

PROXIMATE DETERMINANTS OF PHILIPPINE FERTILITY: 1983 LEVELS AND PATTERNS

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ABSTRACT

Three stages of the family life cycle are examined for the factors that affect fertility levels directly and indirectly. At the family formation stage, although childbearing comes rather late, women start to bear children quite rapidly once they are married and postponement of the first birth does not seem to be a common practice. With regard to the birth spacing patterns, younger cohorts of women have shorter birth intervals than older cohorts indicating some changes in fertility strategies. The post-partum non-susceptible period is very short due to the short length of breastfeeding; the exposure interval is fairly long more likely resulting from contraceptive practice than from foetal loss or temporary spousal separations. The stopping patterns of childbearing occur at fairly advanced ages indicating that Filipino women take full advantage of their reproductive years. However, with increasing use of effective contraceptive methods, Filipino women are now likely to employ these methods to stop childbearing at younger ages.

Introduction

Cultural, social and economic factors affect fertility behavior only indirectly through the proximate determinants. These variables affect the proximate determinants differentially and their effects on fertility behavior may not necessarily follow the same direction. Key proximate determinants such as age at marriage, breastfeeding duration, use of contraception and coital frequency are likely to respond to the same set of changes in economic, social or cultural background factors. The degree to which these responses mutually compensate or reinforce each other greatly determines the course that fertility will follow over time. Thus, fertility levels may remain constant if changes in some proximate variables are compensated to the same degree by changes in others in the opposite direction (Lesthaeghe, Shah and Page, 1981). For example, increased schooling might lead to a delay in marriage and a corresponding reduction in fertility. Simultaneously, though, this same social change might lead to shorter breastfeeding duration which, if not compensated by contraceptive practice, would shorten birth intervals and increase fertility. The adoption of contraception may also be related to education.

The fertility exposure analysis conducted by Zablan (1984) on the 1978 Republic of the Philippines Fertility Survey data has shown that the major

proximate determinants (non-marriage, lactational amenorrhea and contraception) reduced potential fertility by 47.9 percent.¹ Among these, the fertility-reducing effect of non-marriage was 47.1 percent, that for contraception was 14.0 percent and lactational amenorrhea was 5.4 percent. Potential fertility among Philippine couples was estimated at 14.8 children. The conclusion drawn from these findings was that postponement of marriage had the largest fertility-reducing effect, contraception next largest, and breastfeeding last.

This paper is limited to the analysis of the levels and patterns of the proximate determinants of fertility using data from the 1983 National Demographic Survey (NDS). The analysis is a necessary first step towards parametrization of the inputs required for fertility exposure analysis. Objectives of the study are threefold: namely, to describe the starting points of family formation (in particular the proximate determinants of age at first birth), to describe birth spacing patterns among the NDS respondents, and to describe the patterns leading to the end of family formation.

Although some studies have touched on one or two of these topics using data from the 1983 NDS (e.g., Cabigon, 1984), little attention has yet been paid to the proximate determinants of all three stages of family formation. This paper is a first attempt to analyze thoroughly the proximate determinants of fertility in each of the three stages of

family formation and to put together all the major factors directly and indirectly affecting fertility levels and trends.

Data and Methodology

The data come mainly from three out of the ten blocks of information gathered in the 1983 NDS, namely, the Pregnancy History, Factors Other than Contraception Affecting Fertility, and Contraceptive Knowledge/Use and Fertility Preferences. In general, the paper does not attempt to explain why the proximate determinants are at the levels observed. The analysis merely estimates the levels of the proximate determinants for the country's population and its major sub-groups.

For some proximate determinants, data from the ever-married women file (N=10,843) were used since the variables pertain to the woman's unique experience (such as marriage, first and last births, menarche, menopause, etc.). In others, the child file (N=12,771) was used since some proximate determinants (such as postpartum amenorrhea, exposure intervals, etc.) occur in connection with each birth experience. For the child file, only those births which occurred between January 1978 and the time of interview were included because data on the proximate determinants were collected only for these births.

Starting Patterns of Family Formation

Consideration of the starting patterns of family formation essentially deals with the age at first birth, the factors that determine it, as well as its differentials among population sub-groups. Potentially, two intervals can be analyzed. The first interval is the time between menarche and entry into marital union. The second interval is the time between first union and first birth. The first of these two intervals can measure the risk of pregnancy if information on pre-marital sexual exposure were available. Unfortunately, no data are available on this in the 1983 NDS since fertility histories were collected only for ever-married women (EMW). While the level of

pre-marital births is important, this information is known only for those who eventually got married and none exists for those who remained single.

The analysis of the interval between first marriage and first birth is also not without problems. Clearly, data on ever-married women underrepresent late starters. The magnitude of the resulting bias is unknown. If one is willing to presume that pre-marital births are few in the Philippines, and that marriage marks the beginning of regular exposure to the risk of pregnancy, then the proximate determinants of the age at first birth can reasonably be analyzed from the experience of ever-married women.

For a comprehensive understanding of the determinants of starting patterns, the differentials in the age at first birth will be analyzed together with five proximate determinants: age at menarche, age at first marriage/union, contraception before the first birth, foetal wastage before the first birth and primary sterility. Lastly, the analysis of differentials in the interval between first marriage and first birth is an attempt to summarize the effects of background factors on both the proximate determinants and the interval to first birth.

Age at First Birth

The reported age at first birth among the NDS respondents is relatively late, the average being estimated at 22.5 years (Table 1). Slightly less than half (46.3 percent) had their first birth between the ages of 20 and 24 years, although over a fifth (21.6 percent) had theirs between the ages of 15 and 19 years.

The data depict a steady increase in mean age at first birth from the younger cohorts to the older cohorts: the mean for women currently aged 15-24 was 20.1 years as compared to 22.4 years for those ten years older and 23.4 years for those aged 35 to 49 years.

