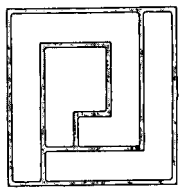
CONTRACEPTIVE PRACTICE IN THE PHILIPPINES: A SYNTHESIS



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ABSTRACT

This article puts together all available data on contraceptive prevalence and effectiveness from 1968 to 1983 in an attempt to assess the Philippine family planning program's performance in reducing fertility. Three indicators of contraceptive effectiveness are discussed – Pearl pregnancy rates, 12-month continuation rates, and effective protection level. Findings on factors associated with contraceptive prevalence are presented and discussed, with special emphasis on the effects of the Outreach project variables. The argument is that population programs can influence demographic behavior, but the extent of this influence largely depends on the quality of program design and implementation.

INTRODUCTION

The response of the Philippine government in dealing with its population problems has consisted of adopting an official population policy and providing direct support to its national family planning program since 1971. Aligned with the principles and objectives of the Bucharest World Plan of Action, intensive efforts have been and remain directed to providing couples access to various means of effective fertility regulation on a voluntary and non-coercive manner. In 1977, operations shifted from provision of services through clinics based in cities and town centers to a village-based outreach project. The basic premise was that to speed up declines in population growth rates, family planning services must reach rural couples whose fertility remained high despite heavy investments by the program. It is particularly in this sector where the crucial need to raise consciousness about the need to change traditional behavior with respect to birth control is greatest. After 13 years of operation, it is inevitable that the question of how close the program is to fertility reduction goals assumes significance. Some critics of the program observe that, despite an early and relatively strong commitment of the government to family planning, empirically based achievements in fertility reduction associated with the program neither approximate

desired targets nor appear cost-efficient.

This paper is aimed to provide an overview of the currently available data related to family planning practice and effectiveness of contraceptive practice in the Philippines. It is principally a synthesis of data on contraceptive prevalence and contraceptive effectiveness which are considered to be important although intermediate indicators of program performance. Factors affecting contraceptive prevalence will also be considered with special emphasis on program variables. This synthesis will present regional data to the extent possible.

DATA SOURCES AND LIMITATIONS

This paper is largely dependent on sample survey data. Surveys which include questions on family planning knowledge, attitudes and practice remain important as they still provide the best information on contraceptive prevalence in the absence of better data such as service statistics which can be generated by the program's record-keeping system.

National demographic surveys, with the intention of obtaining demographic measures at regular intervals, have been conducted in 1968, 1973, and 1983. Between 1973 and 1983, a nationwide fertility survey was conducted in 1978 supplanting a demographic survey. Other large-scale surveys which dealt with family planning knowledge, attitudes and practice were the 1972 Survey of the Bureau of Census and Statistics (now known as the National Census and Statistics Office) and the 1976 National Acceptor Survey (NAS), a follow-up survey of a nationally representative sample of acceptors reported by program clinics. The two rounds of Area Fertility Surveys (AFSs) in 1979 and 1980 failed to cover all the regions of the country. As a result of the shift in program thrusts from providing clinic-based to community-based family planning services, the 1978 and 1980 Community Outreach Surveys (COSs) were conducted. Although these surveys were nationwide in scope, the sample of married women of reproductive age interviewed was limited to those in outreach areas, biased towards rural areas serviced by the Outreach project barangay service points.

Differences in the nature of data collected, variability in sampling and questionnaire design and even in the manner in which family planning questions were asked certainly affect estimates of contraceptive use and effectiveness. Laing (1977) for example underscored the need to adjust the estimated prevalence rates obtained for 1973 based on the difference in the manner in which the question on current use of contraceptive was asked in the 1972 BCS Knowledge, Attitudes and Practice Survey and the 1973 National Demographic Survey (NDS). Likewise, the nature of the COS and its geographic coverage may help explain the relatively higher prevalence rates obtained for 1978 and 1980, in comparison with the rates obtained from the 1978 Republic of the Philippines Fertility Survey (RPFS) and the more recent 1983 NDS. The trend analysis in contraceptive prevalence rates is therefore limited

to the discussion of estimates obtained from the three NDSs and the 1978 RPFS.

CONTRACEPTIVE PREVALENCE

A common procedure for monitoring the progress of a family planning program is to record the number of couples accepting family planning. One other operational measure of family planning program output which also serves as intermediate program variable to measure births averted and cost-benefit and cost-effectiveness consideration is the contraceptive prevalence rate. Contraceptive prevalence rate (CPR) is herein defined as the percentage of eligible married couples of reproductive age (MCRA) or of currently married women of reproductive age (MWRA) using contraceptive methods at a given point in time. As in most analyses, married women in the ages 15-44 are the exposed population in the computation of the CPR.

Trends Over Time

Table 1 presents trend data on CPR over a 15-year period (1968-1983) from various sources. It appears that overall CPR sharply increased from 16 percent to 37 percent during the decade 1968-1978. This substantial increase, however, was not sustained as prevalence dropped to 33 percent in 1983. Nevertheless, it is interesting to note the consistent rise in the current use of modern program (clinical) methods. As evident from the data, most of the increase was accounted for by the continued upsurge in the use of sterilization. Prevalence of the less effective methods particularly rhythm and withdrawal which rose over the previous ten-year period (1968-1978) decreased by one-third (nine percent to six percent) and by three-fifths (10 percent to four percent) respectively during the last quinquennium (1978-1983).

The observation that sterilization, a highly effective clinical method of contraception, was much more widespread than the use of relatively less effective methods in 1983 is rendered additional empirical support by data from the 1978 and 1980 COSs. It will be noted that while prevalence of sterilization increased by 75 percent, the use of rhythm and condom was reduced by 27 percent and 50 percent respectively, during the two-year interval 1978-1980. However, the observed increase in the prevalence of sterilization should be viewed with caution because of the fact that it is a cumulative measure. This makes it different from measures of prevalence of other methods.

