceptive use, it cannot establish causality. Rather, it is limited to identifying the patterns and trends of traditional contraceptive use between 2003 and 2013.

References

Abejo, S., E. M. Go, G. T. Cruz, and M. P. N. Marquez. 2006. "Contraceptive Use, Discontinuation and Switching Behavior in the Philippines." 2003 National Demographic and Health Survey Further Analysis. Quezon City/Manila and Maryland: University of the Philippines Population Institute, Demographic Research and Development Foundation, National Statistics Office and Macro International.

Ali, M. M., J. Cleland, and I. Shah. 2012. *Causes and Consequences of Contraceptive Discontinuation: Evidence from 60 Demographic and Health Surveys.* World Health Organization: Geneva, Switzerland.

Cindoglu, D., I. Sirkeci, and R. F. Sirkeci. 2008. "Determinants of Choosing Withdrawal Over Modern Contraceptive Methods in Turkey." *The European Journal of Contraception and Reproductive Health Care.* 13 (4): 412-421.

Cruz, G. T., M. P. N. Marquez, and M. M. M. Kabamalan. 2016. "Endline Study on Access to Information and Services on Family Planning Among Women in Urban Poor Areas in Manila: Knowledge, Attitude and Practice." Final project report submitted to Likhaan Center for Women's Health.

Family Planning 2020. 2015. *Philippines: FP2020 Core Indicator Summary Sheet*. Available at http://www.track20.org/download/summaries/english/Philippines%20FP2020%20Core%20Indicators.pdf.

Guttmacher Institute and Likhaan Center for Women's Health, Inc. 2010. *Facts on Barriers to Contraceptive Use in the Philippines*. Available at https://www.guttmacher.org/sites/default/files/factsheet/fb-contraceptives-philippines.pdf.

Hubacher, D., M. Suazon, S. Terrell, and M. Pinel. 1996. "Examining the Increasing Prevalence of Traditional Contraceptive Methods in Honduras." *International Family Planning Perspectives.* 22 (4): 163-168.

Johnson-Hanks, J. 2002. "On the Modernity of Traditional Contraception: Time and the Social Context of Fertility." *Population and Development Review*. 28 (2): 229–249.

Kamal, N., U. R. Saha, M. A. Khan, and R. Bairagi. 2005. "Use of Periodic Abstinence in Bangladesh: Do They Really Understand?" *Journal of Biosocial Science*. 39: 27-40.

Kulczycki, A. 2004. "The Determinants of Withdrawal Use in Turkey: A Husband's Imposition or a Woman's Choice?" *Social Science & Medicine.* 59 (5): 1019-1033.

Laing, J. E. 1987. "Periodic Abstinence in the Philippines: New Findings from a National Survey." *Studies in Family Planning*. 18 (1): 32-41.

Melgar, J. D., A. R. Melgar and J. V. Cabigon. 2012. "Family Planning in the Philippines." Zaman, W. et al. (Eds.). *Family Planning in Asia and the Pacific: Addressing the Challenges*. Selangor, Malaysia: International Council on Management of Population (ICOMP). pp. 293-333.

National Statistics Office (NSO) [Philippines] and ORC Macro. 2004. *National Demographic and Health Survey 2003*. Manila, Philippines, and Rockville, Maryland, USA: NSO and ORC Macro.

National Statistics Office (NSO) [Philippines] and ICF Macro. 2009. *National Demographic and Health Survey 2008*. Manila, Philippines, and Rockville, Maryland, USA: NSO and ICF Macro.

Philippine Statistics Authority (PSA) [Philippines] and ICF International. 2014. *Philippines National Demographic and Health Survey 2013*. Manila, Philippines, and Rockville, Maryland, USA: PSA and ICF International.

Polis, C. B., S. E. K. Bradley, A. Bankole, T. Onda, T. N. Coft, and S. Singh. 2016. *Contraceptive Failure Rates in the Developing World: An Analysis of Demographic and Health Survey Data in 43 Countries*. New York: Guttmacher Institute. Available at http://www.guttmacher.org/report/contraceptive-failure-rates-in-developing-world.

Ram, F., C. Shekhar, and B. Chowdhury. 2014. "Use of Traditional Contraceptive Methods in India and its Sociodemographic Determinants." *Indian Journal of Medical Research.* 140 (Suppl 1): S17-S28.

Sullivan, T. M., J. T. Bertrand, J. Rice, and J. D. Shelton. 2006. "Skewed Contraceptive Method Mix: Why It Matters." *Journal of Biosocial Science.* 38: 501-521. DOI:10.1017/ S0021932005026647.

United Nations, Department of Economic and Social Affairs, Population Division. 2015. *Trends in Contraceptive Use Worldwide: 2015*. (ST/ESA/SER.A/349).

Verzosa, C. C., N. Llamas and R. T. Mahoney. 1984. "Attitudes toward the Rhythm Method in the Philippines." *Studies in Family Planning*. 15(2): 74-78. DOI: 10.2307/1966048.

Williamson, L. M., A. Parkes, D. Wight, M. Petticrew, and G. J. Hart. 2009. "Limits to Modern Contraceptive Use Among Young Women in Developing Countries: A Systematic Review of Qualitative Research." *Reproductive Health*. 6 (3). DOI: 10.1186/1743-4755-6-3.