Urban women were slightly older (23.0 years), on the average, than rural women (22.1 years) when they bore their first child. In like fashion, women from Metro Manila were older (23.1 years) when they had their first child than were women residing

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Table 1. Percentage Distribution of Ever Married Women (EMW) by Age at First Birth and by Selected Characteristics: Philippines, 1983

Characteristics	Age at First Birth (Years)								TOTAL		X̄	SD
	<15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Percent	N		
Philippines	0.3	21.6	46.3	18.3	4.4	0.9	0.2	0.0	100.0	--	22.5	4.1
Percent	0.3	21.6	46.3	18.3	4.4	0.9	0.2	0.0	100.0	--	22.5	4.1
N	35	2340	5031	1865	476	102	21	1	--	9992	--	--
1. Current Age												
15-24 years	0.4	40.0	57.9	1.7	0.0	0.0	0.0	0.0	16.2	1621	20.1	2.2
25-34 years	0.3	21.0	52.1	23.2	3.4	0.0	0.0	0.0	39.0	3892	22.4	3.5
35-49 years	0.4	19.5	56.1	23.6	7.7	2.2	0.5	0.0	44.8	4479	23.4	4.7
2. Place of Residence												
Urban	0.3	19.2	50.2	23.3	5.5	1.2	0.3	0.0	37.8	3775	23.0	4.2
Rural	0.4	26.0	50.5	17.8	4.3	0.9	0.1	0.0	62.2	6217	22.1	4.0
3. Region												
Metro Manila	0.2	17.8	50.5	23.8	5.9	1.4	0.4	0.0	13.3	1331	23.1	4.2
Other Luzon	0.2	22.3	50.7	20.4	5.2	1.0	0.2	0.0	41.9	4182	22.6	4.1
Visayas	0.3	23.0	51.0	19.9	4.3	1.3	0.2	0.0	22.0	2204	22.5	4.1
Mindanao	0.7	29.1	49.1	16.6	3.8	0.7	0.0	0.0	22.8	2275	21.8	4.0
4. Education of Wife												
0 - Grade 4	1.0	34.9	44.0	14.7	4.5	0.8	0.1	0.0	21.3	2131	21.5	4.2
Grade 5-7	0.3	25.9	52.1	17.1	3.4	1.0	0.2	0.0	37.9	3778	22.1	3.9
High School 1-4	0.1	20.6	56.7	18.1	3.6	0.7	0.2	0.0	25.8	2578	22.3	3.7
College+	0.0	5.8	44.0	37.1	10.6	2.1	0.4	0.0	15.0	1503	25.0	3.8

Note: Excludes 5 cases with no information, 625 Rs who had never been pregnant, 114 Rs with pregnancy but with no live birth, and 107 Rs who are currently pregnant for the first time.

in other areas of Luzon (22.6 years), in the Visayas (22.5 years), or in Mindanao (21.8 years).

Education of the mother was inversely related with age at time of first birth. Those who failed to go beyond grade four gave birth to their first child 3.5 years earlier, on the average, than those who reached college.

The Proximate Determinants of Age at First Birth

Age at Menarche. The start of childbearing is

demarcated by the onset of menstruation (or menarche). It is at this point that ovulation begins, thus bringing with it the starting point of a woman's fecund life. For the women interviewed during the course of the NDS, menarche occurred as early as 9 years. Only a few began to menstruate at age 20 or more (Table 2). By age 12, twenty-two percent of the women had reached menarche and by age 15, 82.9 percent had already started menstruating.

Although the differences between age cohorts are slight, there does appear to be a monotonic decline

Table 2. Percentage Distribution of EMW by Age at Menarche and by Selected Characteristics.
Philippines, 1983

Characteristics	Age at Menarche (Years)												Total		\bar{X}	SD
	9	10	11	12	13	14	15	16	17	18	19	20	Percent	N		
Philippines Percent	0.1	0.7	4.6	16.6	21.3	23.8	15.8	11.6	3.4	1.7	0.3	0.1	100.0	-	13.9	1.6
N	12	73	490	1775	2284	2545	1692	1244	360	181	31	14	-	10701	-	
1. Current Age																
15-24 years	0.2	1.3	4.6	18.0	23.9	23.1	17.1	9.1	2.0	0.6	0.1	-	19.0	2031	13.6	1.5
25-34 years	0.1	0.5	4.9	17.7	21.9	24.5	15.3	9.9	3.0	1.9	0.2	0.1	38.1	4074	13.8	1.6
35-49 years	0.0	0.6	4.3	15.0	19.7	23.4	15.7	14.3	4.3	2.0	0.5	0.2	42.9	4590	14.0	1.7
2. Place of Residence																
Urban	0.2	0.9	6.2	18.0	23.2	22.8	13.7	10.4	2.8	1.4	0.3	0.1	37.9	4060	13.7	1.7
Rural	0.1	0.5	3.6	15.7	20.3	24.4	17.1	12.3	3.7	1.9	0.3	0.1	62.1	6641	14.0	1.6
3. Region																
Metro Manila	0.3	0.9	7.5	17.9	24.2	21.1	12.6	11.2	2.9	0.6	0.4	0.4	13.3	1423	13.6	1.6
Other Luzon	0.0	0.6	4.1	16.8	21.7	23.4	16.1	11.8	3.4	1.9	0.2	0.0	41.4	4428	13.9	1.7
Visayas	0.1	0.8	4.4	17.8	18.7	24.0	16.2	11.5	4.1	1.8	0.4	0.2	21.8	2338	13.9	1.6
Mindanao	0.2	0.6	4.0	14.3	22.5	25.2	16.8	11.7	2.6	1.9	0.2	0.0	23.5	2512	13.9	1.7
4. Education of Wife																
0 - Grade 4	-	0.6	4.0	15.2	18.0	24.7	19.1	11.5	3.9	1.8	0.2	0.0	20.8	2226	14.0	1.6
Grades 5-7	0.0	0.5	3.9	14.8	19.9	25.2	16.5	13.1	3.5	2.1	0.3	0.2	37.0	3960	14.0	1.6
H. School 1-4	0.2	0.7	5.1	18.2	22.1	22.9	14.3	11.4	3.3	1.3	0.4	0.1	26.6	2845	13.8	1.6
College +	0.2	1.3	6.2	20.0	26.7	20.5	12.4	8.8	2.3	1.2	0.3	0.1	15.6	1670	13.5	1.6

Note: Excludes 142 inconclusive responses.

in the age at menarche from the oldest to the youngest cohorts of women: 13.6 years for the age cohort 15-24, 13.8 years for those in the 25-34 age cohort and 14.0 years for the oldest cohort.

Urban women attained menarche at a slightly earlier age (13.7 years) than rural women (14.0 years). Metro Manila women likewise experienced menarche at a slightly earlier age (13.6 years) than residents in other regions of the country (13.9 years). An inverse relationship between age at menarche and education was observed. The above data appear to indicate non-significant differences in age at menarche. In fact, the standard deviations are much larger than sub-group differentials. Nevertheless, the patterns in sub-group values appear to

be consistent with those found in data from the 1978 RPFs (Zablan, 1984).

Age at First Marriage/Union. Although menarche can probably be considered as a lower age limit to a woman's fecund life, the start of actual childbearing depends of course on subsequent exposure to sexual intercourse. Age at first marriage could probably identify the start of exposure to the risk of conception for a majority of women inasmuch as pre-marital sex and conception are not rampant in the country. Furthermore, the operational definition of marriage adopted in the 1983 NDS was loose enough to include all women living together with their partners, whether or not a formal wedding

ceremony had been performed.

The results in Table 3 show that the mean age at marriage is relatively early (20.7 years). Older cohorts married about three years later (21.4 years) than younger cohorts (18.6 years) pointing towards a longer exposure to pregnancy risks of the latter relative to the former group.² Urban women marry over a year later (21.4 years) than rural women (20.2 years) and Metro Manilans marry about a year later (21.7 years) than women residing in other areas of the country (20.7 years). As expected, age at marriage was positively related with education, with women in the lowest educational category marrying over four years earlier than those in the highest educational category.