Such an observation is substantiated further by data in Table 2 for the country and its three major islands. Based on the survey estimates in 1978 and in 1983, the increasing prevalence of sterilization during the period 1978-1983 was manifest in all the major islands of the country. Of all the islands, Visayas registered the largest increase in prevalence of sterilization followed by Luzon. The Mindanao group of regions experienced the smallest increment to acceptors of the permanent method of contraception.

Table 1. Contraceptive Prevalence Rates: Philippines, 1968-1983

Current Method	Survey and Mean Survey Date							
	NDS 5/68	BCS 5/72	NDS 5/73[a]	NAS 2/77	RPFS 5/78	COS 7/78	COS 7/80	NDS 6/83[b]
Total	**16**	**23**	**24**	**32**	**37**	**48**	**46**	**33.4**
Program Methods	**8**	**17**	**19**	**26**	**25**	**31**	**29**	**28.4**
Modern Methods	2	9	11	15	12	11	14	17.6
Pills	1	7	7	8	5	5	5	5.5
IUD	1	2	3	4	2	2	2	2.6
Sterilization	–	–	1	3	5	4	7	9.5
Other Methods	6	8	8	11	13	20	15	10.8
Rhythm	6	7	7	7	9	11	8	6.4
Condom	–	1	1	4	4	4	2	1.5
Combinations of any method	–	–	–	–	–	5	5	2.9
Non-Program Methods	**8**	**6**	**5**	**6**	**12**	**17**	**17**	**5.0**
Withdrawal	6	4	4	5	10	12	14	3.9
Others	2	2	1	1	2	5	3	1.0

NDS-National Demographic Survey; BCS-Bureau of the Census and Statistics; NAS-National Acceptor Survey; RPFS-Republic of the Philippines Fertility Survey; COS-Community Outreach Survey.

[a] *Adjusted for underreporting.*

[b] *Based on a 25% sub-sample of respondents.*

Sources: For columns 1 to 5, Laing, J.E. 1977. *1976 National Acceptor Survey: estimation of national contraceptive prevalence from survey data on acceptors.* University of the Philippines Population Institute Research Note No. 136, Tables 3 and 4; Column 6, computed from Tables 4.2.1. and 4.4.1, 1978 RPFS, *First Country Report;* Community Outreach Surveys; and Column 9, UPPI, 1984. *1983 National Demographic Survey First Report.*

Another important observation is the distinct increase in contraceptive practice using program methods (see Table 1). Over the years, use of program methods rose from 8 percent in 1968 to 28.4 percent in 1983. Unlike the use of non-program methods which is characterized by periodic fluctuations, the prevalence of the program methods rose steadily, with the peak increase occurring during the earlier quinquennia, most especially during the interval 1968-1973, when prevalence rate of program methods more than doubled. Moreover, contraceptive prevalence on the whole is mostly attributable to the use of program methods rather than non-program methods. This is particularly true in 1983 when use of program methods accounted for over four-fifths (84.8 percent) of total contraceptive prevalence.

The decline in overall prevalence

rate observed for the nation as a whole during the interval between the 1978 and 1983 surveys is corroborated by data in Table 3. Four of the six regions covered by the 1979 and 1980 AFSs showed declines in overall contraceptive prevalence. However, the opposite trend is observed for Bicol, Western Visayas, and Northern Mindanao which experienced increases in its overall prevalence. The increase was most pronounced in Western Visayas, with the data implying that most of the increase was attributed to the increase in the use of program methods. But it should be noted that Bicol and Northern Mindanao experienced increments in prevalence of non-program methods during the one-year interval between the 1979 and 1980 surveys. This is quite a deviation from the general pattern of decreasing prevalence of non-program methods observed for the other regions during the same interval, and for the nation as a whole during the period 1978-1983.

Sterilization was a significant method for most regions except Bicol and Western Visayas, the regions that experienced slight increases in overall contraceptive prevalence. Prevalence of the pills was still slightly higher than sterilization in these regions. It will be noted, however, that the increase in sterilization prevalence was relatively larger than the increase in pill prevalence, the most significant of which occurred in Central Luzon. The program's thrust to include and promote sterilization has certainly influenced the pace of increase in the use of this method during the more recent years. It is frequently believed that the greater demand for sterilization is partly a reflection of a cultural bias in role differentiation between the sexes. Since women usually carry the greater burden in raising and caring for children, they may be especially motivated to undergo sterilization.

As expected, Metropolitan Manila exhibited the highest prevalence rate followed by Western Visayas; Central Luzon ranked third, lagging behind Western Visayas by 2.0 percentage

Table 2. Contraceptive Prevalence Rates: Luzon, Visayas, and Mindanao, 1978 and 1983

Major Island/Method	Survey Year	
	1978 RPFS	1983 NDS
TOTAL	**37.2**	**33.4**
Sterilization	5.3	9.5
All other methods	31.9	23.9
Luzon	**39.5**	**33.0**
Sterilization	5.9	11.2
All other methods	33.6	21.8
Visayas	**30.3**	**36.1**
Sterilization	2.5	7.4
All other methods	27.8	28.7
Mindanao	**38.9**	**32.4**
Sterilization	5.1	6.9
All other methods	33.8	25.5

Sources: University of the Philippines Population Institute (UPPI). *1983 NDS First Report* Table 13; Office of Population Studies (OPS). *1983 NDS, A Summary Report for the Visayas Region,* Tables 17 and 18; Madigan, F.C. *Demographic Situation in Mindanao and Sulu: A Preliminary Report on the 1983 NDS in These Regions,* pp. 23-24; *RPFS First Country Report,* Table 4.5.5B, p. 429.