Contraception Before the First Birth. Data in Table 4 show that only a few ever-married women used contraception before their first birth. For the nation as a whole, 97.7 percent never used and only 1.8 percent used it before their first birth. Another 0.5 percent of the respondents had not yet given birth.

Although contraceptive practice before the first birth was limited, younger women were more likely to follow this mode of behavior than were those in the older age cohorts. Twice as many urban wives as rural ones used a method (2.5 percent vs. 1.3 percent). Metro Manilans (2.8 percent) were also more likely than residents in other regions to use family planning before the first birth. The education differential in contraceptive use before the first birth was greatest. Women with college education showed a percentage about 8 times larger than those in the lowest educational attainment category.

Foetal Wastage Before the First Birth. In general, foetal wastage is seriously underreported. Only 6.4 percent of the respondents reported that their first pregnancy ended in a non-live birth (Table 5). These consisted mainly of spontaneous abortions (5.2 percent), along with 1.0 percent stillbirths and 0.2 percent induced abortions. Foetal loss before the first birth was inversely related with age. Younger cohorts were more likely to have their first pregnancy terminated in a non-live birth than were the older cohorts although this could be a

function of recall. Foetal loss before the first birth did not seem to differ much by urban-rural, regional or educational characteristics.

Primary Sterility. The onset of sterility (i.e., the inability to conceive) is not an observable event. Thus, indirect approaches must be made to obtain it. For a non-contracepting population, a history of never becoming pregnant is typically taken as an indicator of sterility and not of deliberate control. Thus, women who have never had a child are considered as exhibiting primary infertility, whereas those who, after having had at least one child, appear unable to give birth after a specified period of exposure are considered as having secondary infertility.

The 1983 NDS data allow us to estimate the proportion of women who had never had a live birth (i.e., who were infertile), but not, of course, the proportion infecund. Table 6, first panel, shows 1.1 percent of ever-married women as having never given birth to a live born child while 5.8 percent reported never having had a pregnancy. A fifth (20.4 percent) of the women 15-24 years of age were found to be childless. For ever-married women aged 25-34 years, the proportion childless was 4.6 percent and among those who were married for at least 5 years at similar ages, this proportion was 4.3 percent (see the second panel of Table 6).

Childlessness among urban residents was slightly higher (7.1 percent) than among rural women (6.7 percent). Women residing in Mindanao (17.9 percent) showed the highest value, on this measure, especially in comparison to the national figure of 6.9 percent. Metro Manila women exhibited a value in excess of the national average while women from to be of relatively lower levels. Education appeared to be positively related with childlessness indicating be positively related with child-lessness indicating a possible association with socio-economic level and contraceptive use.

Interval Between First Marriage and First Birth. Table 7 presents findings on differentials in the interval between marriage and first birth (I1). The overall mean length of I1 for ever-married women 15-49 years of age was 18.2 months. Slightly more

Table 3. Percentage Distribution of EMW by Age at First Marriage and by Selected Characteristics: Philippines, 1983

Characteristics	Age at First Marriage						Total		\bar{X}	SD
	<15	15-19	20-24	25-29	30-34	35+	Percent	N		
Philippines Percent	2.8	41.1	40.1	12.5	2.7	0.8	100.0	-	20.7	4.2
N	309	4443	4337	1358	294	86	-	10827	-	-
1. Current Age										
15-24 years	3.7	61.3	34.8	0.2	0.0	0.0	19.0	2058	18.6	2.4
25-34 years	2.5	35.9	44.3	15.6	1.7	0.0	38.1	4126	20.8	3.8
35-49 years	2.8	36.4	38.7	15.4	4.8	1.9	42.9	4643	21.4	4.9
2. Place of Residence										
Urban	1.8	35.2	42.3	16.1	3.5	1.1	38.0	4111	21.4	4.3
Rural	3.5	44.7	38.6	10.4	2.2	0.6	62.0	6715	20.2	4.1
3. Region										
Metro Manila	1.5	32.2	43.1	18.4	3.6	1.2	13.4	1455	21.7	4.4
Other Luzon	2.1	41.1	41.2	12.2	2.7	0.7	41.3	4473	20.7	4.1
Visayas	2.7	40.3	40.7	12.4	2.9	1.0	21.9	2370	20.7	4.3
Mindanao	5.1	46.5	35.8	9.9	2.1	0.6	23.4	2529	20.0	4.1
4. Education of Wife										
0 - Grade 4	7.8	51.5	30.2	7.7	2.1	0.7	20.8	2248	19.3	4.2
Grades 5-7	2.4	47.0	38.2	9.9	1.8	0.7	36.9	3996	20.2	4.0
High School 1-4	1.2	40.4	44.9	11.0	1.9	0.6	26.5	2870	20.7	3.8
College +	0.3	14.4	49.4	27.4	7.0	1.5	15.8	1711	23.5	3.9

Note: Excludes 16 inconclusive responses.

than one in four (26.6 percent) of the women had pre-marital conceptions (9 months or less) and 24.0 percent gave birth within the 10th to the 12th month after marriage. After one and one-half years of marriage, 71.1 percent had had their first birth.

The first birth interval (I1) was 7.2 months shorter for the youngest cohort (14.1 months) than for the oldest cohorts (21.3 months). Pre-marital conceptions for the women currently aged 15-24 (30.5 percent) were 33 percent higher compared to those in the 35-49 age groups (22.9 percent).

Urban women had shorter first birth intervals (17.1 months) than rural women (18.9 months) and a greater proportion of them had pre-marital conceptions (31.0 percent vs. 23.9 percent).

Of the four geographic subdivisions of the country, Metro Manila showed the shortest first interval on average (16.9 months) while women residing in other Luzon areas showed the longest (19.2 months). The proportion of pre-marital conceptions appears to have been highest for Metro Manila (32.5 percent) and the Visayas (28.0

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Table 4. Percentage Distribution of EMW by Use of Family Planning (FP) Before First Birth by Selected Characteristics: Philippines, 1983

Characteristics	Used FP Before First Live Birth		R Has Not Had a First Birth	Total	
	No	Yes		Percent	N
Philippines Percent	97.7	1.8	0.5	100.0	-
N	10574	194	57	-	10825
1. Current Age					
15-24 years	96.6	2.3	1.1	19.0	2060
25-34 years	96.5	2.7	0.8	38.1	4121
35-49 years	99.2	0.8	0.0	42.9	4644
2. Place of Residence					
Urban	96.5	2.5	1.0	38.1	4118
Rural	98.5	1.3	0.2	61.9	6707
3. Region					
Metro Manila	96.1	2.8	1.1	13.5	1461
Other Luzon	97.8	1.7	0.5	41.2	4463
Visayas	97.9	1.9	0.2	21.9	2373
Mindanao	98.2	1.3	0.5	23.4	2528
4. Education of Wife					
0 - Grade 4	99.2	0.6	0.2	20.8	2248
Grades 5-7	98.4	1.4	0.2	36.9	3998
High School 1-4	97.8	1.4	0.8	26.5	2868
College +	93.7	5.1	1.2	15.8	1711

Note: Excludes 18 inconclusive responses.

percent). About a fourth of women in other areas of the country reported their first births to have occurred less than 10 months after marriage.