Table 3. Contraceptive Prevalence Rates By Method: Six Selected Regions, 1979 And 1980

Method/Year	Metro Manila		Central Luzon		Southern Tagalog		Bicol		Western Visayas		Northern Mindanao	
	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980
TOTAL	**51.3**	**50.2**	**39.2**	**34.6**	**34.8**	**33.6**	**25.5**	**25.9**	**35.0**	**36.6**	**31.0**	**31.2**
Program Methods	41.3	41.3	28.3	27.0	28.0	28.0	18.4	17.2	27.5	29.2	28.0	26.6
Non-Program Methods	10.0	8.9	10.9	7.6	6.8	5.6	7.1	8.7	7.5	7.4	3.0	4.6
A. Modern Program Methods	**25.1**	**26.6**	**17.8**	**20.3**	**18.2**	**18.8**	**5.6**	**6.2**	**9.0**	**12.0**	**12.6**	**12.5**
Pills	9.2	9.5	6.8	6.7	7.0	6.5	2.9	3.0	4.6	5.1	4.3	3.6
IUD	4.5	4.8	1.9	1.2	2.8	2.8	0.6	0.9	1.2	2.5	2.1	2.3
Sterilization	10.9	12.2	9.0	12.2	8.2	9.2	2.1	2.3	3.2	4.2	5.9	6.4
Injection	0.4	0.1	0.1	0.2	0.2	0.3	0.0	a	a	0.2	0.3	0.2
B. Other Program Methods	**16.2**	**14.7**	**10.5**	**6.7**	**9.8**	**9.2**	**12.8**	**11.0**	**18.5**	**17.2**	**15.4**	**14.1**
Rhythm	10.6	9.3	4.6	3.0	4.4	5.4	6.0	6.7	11.9	11.0	9.3	9.2
Condom	2.1	1.3	2.3	2.4	1.9	2.6	1.7	1.2	2.1	2.0	1.3	1.6
Combination of any method	3.5	4.1	3.6	1.3	3.5	1.2	5.1	3.1	4.5	4.2	4.8	3.3
C. Non-Program Methods	**10.0**	**8.9**	**10.9**	**7.6**	**6.8**	**5.6**	**7.1**	**8.7**	**7.5**	**7.4**	**3.0**	**4.6**
Withdrawal	6.5	4.8	6.4	6.7	4.7	4.0	3.8	3.9	4.4	4.2	1.7	3.2
Others	3.5	4.1	4.5	0.9	2.1	1.6	3.3	4.8	3.1	3.2	1.3	1.4

[a] *Insignificant figure.*

Source: Concepcion and Cabigon, 1982. *Fertility and Family Planning in Six Regions: Final Report on the 1980 AFS.* Table 4.8.

points. Bicol has the lowest prevalence rate, a most likely pattern as it is admittedly the least developed among the six regions covered by the survey.

CONTRACEPTIVE EFFECTIVENESS

More than just recruiting new acceptors, program administrators are seriously concerned with the quality of contraceptive practice. A measure of program output that reflects this aspect is contraceptive effectiveness which indicates the percentage by which fertility is reduced as a result of contraceptive practice. It is therefore useful in sorting out the demographic impact of family planning programs.

Three of several indicators of the effectiveness of each contraceptive method are discussed in this paper. The first is the Pearl pregnancy rate which indicates the number of failures occurring per 100 women-years of contraceptive use. This indicator is actually based on a monthly failure rate derived from information on months of contraceptive practice and months of conception. In other words, this indicator represents the number of women who became accidentally pregnant while using any contraceptive method.

The second indicator is the continuation rate which can either be a first-method or an all-method continuation rate. The first method continuation rate is the "probability that an acceptor of a particular method will continue to use that method for a specific period of time without changing methods or becoming pregnant" (Laing, 1982). On the other hand, the all-method continuation rate is the "probability that an acceptor of a contraceptive method will continue to use any contraceptive method for a specific period of time without becoming pregnant" (Laing, 1982). In both cases, brief interruptions of use without pregnancy are disregarded as long as contraceptive practice is subsequently resumed.

A summary indicator of the effectiveness of all methods combined is the "effective protection" level roughly estimated as the sum of the products obtained by multiplying each method-specific contraceptive prevalence rate by the assumed effectiveness level for that method. This measure may be interpreted as the proportion of currently married women 15-44 who are completely protected from conception.

Variability in the calculation of the first two indicators arising from differences in the nature of information collected during the various surveys prevents a trend analysis of Pearl pregnancy rates. Nevertheless, data in Table 4 underscore the consistency in the ranking of methods in terms of effectiveness in preventing pregnancy. Gauging from the Pearl pregnancy rates, it appears that the IUD is the most effective, followed by pills. As can be gleaned from the data, the gap between IUD and pill effectiveness based on Pearl pregnancy rates has been remarkably large during the three survey years. Condoms were found to be the least effective. It is borne out by the data that withdrawal and condoms were the only methods

Table 4. Pearl Pregnancy Rates and Twelve-Month Continuation Rates By Method: 1976 NAS, 1978 And 1980 COSs

Method	Measure/Survey/Period							
	Pearl Pregnancy Rates			Continuation Rates				
	1976	1978	1980	1976 NAS[c]			COS	
	NAS	COS	COS	1970-72	1973-74	1975	1978	1980
PROGRAM METHODS								
Modern Methods								
Pills	7.8	20.6	19.2	54	41	37	47	42
IUD	2.6	8.0	3.6	68	64	61	69	70
Other Methods								
Rhythm	20.2	38.9	33.4	43	46	42	48	51
Condoms	21.3	48.2	60.4	23	23	18	16	10
Combination of any method	a	23.9	21.9	a	a	a	64	67
NON-PROGRAM METHODS								
Withdrawal	a	39.6	43.7	a	a	a	41	43
Abstinence	a	16.5	16.7[b]	a	a	a	9	13

[a] *Unavailable.*

[b] *Relatively unreliable.*

[c] *First-method continuation rate.*

Sources: Laing, J.E. and Alcantara, A.N. 1980. *Final Report on the 1976 NAS;* UPPI, 1984. *First Report. 1983 National Demographic Survey.* Tables 7 and 13; Laing, J.E. 1981. *Family Planning Outreach in the Philippines, Final Report on the COSs;* UPPI, 1984. *First Report. 1983 National Demographic Survey.* Tables 53 and 55.

with increases in Pearl pregnancy rates during the interval between 1978 and 1980. Among the other methods, abstinence and combinations appeared to be approximately as effective as the pills, and withdrawal appeared to be somewhat more effective than condoms but less effective than rhythm.

The 1976 NAS provided the first opportunity to observe trends in use effectiveness in terms of continuation rates, over a period of five years. Respondents were grouped into acceptor cohorts, defined by their date of acceptance. Table 4 shows the proportion of acceptors continuing use at the 12th month since acceptance of first method.

An examination of the first-method continuation rates for the different acceptor cohorts for the five-year period 1970-1975 shows that the IUD stands out as the method most likely to be used continuously for a long period following acceptance. The mean duration of use calculated in

1976 for the IUD was about 38 months (Laing and Alcantara, 1980). On the other hand, the condom was the least likely to be used continuously with an average use after acceptance of about six months. It is also clear that there was a consistent tendency for continuation rates to decline for all methods except rhythm which did not show much variation.

Estimates of the same measure for the more recent years were also derived from the 1980 COS. Information based on the calendar of contraceptive status from January 1978 to June 1980 of each respondent in Outreach areas was used to calculate 12-month continuation rates. Data for both years corroborate the earlier findings that the best method in terms of continuation is the IUD. It is worth noting that the continuation rate for combinations of the less effective methods (rhythm, condom, withdrawal) was remarkably high. To supplement the estimated continuation rates, the mean period of consecutive couple-months of use of the different methods were likewise calculated from the 1978 and 1980 data. Condoms and abstinence, the methods with the lowest continuation rates, were used only five to six months. By contrast, IUD users averaged almost three years and users of combination averaged more than two years of continuous use (Laing, 1981).

Overall, data from both the NAS and the COSs are consistent in the rank-order of methods in terms of Pearl pregnancy rates and continuation rates. Based on these two indicators, the IUD appears the most effective and condoms the least effective.

More recently, estimates of the potential fertility impact of contraceptive practice or effective protection level were computed using information generated by the 1983 NDS. Assuming effectiveness levels of 100 percent for sterilization, 95 percent for the IUD, 85 percent for pills and 60 percent for other methods taken as one, the effective protection level for the country was estimated at 26.2 percent in 1983 (UPPI, 1984). This measure further assumes that the accidental pregnancy rate and continuation rates of contraceptive methods remain constant. It is presently interpreted to mean that about one in four of currently married women in the ages 15-44 are completely protected from conception. Data for sub-national levels shown in Table 5 reveal that of all the eligible women in the three major islands, the Visayan women appear the most protected. Women in the Mindanao regions apparently are the most exposed to the risk of conception. It is instructive to compare the 1983 effective protection level with the level that prevailed at some point earlier assessing the demographic impact of contraceptive practice. In 1978, the effective protection level for the nation was estimated at 26.4 percent. Despite the observed decline in contraceptive prevalence during the interval between 1978 and 1983, the overall potential fertility effect of contraceptive practice, as measured by the effective protection level, was not unfavorably affected. The effec-

tive protection levels for both years virtually remained the same. This is explained by the fact that during the five-year span, the use of more effective modern methods, particularly sterilization, increased significantly. Thus whatever undesirable effects associated with a declining contraceptive use among eligible women was offset by the rise in the use of modern and more effective methods.

FACTORS ASSOCIATED WITH CONTRACEPTIVE PRACTICE

Many governments of developing countries emphasize the importance of reducing fertility through increased and more effective practice. In most cases, government plans call for specific family planning targets in line with fertility objectives and goals. Such being the case, it is important that information on factors facilitating contraceptive acceptance and practice are identified.

Contraceptive practice and effectiveness are influenced by as many factors as could be identified, ranging from individual traits of users to other exogenous variables such as areal characteristics and program structure and organization which directly or indirectly influence the decision to use contraceptive methods or not. The vast literature on differentials in prevalence and effectiveness on the whole provide adequate material for a very general theoretical framework (Figure 1) with which a comprehensive synthesis of factors associated with contraceptive practice and effectiveness may be undertaken.

Table 5. Effective Protection Levels, Philippines And Three Main Regions, 1978 and 1983

Region	Year	
	1978	1983
Luzon	a	26.8
Visayas	a	27.8
Mindanao	a	24.0
Philippines	26.4	26.2

[a] *No data available.*

Sources: UPPI. *First Report* p. 33; OPS; *A Summary Report* Table 23; Madigan, F.C., *Demographic Situation in Mindanao and Sulu; A Preliminary Report on the 1983 NDS in These Regions*, pp. 23-24.

The present synthesis includes an attempt to assess the performance of the government's population program with special emphasis on Outreach Project variables, the Outreach Project being the core activity of the program. The schematic diagram (Figure 1) shows the population program and development factors at the macro and individual levels influencing two key factors, i.e., attitudes towards family size and knowledge of and attitudes towards contraception, which ultimately determine contraceptive practice and effectiveness. For present purposes, only the relevant findings of all *descriptive* and *multivariate* analyses based on the more recent surveys: 1978 RPFS, 1978 and 1980 COSs, 1980 AFS, 1983 NDS, and descriptive results of various regional studies will be presented and discussed.

Socio-Economic, Cultural, Demographic and Health-Related Variables

There is no doubt that development programs that increase economic security, promote social and economic equality, raise standards of living, change the status of women, and improve nutrition, health and literacy not only reduce the demand for large families but also increase motivation to have smaller families. This motivation for small family size can be realized through family planning.

Using the 1978 RPFS data in a multivariate analysis, Engracia, et.al. (1984) discovered that the urban-rural locale of the community of residence and the degree to which family planning clinics are accessible to the target population, measured by travel time to family planning source, were positively related with the level of contraceptive use. Such a finding ties up closely with other multivariate analytical results of the same data and descriptive and multivariate findings from the 1980 AFS that contraceptive prevalence tended to be low in the less developed regions of Bicol and Northern Mindanao, particularly in the rural areas of Southern Tagalog and Bicol (Cabigon, 1983 and 1984; Concepcion and Cabigon, 1982; and Pullum, et.al., 1984).