Education was negatively related with the first birth interval while the proportion of those with premarital conceptions increased with education. The negative relationship between education and I1

is perhaps due to the fact that more educated women tend to marry later than less educated ones, therefore bringing about a longer exposure to premarital pregnancy risks.

Birth Spacing Patterns

Analysis of birth spacing patterns in settings where

Table 5. Percentage Distribution of First Pregnancies Ending in Foetal Loss by Type of Pregnancy Termination and by Selected Characteristics; Philippines, 1983

Characteristics	Type of Foetal Loss			Live Birth	Total	
	Stillbirth	Induced Abortion	Spontaneous Abortion		Percent	N
Philippines Percent	1.0	0.2	5.2	93.6	100.0	-
N	105	20	525	9464	-	10114
1. Current Age						
15-24 years	1.0	0.1	6.8	92.1	16.5	1670
25-34 years	1.2	0.3	5.3	93.2	38.9	3937
35-49 years	0.9	0.2	4.5	94.4	44.6	4507
2. Place of Residence						
Urban	1.0	0.3	5.4	93.3	37.8	3820
Rural	1.1	0.1	5.1	93.7	62.2	6294
3. Region						
Metro Manila	0.6	0.2	5.8	93.4	13.1	1343
Other Luzon	1.3	0.3	5.0	93.4	41.8	4230
Visayas	1.1	0.2	5.8	92.9	22.1	2236
Mindanao	0.8	0.0	4.5	94.7	22.8	2305
4. Education of Wife						
0 - Grade 4	0.9	0.0	5.2	93.9	21.3	2159
Grades 5-7	1.3	0.2	4.6	93.9	37.7	3906
High School 1-4	0.8	0.2	6.1	92.9	25.9	2620
College +	1.1	0.3	5.2	93.4	15.1	1529

Note: Excludes 93 inconclusive responses, 625 respondents who have never been pregnant, and 11 respondents with no terminated pregnancy.

fertility is in transition is important in order to detect changes in individual reproductive strategy well before changes in actual fertility occur. A temporary lull in a declining trend in fertility levels does not necessarily mean that individual reproductive strategies are unchanging. In reality, quite the opposite may be true because of some emerging trade-offs between the proximate fertility variables. In particular, birth intervals are likely to decrease

during the early stages of the fertility transition, thus offsetting in part the fertility-reducing effect of later marriage and the adoption of contraception to end family formation.

Apart from its role in determining fertility levels and trends, the study of birth spacing in itself is important for assessing the health risks for both mother and child as a result of rapid succession of births.

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Table 6. Percentage Distribution of EMW by Primary Sterility and by Selected Characteristics: Philippines, 1983

Characteristics	All Ever-Married Women			EMW Married Longer than 5 years		
	No Pregnancy	No Live Birth	N	No Pregnancy	No Live Birth	N
Philippines Percent	5.8	1.1	10737	5.9	1.0	-
N	625	114	10737	520	88	8761
1. Current Age						
15-24 years	18.1	2.3	2039	19.1	2.1	1658
25-34 years	3.6	1.0	4083	3.3	1.0	3403
35-49 years	2.3	0.5	4615	2.5	0.5	3703
2. Place of Residence						
Urban	6.1	1.0	4069	6.3	1.0	3253
Rural	5.6	1.1	6668	5.7	1.0	5509
3. Region						
Metro Manila	5.9	6.8	1427	6.5	7.2	1142
Other Luzon	5.1	6.1	4454	4.9	5.7	3760
Visayas	4.5	5.7	2340	4.9	6.2	1894
Mindanao	8.3	9.6	2516	8.5	9.7	1968
4. Education of Wife						
0 - Grade 4	3.7	4.8	2243	3.8	4.8	1752
Grades 5-7	4.2	4.8	3973	4.3	4.9	3251
High School 1-4	8.0	9.4	2848	8.1	9.4	2354
College +	8.7	10.2	1673	8.8	10.4	1407

Note: Excludes 106 cases with no information.

Using data from the 1983 NDS, birth spacing can be studied most effectively by considering the interval between successive live births and dividing it into three major components:

(1) The postpartum non-susceptible period. This is the period after each birth when a woman is not susceptible to pregnancy because she is not ovulating or has not yet resumed sexual relations. The former is usually measured by the more observ-

able and fairly closely correlated period of postpartum amenorrhea.

(2) The exposure interval or the period between the return of susceptibility and the conception that leads to the next live birth. This includes any months 'lost' due to pregnancies that do not end in a live birth.

(3) The period of gestation leading to the next

Table 7. Percentage Distribution of EMW by Interval between First Marriage and First Birth: Philippines, 1983

Characteristics	Interval Between First Marriage and First Birth (Months)							Total		\bar{X}	SD
	<10	10-12	13-18	19-24	25-30	31-36	37 +	Percent	N		
Philippines Percent	26.6	24.0	20.5	11.9	5.7	3.3	8.0	100.0	-	18.2	19.5
N	2538	2298	1960	1140	542	316	767	-	9561	-	-
1. Current Age											
15-24 years	30.5	25.4	22.3	10.8	5.5	2.9	2.6	16.2	1551	14.1	19.1
25-34 years	29.1	24.6	20.7	11.4	5.1	2.9	6.2	38.8	3711	16.3	14.2
35-49 years	22.9	23.0	19.6	12.8	6.3	3.8	11.6	45.0	4299	21.3	25.0
2. Place of Residence											
Urban	31.0	23.1	19.7	10.8	5.3	3.1	7.0	37.3	3566	17.1	18.4
Rural	23.9	24.6	21.0	12.6	5.9	3.4	8.6	62.7	5922	18.9	20.1
3. Region											
Metro Manila	32.5	21.2	20.3	11.2	5.6	2.4	6.8	12.9	1237	16.9	18.8
Other Luzon	25.3	24.7	20.4	11.8	5.1	3.4	9.3	42.1	4016	19.2	21.8
Visayas	28.0	23.7	20.0	12.0	6.0	3.4	6.9	22.1	2114	17.2	16.6
Mindanao	24.1	24.8	21.2	12.5	6.4	3.5	7.5	22.9	2194	18.1	18.0
4. Education of Wife											
0 - Grade 4	18.8	22.1	20.4	14.4	7.9	4.8	11.6	21.3	2034	22.3	25.0
Grades 5-7	25.3	25.0	20.0	12.3	5.5	3.4	8.5	37.9	3624	18.5	19.8
High School 1-4	29.4	24.3	21.4	10.5	5.2	2.8	6.4	25.7	2456	16.5	16.2
College +	35.8	24.0	20.3	10.0	3.8	1.5	4.6	15.1	1447	14.3	13.0

Note: Excludes 135 respondents with no information, 408 with a negative interval, 625 with no pregnancy, and 114 with no live births.

birth. This is usually about nine months in duration.