The influence of family planning clinics' accessibility on contraceptive prevalence was likewise manifest in the 1978 RPFS data. The association, however, was weak, with the farthest supply point merely reducing the average contraceptive prevalence by one percent (Cabigon, 1984). It was observed, however, that the establishment of supply points or any family

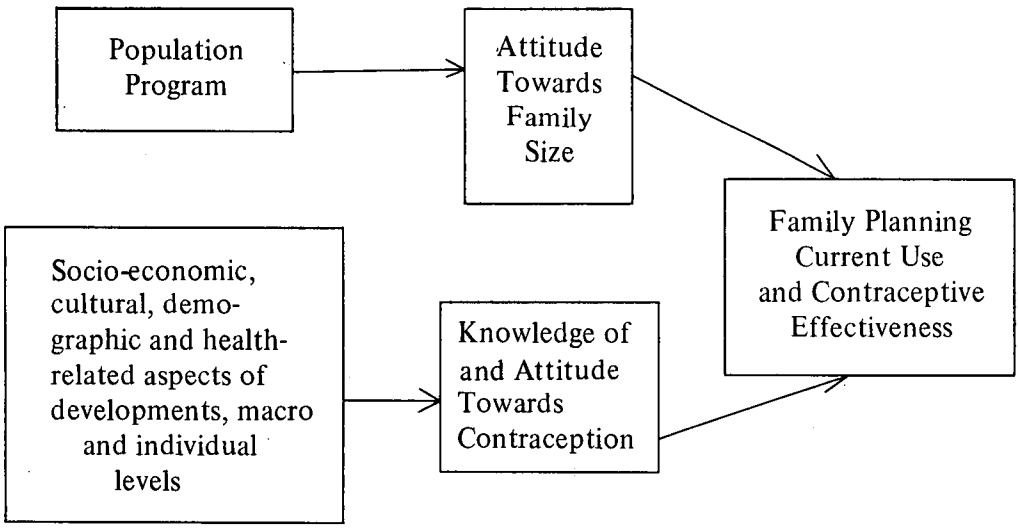

Fig. 1. A Framework for Synthesizing Findings of Factors Associated with Contraception.

planning source near the clients appeared to enhance contraceptive use. Several studies have shown that real or perceived difficulties of access may pose a constraint to contraceptive use. In urban areas, the closer the perceived distance to condom supplies, the more likely it is used. Among pill, IUD, and sterilization users, the effects of perceived distance and the accompanying cost of travel on current use were weak and negligible. It was hypothesized that motivation may be an overriding factor to the apparently weak association. Users of such methods are usually highly motivated and as such are less likely to be discouraged by a long journey or high cost of travel to obtain them.

Specific multivariate results on use of pill, condom, rhythm and female sterilization yielded no effect of region. However, region of residence appeared to be strongly associated with the use of the IUD. IUD users in the Luzon islands tended to have longer continuation rates than their counterparts in the Visayas and Mindanao islands (Cabigon, 1984).

The 1978 RPFS data when subjected to a multivariate analysis likewise revealed that region, as a proxy of development, significantly affected desired family size, implying a lower contraceptive prevalence. In the same vein, Laing (1981) found out that contraceptive practice, especially of clinical methods, was correlated with indicators of the individual's socio-economic status, as well as the level of urbanization, and the extent of modernization in the community of residence. However, a more refined analysis utilizing multivariate technique on 1980 COS data at the community level (i.e., the unit of analysis was the community) showed that such variables did not have independent effects on contraceptive prevalence. This presents evidence that ecological correlations resulting from community level analysis do not necessarily agree with equivalent individual level correlations. Unfortunately, preliminary investigations of the 1980 COS within the individual level framework of analysis demonstrated the inadequacy of the data for such analysis. Nevertheless, multivariate results at the individual level using the 1980 AFS (Cabigon, 1983a) indicated that husband's occupational index, income and education emerged as strong predictors of current use in most of the regions covered by the AFS. Moreover, current work status of the woman significantly affected contraceptive use in Southern Tagalog and Metro Manila.

A multivariate study of contraceptive use of currently married, non-pregnant, fecund women who wanted no more children sampled in the 1978 RPFS revealed that cultural variables like religion, ethnicity, and region significantly affected current use of a family planning method (Pullum et. al., 1984). However, such cultural variables are typically lifetime characteristics and are associated with one another. Their impact on contraceptive use should therefore be interpreted with caution. Besides such characteristics, other socio-economic traits were considered in the same study.

Among the socio-economic characteristics (wife's education, husband's occupation and wife's work pattern), wife's education, as expected, stood out to be the most important variable affecting contraceptive use. Women with higher education were far more likely to be users than women with no education. Husband's occupation and wife's patterns showed very little impact on current use. Child mortality, viewed as an indicator of health conditions, showed no direct effect on current use. The hypothesis that women who lost one or more children through death would tend to be more non-users than women whose children are still living is therefore not validated by the data. Interestingly, the same finding of weak effect of child mortality on current use as revealed by a multivariate analysis in all AFS regions emerged (Cabigon, 1983a).

Crosstabulation analyses based on the 1980 AFS by Concepcion and Cabigon (1982) corroborated the above patterns of association. Wives of low socio-economic status, engaged in blue collar occupations, and who had just worked for at most a year since first marriage were less likely to use contraception.

Population Program Variables

Launched in 1977, the Outreach Project was designed to bring contraceptive information and services closer to rural couples so that their use of contraception, particularly their use of the more effective program methods, would increase. The implementation of the program objectives involved the fielding of full-time outreach workers (FTOWs) and barangay service point officers (BSPOs) nationwide.

There have been attempts at ascertaining the effects of the Outreach project on contraceptive practice. It is therefore of prime importance that program effects are specified by focusing on variables directly related with the Outreach project. Non-Outreach variables which are related to other components of the program like the information, education and communication (IEC), training and service delivery strategies of the Commission on Population (POPCOM) are equally given attention.