The analysis focuses on the inter-live birth intervals for those born since January 1978 to the time of the 1983 NDS. For this purpose, data from the child file will be used. The analysis gives equal weight to each interval which started in the period covered.

As indicated in Table 8, the results show an inverse

relationship between birth interval length and current age of the mother. Younger cohorts of women had shorter birth intervals than older cohorts. Those in age groups 35 years and above had particularly long birth intervals either as a result of declining fecundability with age, increasing contraceptive practice, or both.

Urban mothers showed birth interval lengths 0.8 month longer on the average (32.2 months) than

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Table 8. Mean Length (in Months) of the Live Birth Interval, by Selected Characteristics of Mother: Philippines, 1983

Mother's Characteristics	Mean (months)	N
Philippines	31.8	10066
1. Current Age		
15-19 years	22.0	67
20-24 years	22.6	1266
25-29 years	26.7	2904
30-34 years	30.7	2613
35-39 years	37.6	1718
40-44 years	42.9	1164
45-49 years	52.1	334
2. Place of Residence		
Urban	32.2	4871
Rural	31.4	5189
3. Region		
Metro Manila	33.0	626
Other Luzon	32.4	3904
Visayas	32.9	2118
Mindanao	30.1	3418
4. Mother's Education		
0 - Grade 4	33.4	2185
Grades 5-7	31.7	3525
High School 1-4	30.8	2543
College +	31.2	1513

Note: Calculated for all births born between January 1978 and the 1983 NDS with these births marking the beginning of the live birth interval. Arithmetic means are based solely on closed intervals.

did the rural respondents (31.4 months).

Birth intervals were longest on average among women from Metro Manila. Duration of postpartum amenorrhea, however, was shortest for this region, thereby indicating that lengthening of birth intervals among the Manila residents has resulted

from greater contraceptive practice. A curvilinear relationship of birth interval length was observed with education, being longest among those with the highest and lowest levels of education. This is perhaps attributable to the fact that women with little or no schooling are usually older than those with formal education.

Table 9: Mean Duration of Post-partum Amenorrhea (in Months) by Selected Characteristics of Mother: Philippines, 1983

Characteristics	1983	
	Mean Duration (months)	N
Philippines	6.2	10831
1. Current Age		
15-24 years	5.4	2161
25-34 years	6.0	5747
35-49 years	7.2	2923
2. Place of Residence		
Urban	5.4	5515
Rural	6.9	5316
3. Region		
Metro Manila	4.2	795
Other Luzon	6.1	4178
Visayas	7.0	2134
Mindanao	5.9	3724
4. Education of Wife		
0 - Grade 4	7.6	1813
Grades 5-7	7.7	3258
High School 1-4	6.7	2423
College +	5.2	1408

Note: Calculated as an arithmetic average using experiences of mothers who have resumed menstruation postpartum from births occurring between January 1978 and the 1983 NDS. Computations exclude 1,940 children whose mothers were found still amenorrheic as well as those who became pregnant before resumption of menstruation.

The Post-Partum Non-susceptible Period. The post-partum nonsusceptible period depends principally on the duration of frequent and intense breastfeeding. It varies from about 1.5 to 2.0 months or more where frequent and unsupplemented breastfeeding is practiced.

In almost all populations, abstinence is observed for a short period postpartum. Where this period is

shorter than the period of amenorrhea, it has no impact on fertility. Where it is longer, the birth interval is thereby lengthened. Strictly speaking, since the woman is then susceptible, the additional months should not be treated as part of the "non-susceptible period". Since both periods start at the moment of delivery and since they cover overlapping periods, the postpartum period of non-susceptibility is the longer of the two--postpartum

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Table 10. Percentage Distribution and Mean Length of Breastfeeding for Mothers Who Breastfed Their Babies: Philippines, 1983

Characteristics	Ever Breastfed		Mean Duration	
	Percent	N	Months	N
Philippines	83.1	11486	11.3	9531
1. Current Age				
15-24 years	85.3	2264	10.4	1932
25-34 years	83.3	6029	10.9	5011
35-49 years	81.3	3194	12.7	2588
2. Place of Residence				
Urban	73.8	3822	9.7	2818
Rural	87.8	7664	12.0	6706
3. Region				
Metro Manila	67.9	1263	7.8	857
Other Luzon	84.1	4754	11.4	3996
Visayas	87.9	2734	12.9	2386
Mindanao	83.9	2729	10.8	2291
4. Education of Wife				
0 - Grade 4	90.1	2531	12.4	268
Grades 5-7	87.7	4533	12.0	3966
High School 1-4	79.7	2955	10.6	2350
College +	67.5	1641	7.9	1107

Note: Cases with no information on breastfeeding practice or duration excluded from the analysis, thereby bringing about differing sample sizes. (Cases with no information on the selected characteristics also excluded.)

amenorrhoea or postpartum abstinence.

The estimated duration of postpartum amenorrhoea is fairly short, the mean being around 6 months (Table 9). The mean was about two months shorter for births among women currently aged 15-24 than among those aged 35-49 years. Postpartum amenorrhoea was 1.5 months longer among rural than among urban mothers. Of the four regional subdivisions, Metro Manila mothers showed the shortest amenorrhoea duration (4.2 months) while Visayan

mothers showed the longest (7.0 months). Education of mother showed a negative relationship with postpartum amenorrhoea length.

Changes in the mean duration of postpartum amenorrhoea are generally associated with changes in the duration of total and full breastfeeding. Table 10 presents further data on this topic, as derived for all children born in the five-year period preceding the survey. As shown therein, most such births (83 percent) were breastfed, with an average duration

Table 11. Mean Duration of Postpartum Amenorrhea by Duration of Total Breastfeeding: Philippines, 1983

Duration of Breastfeeding	Mean Duration of Postpartum Amenorrhea (Months)	N
Never breastfed	3.1	2155
0-6 months	4.1	2401
7-12 months	7.0	3734
13-18 months	8.9	1698
19-24 months	10.6	626
25-30 months	10.9	106
31-36 months	11.7	78
37-72 months	13.3	33
Total	6.2	10831

Note: Estimates are for all children born between January 1978 and the 1983 NDS. Figures exclude 1,940 children whose mothers were found to still be amenorrheic or who became pregnant again before resumption of their menstruation.

of nearly a year (11.3 months). Most differentials are in the expected direction, with breast-feeding being least common among urban women, those from Metro Manila, and among the better educated. On the age variable the findings show younger women to be more likely to initiate breastfeeding but to continue with this type of infant feeding for somewhat shorter durations.