Effects of Outreach Project

Evaluation of the Outreach project using the 1978 and 1980 COS data by Laing (1981) revealed some notable accomplishments: the FTOW succeeded in establishing barangay service points (BSP) in rural areas; most BSPs were stocked with pills and condoms; FTOWs and BSPOs appeared to be good models in terms of contraceptive practice; many BSPOs, despite their status as unpaid volunteer workers, were actively involved in home visiting activities and referral of clients to clinics; most FTOWs were assisting clinics in the follow-up of their clients. All these may have contributed largely to the almost universal knowledge of family planning and favorable attitudes toward contraceptive among the respondents in both surveys. Thus, it has been observed that practice of contra-

ception tended to be high among eligible couples living in BSP areas. It must be noted that the regional studies reviewed by Raymundo (1984) revealed the same findings. Multivariate analysis (Laing, 1981, Laing, et.al., 1984) demonstrated that several specific aspects of Outreach operations were indeed contributing to contraceptive practice, especially to the use of the highly effective clinical methods. One crucial aspect is the FTOW's time allocation which is measured by a simple time allocation index. This index indicated that the more time spent by the FTOWs in maintaining and monitoring BSPs, motivating couples to become new acceptors, following up dropouts, coordinating with workers of other agencies, conducting premarital counselling and establishing new BSPs, the higher the level of current use. The other aspect is the role played by BSPOs as agents and as program channels of communication in influencing knowledge and attitudes about modern methods.

The Outreach project is not without weaknesses. Laing (1981) discovered from the 1978 and 1980 COSs that in the enumeration of the BSP area by the COS teams, only about half of the MCRAs living in BSP areas were included in the BSP records. As a result, many couples who said they would be interested in using the BSP were not even aware of its existence. Descriptive and multivariate findings underscore the need for a systematic updating of clinic records and periodic surveys to be able to identify non-acceptors and remotivate dropouts. Analysis of the BSP records further revealed that they were not being used as an instrument for scheduling home visits so as to minimize dropouts and keep the records up to date. FTOWs and BSPOs were visiting only a small proportion of the MCRAs in their territories. IEC support appeared to have been very weak; most FTOWs did not have multiple copies of printed materials to be distributed and most BSPOs did not even have copies for their reference. Comic books, which were found to be the most popular IEC materials, were in shortest supply. The BSPOs were reported to be relatively untapped as service providers in the BSP areas despite the fact that one of their five-fold functions is to supply those in need of pills and condoms, the contraceptive methods they could readily provide. The need to train BSPOs and FTOWs especially in their motivational roles was clearly indicated.

Multivariate analysis also revealed that despite the fact that FTOWs received far more training than the BSPOs and that they are paid, full-time workers, the unpaid volunteer BSPOs have played a much more influential role in relation to the knowledge and attitudes of the target population (Laing, et. al. 1984). It was likewise discovered that respondents exposed to family planning messages from the media were more likely than the rest to perceive incorrectly that condoms are as effective as or more effective than the IUD. It is interesting to note that regional studies which are descriptive revealed that

BSPOs had the same incorrect notion (Raymundo, 1984). With respect to respondent's own attitude toward modern methods, the same authors found out that the perceived attitude of husband, and the willingness to use a method of contraception in the future, the effects of clinic-related communications measured by clinic attendance and communication with doctor, nurse, or midwife and primary interpersonal communication with husbands, friends, relatives and neighbors appeared to be considerably more influential than project sources (FTOW or BSPO).

Descriptive findings from the 1983 NDS corroborate the earlier finding that Outreach personnel (FTOWs and BSPOs) were relatively uncommon sources of current method among users. Interestingly, BSPOs in the Visayas appeared to be more active than their counterparts in Luzon and Mindanao. Furthermore, knowledge of BSPs and BSPOs, and level of communication/contact by FTOWs and BSPOs with the MCRAs during the year preceding the survey turned out to be unsatisfyingly low (Madigan, 1984; OPS, 1984; UPPI, 1984).

On balance, it appears that certain aspects of the Outreach Project are independently and significantly correlated with contraceptive prevalence. The most important Outreach variable that appears to be the underlying determinant of clinical prevalence is the "model" role of the FTOW or BSPO in the use of clinical methods. This effect may be reinforced by program management intervention thru FTOW and BSPO selection and incentives to "practicing" Outreach personnel.

Effects of Non-Outreach Project Inputs

The health service component of the government's Ministry of Health is widely utilized as channel of family planning information and as source of supplies to improve family planning's effectiveness. As non-Outreach input to the population program, accessibility of medical facilities or barangay health stations offering family planning services can certainly affect contraceptive prevalence.

It is interesting to note that all surveys consistently revealed that clinics and clinic personnel stood out as the most important channels of communication for influencing knowledge and attitudes about program methods and were the main source of contraceptive supplies of the MCRAs. On the other hand, broadcast media, mainly radio and television which are non-Outreach inputs to the family planning program, was shown to have been playing an important role in spreading the family planning and welfare program. However, multivariate analysis of the 1980 COS showed that the net effect of mass media (regardless of whether they focused on family planning messages or not and regardless of whether mass media materials on family planning were generated by the program or not) on the knowledge and attitudes about modern methods was weak. It was likewise indicated that greater efforts are needed to

match the impact of family planning clinics, doctors, nurses, midwives and teachers on contraceptive prevalence despite media's wider coverage of the eligible population compared to lectures, other POPCOM printed materials and family planning clubs (Cabigon, 1984; Concepcion and Cabigon, 1982; Laing, 1981; Laing, et. al., 1984; Madigan, 1984; OPS, 1984; UPPI, 1984).

Another major non-Outreach input of the family planning program is the motivational work by field workers other than the FTOWs and BSPOs. Multivariate analysis based on the 1980 COS showed that the workers of participating and partner agencies like the Bureau of Agricultural Extension (BAEx), Ministry of Social Services and Development (MSSD), and the Nutrition Council of the Philippines (NCP) had no significant effect on any of the related family planning knowledge and attitudes. Thus, POPCOM's assumption that such workers assist materially in the education and promotional efforts of the FTOWs, BSPOs, and clinics are subject to further verification (Laing, et.al., 1984). The same study again underscored the importance of informal communication with husband, friends, relatives and neighbors which influenced family planning knowledge and attitudes more than program communication variables.