Table 11 presents the mean duration of postpartum amenorrhea associated with specified durations of total breastfeeding. For mothers who did not breastfeed, the mean duration of postpartum amenorrhea was 3.1 months. For mothers who breastfed 0-6 months, the mean duration of postpartum amenorrhea was 4.1 months, thereby indicating a prolongation of an additional month. Breastfeeding for 7-12 months was associated with 7.0 months of postpartum amenorrhea. After that point, however, additional increases in breastfeeding duration were associated with lesser incre-

ments in postpartum amenorrhea duration.

Postpartum abstinence is generally too short to make a major impact on the birth interval length. For a few intervals, however, postpartum abstinence does last longer than postpartum amenorrhea. The duration of the overall non-susceptible/non-exposed period postpartum is, therefore, slightly longer than the duration of postpartum amenorrhea alone.

The mean duration of postpartum abstinence was 2.8 months. Only 2.0 percent of mothers resumed sexual relations after less than one month, 25.7 percent after 1 month, 25.0 percent after 2 months and 21.4 percent after 3 months. By the fourth and sixth month, the percent resuming sexual relations stood, respectively, at 74.1 and 90.8 percent. Table 12 shows the mean duration of postpartum abstinence and its differentials. Postpartum abstinence was shortest (2.6 months) for the

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youngest cohort of women and was longest for the oldest cohort (3.0 months). It was undifferentiated by urban-rural residence but was longer for Metro Manilans (3.3 months) and other Luzon (3.2 months) than for residents of Mindanao (2.2 months). No consistent pattern was observed for the education sub-groups.

Exposure Interval

The duration of exposure to pregnancy risk within the interval between successive live births cannot be gathered directly from the 1983 NDS data since no direct question was asked about the time required to conceive. Rather, the exposure interval can only be estimated indirectly by differences. That is, the length of the inter-live birth interval minus 9 months minus postpartum amenorrhea may be used as a proxy for this variable.

The time required to conceive by age group of women in the 1983 NDS is given below, in months:

Age of woman (Years)	Birth Interval (Months)	Postpartum Amenorrhea (Months)	Gestation (Months)	Time required to conceive (Months)
15-24	22.6	5.4	9	8.2
25-34	26.6	6.0	9	11.6
35-49	41.0	7.2	9	24.8
All	31.8	6.2	9	16.6

These data indicate that the exposure period tends to be positively related to the respondent's age; i.e., the older the woman, the longer the time required to conceive.

The time required to conceive for non-contracepting women is largely determined by coital frequency and by any periods of separation between husband and wife. We, therefore, focus on these two factors, along with use of family planning.

Table 13 shows the frequency distribution and means of couples by the number of days they had sex in the week preceding the survey, as broken

down by selected characteristics. More than half (51.9 percent) of the respondents either said they have had sex in one out of the last seven days or had not had sex at all. The median frequency per week is therefore one episode, while the mean number of days they had sex was 1.6.

The data indicate that younger women tend to be more sexually active than older women. There appears to be hardly any difference in the mean coital frequency among urban and rural residents, although there was some tendency for Metro Manila residents to exhibit lower rates of coital frequency. Coital frequency patterns among education sub-groups appear to be in the expected direction: lowest among those with low levels of education (who may also be older) and highest among those with high levels of education.

Periods of separation between husband and wife could have a significant impact on the exposure interval if they are lengthy. Often, however, periods of separation overlap at least in part with pregnancy or the period of postpartum non-susceptibility, thereby minimizing their impact. In the 1983 NDS, only separations exceeding three or more months were noted. Table 14 shows that in only 3.7 percent of the intervals were the couples separated at least once for this length of time. There is remarkable similarity among all subgroups in the distributions of the number of times the couple were apart. The only exceptions here were for Metro Manila residents and those who reached college, among whom temporary separations were more common.

Use of contraception is, of course, of great importance in the discussion of the exposure interval. While use of contraception protects the woman from the risk of pregnancy, some methods are more effective than others. Table 15 shows the prevalence of contraceptive use among currently married women (CMW) as subdivided into four major categories: use of a more effective method (MEM), use of a less effective method (LEM) associated with the country's family planning program, use of a non-program LEM and nonuse of family planning.

For the Philippines as a whole, 32.1 percent of currently married women 15-44 years were practicing some form of contraception. Most of those who were currently practicing were using the more

Table 12. Percentage Distribution of Births in the Last Five Years by Number of Months Since Birth When Mother Resumed Sexual Relations: Philippines, 1983

Characteristics	No. of Months						Sex still not started	TOTAL		\bar{X}	SD
	<1	1	2	3	4-6	7+		Percent	N		
Philippines Percent	2.0	25.7	25.0	21.4	16.7	4.5	4.7	100.0	--	2.8	2.5
N	255	3215	3136	2691	2098	567	591	--	12553	-	-
1. Current Age											
15-24 years	2.1	27.7	24.8	19.8	15.2	3.2	7.2	21.6	2710	2.6	2.3
25-34 years	2.2	26.4	25.7	21.4	15.9	4.3	4.1	52.6	6603	2.7	2.2
35-49 years	1.7	22.2	23.8	22.9	19.8	5.8	3.8	25.8	3240	3.0	2.4
2. Place of Residence											
Urban	2.0	26.2	24.8	20.9	16.9	4.4	4.8	50.0	6271	2.8	2.4
Rural	2.1	25.0	25.2	22.0	16.5	4.6	4.6	50.0	6282	2.8	2.6
3. Region											
Metro Manila	1.6	15.0	25.6	26.2	20.3	6.5	4.8	6.8	861	3.3	3.1
Other Luzon	1.4	15.1	24.1	26.4	22.6	5.4	5.0	38.7	4855	3.2	2.3
Visayas	3.2	28.2	25.2	18.8	14.2	5.5	4.9	20.5	2571	2.8	3.2
Mindanao	2.1	38.2	25.8	16.4	10.8	2.4	4.3	34.0	4266	2.2	2.0
4. Education of Wife											
0 - Grade 4	2.6	24.3	25.0	20.9	16.7	5.5	5.0	19.3	2425	2.8	2.2
Grade 5-7	1.7	24.5	23.6	23.0	18.0	4.3	4.9	36.0	4519	2.9	2.6
High School 1-4	2.0	26.2	25.9	20.4	16.9	4.5	4.1	26.9	3376	2.7	2.2
College+	2.3	28.2	26.4	20.4	13.9	3.9	4.9	17.8	2233	2.7	3.0

Note: Excludes 177 inconclusive responses and 41 Rs with no births in the last 5 years.

effective methods (17.7 percent) while slightly less were using the less effective ones (14.5 percent). The younger women were less likely than older cohorts to use more effective methods. About twice as many urban couples were using MEMs (24.5 percent) as compared to those from rural areas (13.5 percent). Of all the regions analyzed, Metro Manila showed the highest level of MEM use at 31.5 percent. In fact, this level was about three times that found for the Visayas, where only 11.4 percent were using a more effective method. Education was

positively related to contraceptive use, particularly for program methods. These patterns of contraceptive use agree well with our results observed in the birth interval analysis, thus implying that contraceptive use was an important factor in the lengthening of the exposure interval.