Knowledge and Attitudes Towards Contraception

The level of knowledge towards contraception has been nearly universal in the country. Some factors influencing knowledge and attitudes have already been presented and discussed in the preceding section. An interesting interrelationship that deserves more detailed discussion is that existing between knowledge of specific methods and communication with medical persons on the one hand and Outreach workers on the other.

Using 1980 COS data in a descriptive context, Laing (1981) underscores the value of communication with program workers. A larger proportion of respondents were able to name a contraceptive method when the respondent or her husband had discussed family planning with either a medical person or Outreach worker (be it an FTOW or a BSPO) than those who did not discuss family planning with program workers. As noted earlier, in a multivariate perspective, the medical persons appear to provide the most comprehensive information about contraceptive methods. By contrast, the FTOWs contributed less to awareness of pills, the IUD, and rhythm. BSPOs apparently have increased clientele awareness of only two methods – the IUD and condoms.

The same trend is obtained for source of information about current method among users sampled in the 1983 NDS. An examination of the distribution of current users of specific methods by source of information in Table 6 reveals that in general, medical or paramedical persons were the main source of information for most methods. As can be gleaned

from the data, the Outreach workers were more active in disseminating information and the promotion of knowledge about condoms.

Data for the regions covered by the 1980 AFS likewise rank the physician and paramedical staff of the rural health units as the lead source of knowledge on family planning followed by private physicians.

Clearly, the data indicate the importance of clinics as primary sources of information. It should be noted that these clinics are usually situated in town centers. The finding that level of knowledge about specific methods decreased with increasing distance from the urban areas of town should not be surprising then. Program administrators should take the clue from findings that the more methods a potential user knows, the greater the chances of contracepting and the greater the tendency to use it effectively.

All the data consistently point to a need to review the IEC strategies of the Outreach project. A form of program management intervention would be a redirection of IEC funds to upgrade the knowledge base about the effectiveness of the modern methods and communication skills of the Outreach workers, particularly, the BSPO whose communication efforts seem to be of more significance than the FTOWs.

There is general consensus about the positive and strong influence of attitudes on behavior and actual use of contraception. A multivariate analysis of 1980 COS data shows that

Table 6. Percentage Distribution of Current Users of Specific Methods By Source: Philippines, 1983

Source	Current Method						
	Sterilization	IUD	Pills	Rhythm	Condoms	Withdrawal	Others
Doctor, nurse, midwife	100.0	100.0	54.1	33.2	29.9	8.4	24.0
FTOW	0.0	0.0	4.6	0.6	13.5	1.1	1.9
BSPO	0.0	0.0	21.4	2.5	27.0	1.1	6.7
Other non-medical fieldworker	0.0	0.0	2.3	0.6	5.4	1.1	2.9
Sales person	0.0	0.0	9.2	0.0	8.0	0.0	0.0
Husband, self	0.0	0.0	1.5	37.5	5.5	69.5	41.3
Friends, relative, neighbor	0.0	0.0	2.3	17.2	8.0	16.9	16.3
Others	0.0	0.0	4.6	8.3	2.7	2.1	6.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(N)	(239)	(65)	(130)	(158)	(37)	(95)	(104)

Source: UPPI, 1984. *1983 National Demographic Survey: First Report.*

wives who strongly approved of modern methods showed higher continuation rates, lower failure rates, and higher contraceptive effectiveness than women who scored otherwise in the attitudinal scale of approval or disapproval of use of modern methods.

Attitudes towards contraception, as culled from findings of different studies based on different data, show slight improvement over the years. In 1983, less than two-thirds (64 percent) of the sample MWRA expressed approval of contraception in general and 29 percent expressed disapproval. Way back in 1968, 58 percent of the sample MWRA had already expressed approval and 37 percent had said they disapproved use of contraception.

Geographic differentials in attitudes favor women from Luzon who are most likely to use modern methods. On the other hand, the Mindanao women exhibited the lowest level of favorable attitude.

Approval of modern family planning methods may be influenced by a host of variables. In general, favorable attitudes towards the use of modern contraceptive methods tend to be associated with socio-economic as well as cultural variables. The 1980 COS data empirically substantiated such relationships. Data in Table 8 show that more educated wives and urban wives approved of family planning. Differentials by religion showed that Muslims were the least likely to approve the use of such methods. This finding is consistent with the earlier observation that of the three major islands, sample wives in Mindanao exhibited the lowest proportion approving the use of modern methods. The individual's

Table 7. Percentage Distribution of CMW 15-49 By Attitude Toward The Use of Modern Contraceptive Methods: Philippine And Major Islands, 1983

Attitude	Philippines	Luzon	Visayas	Mindanao
Approve strongly .	29.1	28.3	32.3	28.2
Approve moderately	34.5	41.7	33.2	24.8
Depends, no opinion	7.0	5.6	8.5	8.1
Disapprove moderately	14.9	13.9	13.4	17.4
Disapprove strongly	14.5	10.5	12.6	21.5
TOTAL	100.0	100.0	100.0	100.0
(N)	(2650)	(1289)	(492)	(866)

Source: Flieger, Wilhelm, *1983 National Demographic Survey, A Summary Report for the Visayas Regions.* Office of Population Studies, University of San Carlos, Cebu City. June 1984; Madigan, Francis C. *Demographic Situation in Mindanao and Sulu: A Preliminary Report of the 1983 National Demographic Survey in these Regions.* Research Institute for Mindanao Culture, Xavier University. Cagayan de Oro City. May 1984; and *1983 National Demographic Survey: First Report.* Population Institute, University of the Philippines. Manila. March 1984.

perception of her church's stand was shown to be important. Over three-fourths (77 percent) among those who perceived a favorable stand of her religion on family planning had positive attitudes towards modern methods.

Exposure to communications, as expected, was associated with favorable attitudes. More strikingly, those who learned about family planning from television appeared to show the highest percentage approving of modern

Table 8. Percentages of Married Women, 15-49 Approving of Modern Contraceptive Methods By Selected Independent Variables, 1980

Independent Variable	Percent Approving	Independent Variable	Percent Approving
Education		Heard About FP. . .	
None	58.1	. . . on the Radio	
Grades 1-4	64.9	Yes	74.3
Grades 5-7	69.4	No	63.2
High School (1-4)	75.4	. . . on TV?	
College (1+)	83.4	Yes	83.4
		No	68.6
Place of Residence		. . . in a Movie?	
Urban	76.3	Yes	80.2
Rural	69.2	No	68.7
Religion		. . . in a Lecture?	
Roman Catholic	70.1	Yes	76.0
Iglesia ni Cristo	83.5	No	68.7
Protestant	70.8	Read About FP. . .	
Muslim	63.3	. . . in a Newspaper?	
		Yes	79.8
Perceived Stand of Religion		No	66.6
Favorable	77.5	. . . in a Leaflet?	
Opposed	48.8	Yes	80.4
Neither	51.3	No	67.6
Don't know	58.8	Discussed FP with. . .	
		. . . Medical Person?	
Organized Opposition in BSP Area (Reported by FTOW)		Yes	80.5
Yes	63.9	No	66.1
No	70.8	. . . FTOW?	
		Yes	79.7
Head About FP from Friends, Relatives or Neighbors?		No	68.7
		. . . BSPO?	
Yes	75.3	Yes	79.5
No	58.6	No	68.0

Source: Laing, John E. 1981. *Family Planning Outreach in the Philippines, Final Report on the Community Outreach Surveys.* Population Institute, University of the Philippines. November, page 82.

methods (83 percent).

Attitudes Towards Family Size

There is no doubt that attitudes towards family size is a strong determinant of current use. The average desired family size remained in the order of four children during the past 10 years. The 1983 NDS indicated that more than half of the currently married women who were resorting to contraception at the time of survey did not want to become pregnant. Nearly two-fifths had not wanted their last or current pregnancy. These indicate the level of unmet need for contraception. Strikingly, among those who had ever been pregnant, over half wanted no more children. There was a slight preference for son and wives claimed they have equal say as their husbands on the desired number of children (Madigan, 1984; NCSO, UPPI, POPCOM, NEDA, 1979; OPS, 1984; UPPI, 1984).

In 1980, two-thirds (68 percent) of the sample wives of the COS did not want to have any more children. The strong influence of the number of children they already had is clearly demonstrated. Only one in 14 women without a living child wanted none. Among those with living children, 77 percent of those with three or four wanted no more and 98 percent of those with seven or more expressed the same. The data substantiated the notion that the proportion not wanting additional children increases with parity.

Other factors influencing desired family size are dealt with in an earlier national fertility survey in a multivariate perspective. Based on the 1978 RPFS, ethnicity and religion turned out to be the most important determinants of desired family size. Pronatalism of the Muslim stood out as contributing much to the observed ethnic and religious differentials in desired family size. A curvilinear pattern of relationship existed between education and desired fertility and husband's occupation and desired fertility. That is, the most highly educated women and those with "professional" husbands tended to desire no more children relative to moderately educated women and those with husbands occupying positions lower than the professional category (Pullum, et.al., 1984).

It was not possible to ascertain whether the observed positive association between actual and desired family size has arisen primarily through implementation of stated preferences or through rationalization of unplanned fertility with existing Philippine data (Cabigon, 1983b; Pullum, et.al., 1984). However, an initial examination of the effects of unwanted pregnancies on contraceptive use from the 1978 RPFS reveals that the likelihood of contraceptive use did not increase with the number of unwanted children (Pullum, et.al., 1984). Surprisingly, discrepancies between desired family size and actual number of children apparently did not constitute sufficient motivation for using contraceptive methods. This was particularly true among women in the first year following their delivery who thought they were not in imme-

diate need of family planning because of breastfeeding effects on amenorrhea. An implication of this finding is to obtain from wives some estimate of their risk of becoming pregnant and a corresponding instruction that breastfeeding does not necessarily eliminate risk of pregnancy.

SUMMARY AND CONCLUSION

The relevant findings on program indicators presented in this paper underscore the need not only to sustain but also to increase both the overall contraceptive prevalence and the use of modern clinic methods. While past experience has been one of declining overall contraceptive prevalence but increasing use of more effective methods, the possibility of a further decline in overall contraceptive prevalence as well as a decline in modern methods should not be totally discounted. Program administrators should undertake new initiatives to increase the overall contraceptive prevalence and to accelerate the rise in the use of modern methods.

The findings disclose further that Outreach inputs to the IEC aspects of family planning do not seem to be as effective as initially conceived. The informal, non-Outreach channels of communication were consistently more influential in the generation of knowledge and delivery of contraceptive methods among eligible women. Moreover, the clinic personnel, whether medical and paramedical, stood out as the most important source of contraceptive supplies. Often times, the eligible couples relied more on them for information about contraception.

Such a condition calls for a re-structuring of the system of delivery of information materials and contraceptive supplies as well as an upgrading of the Outreach workers' communication skills, particularly, the volunteer worker who seems to be more active than the regular, non-volunteer worker in servicing the program clientele. Perhaps, promotion of satisfied users clubs in the villages, including husbands, could complement outreach efforts in stepping-up contraceptive acceptance and sustained use of the more effective methods. Surely, the need for innovation in the IEC strategies and approaches adopted by outreach workers is great.

Viewing contraceptive use as determined by development variables manifest in individual and areal characteristics, there is sufficient and substantial evidence that development in its broadest sense enhances contraceptive practice. The fairly uncontroversial thesis that the results of population programs, measured by levels of contraceptive prevalence, are originally related to a country's social, cultural, economic, and political environment conducive to development is clearly proven by the findings presented in this synthesis. The question therefore arises whether in actual program implementation the political-administrative structure of the Philippine population program is cognizant of the variations in development circumstances of the target population.

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