Stopping Patterns

The key fertility variable to be estimated in this

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Table 13. Percentage Distribution of Currently Married Women (CMW) by Number of Days R Had Sexual Relations During the Last Seven Days and by Selected Characteristics: Philippines, 1983

Characteristics	Number of Days Respondent Had Sexual Relations During the Past Seven Days								TOTAL		\bar{X}	SD
	0	1	2	3	4	5	6	7	Percent	N		
Philippines Percent	20.2	31.7	27.9	14.1	3.7	1.3	0.4	0.7	100.0	-	1.6	1.3
N	1570	2459	2164	1090	285	97	28	56	-	7749	-	-
1. Current Age												
15-24 years	13.5	25.5	29.9	20.7	6.7	1.8	0.7	1.2	15.7	1214	2.0	1.4
25-34 years	15.1	31.3	31.2	15.6	4.2	1.5	0.3	0.8	36.9	2859	1.7	1.2
35-49 years	26.5	34.2	24.7	10.7	2.3	0.8	0.3	0.5	47.4	3677	1.3	1.2
2. Place of Residence												
Urban	23.2	34.0	23.6	13.3	3.7	0.9	0.3	1.0	37.3	2890	1.5	1.3
Rural	18.5	30.4	30.5	14.5	3.7	1.5	0.4	0.5	62.7	4860	1.6	1.2
3. Region												
Metro Manila	29.4	34.6	20.4	11.1	2.8	0.8	0.3	0.6	13.0	1010	1.3	1.2
Other Luzon	16.2	31.0	31.5	14.2	4.3	1.5	0.5	0.8	41.4	3202	1.7	1.3
Visayas	23.9	32.1	23.3	14.9	3.4	1.4	0.4	0.6	21.6	1676	1.5	1.3
Mindanao	19.1	31.2	30.0	14.6	3.3	0.9	0.2	0.7	24.0	1862	1.6	1.2
4. Education of Wife												
0 - Grade 4	22.6	29.4	28.7	13.8	3.4	1.1	0.3	0.7	21.4	1662	1.5	1.2
Grade 5-7	20.4	33.8	26.7	12.8	4.0	1.1	0.4	0.6	37.0	2866	1.5	1.2
High School 1-4	19.3	31.8	28.0	14.8	3.4	1.6	0.3	0.8	26.8	2074	1.6	1.3
College+	18.3	29.5	29.5	16.3	3.9	1.3	0.3	0.9	14.8	1147	1.7	1.3

Note: Excludes 3093 cases with no information, 590 not currently married, 1217 currently pregnant, 591 whose sexual relations had not yet resumed since last live birth, and 450 respondents whose husband was away during the last 7 days.

section is the age at last birth. It is assumed for the purposes of this analysis that the last birth among women aged 45-49 is the final birth since succeeding births rarely occur to these older women. We, therefore, limit our analysis to this single age group. The proximate determinants to be analyzed are fecundity status and onset of menopause.

married women 45-49 years of age, the mean age at final birth was 37.6 years. Fifty-eight percent of the women reported having had their last birth below age 40 years and 42 percent had theirs at 40 years or more. It is well to observe that only 8.3 percent of the women proceeded to bear their last child at ages 45 and beyond.

Age at Final Birth. Table 16 shows that, for all ever

Age at final birth for urban women was lower

Table 14. Percentage Distribution of Currently Married Women (CMW) by Number of Times Respondent and Husband Were Apart for at Least Three Months and by Selected Characteristics: Philippines, 1983

Characteristics	Number of Times Apart						TOTAL		\bar{X}	SD
	0	1	2	3	4	5+	Percent	N		
Philippines Percent	96.3	3.0	0.5	0.1	0.1	0.0	100.0	-	0.2	1.1
N	12088	381	66	12	8	2	-	12557	-	-
1. Current Age										
15-24 years	96.3	3.2	0.4	0.1	0.0	0.0	21.6	2711	0.2	1.1
25-34 years	96.1	3.1	0.6	0.1	0.1	0.0	52.5	6594	0.2	1.2
35-49 years	96.6	2.7	0.4	0.2	0.1	0.0	25.9	3252	0.2	1.1
2. Place of Residence										
Urban	95.5	3.6	0.6	0.2	0.1	0.0	49.9	6262	0.2	1.3
Rural	97.0	2.5	0.4	0.0	0.1	0.0	50.1	6295	0.1	1.0
3. Region										
Metro Manila	92.0	7.6	0.4	0.0	0.0	0.0	6.8	849	0.4	1.6
Other Luzon	96.3	2.8	0.8	0.1	0.0	0.0	38.7	4864	0.2	1.0
Visayas	95.1	3.9	0.5	0.2	0.2	0.1	20.5	2576	0.2	1.0
Mindanao	98.0	1.8	0.2	0.0	0.0	0.0	34.0	4268	0.2	1.2
4. Education of Wife										
0 - Grade 4	97.6	2.2	0.2	0.0	0.0	0.0	19.3	2429	0.2	1.1
Grade 5-7	97.3	2.3	0.4	0.0	0.0	0.0	36.0	4524	0.2	1.1
High School 1-4	96.1	3.2	0.5	0.1	0.1	0.0	26.9	3373	0.2	1.1
College+	93.3	5.2	1.0	0.3	0.2	0.0	17.8	2231	0.3	1.2

Note: Excludes 63 cases with no information and 151 respondents with no birth in the last 5 years.

(36.5 years) than for rural women (38.2 years). In general, far fewer urbanites bore their last child at age 40 years or older than was the case for rural residents.

Similarly, Metro Manila women had their final birth at 35.8 years on the average while Visayan women had theirs at 38.7 years. Women from Mindanao and other parts of Luzon had their final births at intervening ages.

Education showed a slight curvilinear relationship with age at final birth. One might expect this relationship to be uniformly negative but perhaps the women in the lowest educational category are biologically impaired, due to poor nutritional and health status, thereby lowering their fecundity at older ages. Those with a high school or college education had their final births at ages below the national average, thus indicating some fertility regulation practices among them.

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Table 15. Percentage Distribution of Currently Married Women (CMW) 15-44 by Family Planning Method Currently Used and by Selected Characteristics: Philippines, 1983

Characteristics	Current User of Family Planning			No Family Planning Method Used	TOTAL	
	MEM	LEM Program Method	LEM Non-Program Method		Percent	N
Philippines Percent	17.7	8.9	5.5	67.9	100.0	-
N	1575	798	492	6072	-	8937
1. Current Age						
15-24 years	9.0	6.2	4.6	80.2	22.2	1981
25-34 years	20.2	10.3	5.8	63.7	44.0	3929
35-49 years	19.9	9.0	5.7	65.4	33.8	3027
2. Place of Residence						
Urban	24.5	9.8	6.1	59.6	37.3	3335
Rural	13.5	8.4	5.2	72.9	62.7	5602
3. Region						
Metro Manila	31.5	7.7	6.7	54.1	13.0	1164
Other Luzon	18.4	5.9	5.7	70.0	42.1	3764
Visayas	11.4	10.7	4.9	73.0	21.6	1932
Mindanao	14.2	13.3	5.1	67.4	23.2	2077
4. Education of Wife						
0 - Grade 4	11.3	4.5	5.0	79.2	9.4	1684
Grade 5-7	16.1	7.4	5.5	71.0	18.4	3280
High School 1-4	21.1	9.4	6.2	63.3	13.9	2481
College+	22.4	16.5	5.0	56.1	8.3	1490

Note: Excludes 87 cases with no information. "MEM stands for "more effective method", "LEM" for "less effective method".

Proximate Determinants of Age at Last Birth.

Responses elicited by questions on general fecundity status and the information on menopause are hard to interpret. Women who are clearly pre-menopausal or clearly post-menopausal probably have very little difficulty in categorizing themselves as such, but it is not quite clear how women in the

peri-menopausal period respond, especially since respondents were asked to categorize themselves according to the regularity of their menstrual period, which meant that being in the menopausal state was only one response category among many. The situation is even more difficult for self-reported fecundity status because, technically speaking, women cannot know their exact fecundity status

Table 16. Percentage Distribution, Age at Last Birth, EMW 45-49 Years of Age by Selected Characteristics: Philippines, 1983

Characteristics	AGE AT FINAL BIRTH							TOTAL		X	SD
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Percent	N		
Philippines Percent	0.4	1.7	6.4	17.9	31.6	33.7	8.3	100.0	-	-	-
N	6	23	87	242	427	455	113	-	1353	37.6	5.5
1. Place of Residence											
Urban	0.0	2.2	10.4	21.3	33.0	26.3	6.8	37.0	501	36.5	5.6
Rural	0.7	1.4	4.2	15.7	30.8	38.0	9.2	63.0	852	38.2	4.3
2. Region											
Metro Manila	0.0	2.3	17.0	17.6	30.3	26.7	6.1	12.2	165	35.8	5.9
Other Luzon	0.6	1.5	4.4	19.0	31.0	36.1	7.4	40.0	541	37.8	5.3
Visayas	0.3	0.9	3.4	12.7	34.9	37.6	10.2	23.9	324	38.7	4.9
Mindanao	0.3	2.2	8.0	21.0	29.1	29.5	9.9	23.9	323	37.1	5.8
3. Education of Wife											
0 - Grade 4	1.1	1.5	5.3	16.9	30.6	32.4	12.2	34.0	466	37.9	5.8
Grade 5-7	0.4	1.2	4.2	15.8	32.0	38.7	7.7	38.4	518	38.2	5.0
High School 1-4	0.0	2.8	8.8	21.3	32.6	30.1	4.4	18.3	248	36.5	5.6
College+	0.0	0.8	15.6	22.1	31.2	26.2	4.1	8.9	121	36.4	5.4

Note: Excludes 54 cases with no information.

without some form of detailed laboratory analysis. We, therefore, confine our observations solely to the responses to the survey question on menopausal status as of the time of the survey.

Table 17 presents the proportion of ever-married women reporting themselves to be menopausal. For the Philippines as a whole, 5.2 percent of the women were categorized as such. Of those currently aged 35-49 years, 12.0 percent were reported to be menopausal as compared to only very few women in the younger ages.

Urban-rural differentials were slight but the general pattern showed the rural respondents to be more likely to be in the menopausal state (5.6

percent vs. 4.7 percent). Mindanao women showed the highest proportion of menopausal women (6.1 percent) while those from Metro Manila showed the lowest (3.8 percent). Women in the lowest educational attainment category were most likely to be menopausal (10.4 percent), thereby indicating that the relationship with education was inverse. This finding, however, may well be attributable to the older age profile found among poorly educated women.

Conclusions

Most Filipino women can and do bear children. There is evidence that nearly all births occur within

PROXIMATE DETERMINANTS OF PHILIPPINE FERTILITY: 1983 LEVELS AND PATTERNS

Table 17. Proportion of Ever Married Women (EMW) Who Are No Longer Menstruating by Selected Characteristics: Philippines, 1983

Characteristics	Percent	N
Philippines	5.2	10722
1. Current Age		
15-24 years	0.0	2039
25-34 years	0.2	4077
35-49 years	12.0	4606
2. Place of Residence		
Urban	4.7	4061
Rural	5.6	6661
3. Region		
Metro Manila	3.8	1422
Other Luzon	5.4	4446
Visayas	4.8	2340
Mindanao	6.1	2514
4. Education of Wife		
0 - Grade 4	10.4	2235
Grade 5-7	5.4	3973
High School 1-4	2.8	2845
College+	2.1	1671

Note: Excludes 121 cases with no information.

marriage. Although the start of childbearing comes rather late--22.5 years on average--women do start to bear children quite rapidly once they are married. A significant proportion of first births were premaritally conceived (15.4 percent). Postponement of the first birth does not seem to be a common practice judging from the rapidity with which the first child was born (18.2 months on the average) and the very low level of contraceptive use before first birth (1.8 percent).

impairments. Only 6.9 percent reported themselves as not having ever been pregnant. A decreasing trend in age at menarche, was noted, a pattern which may ultimately result in a further increase in premarital conceptions.

With regard to spacing patterns, the data show that younger cohorts of women have shorter birth intervals than older cohorts, thus indicating some changes in fertility strategy.

In general, Filipino women do not have fecundity

The postpartum non-susceptibility period is very

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short. Due to the short length of breastfeeding, the biological minimum of 1.5 months in postpartum amenorrhea is extended by only 4.7 months. Return to sexual relations after a birth is fairly rapid (2.8 months on average) and does not extend the period of postpartum non-susceptibility in any substantial way.

The exposure interval or the time required to conceive is fairly long (16.6 months). Contraceptive practice or foetal loss can be considered to have extended this interval to twice the biologically expected exposure interval of 8.5 months. Of the three proximate determinants considered, contraceptive practice was more likely to be responsible for the extended period of exposure since coital frequency was fairly high, and temporary separations were very infrequent.

A majority of Filipino women are capable of continuing childbearing at fairly advanced ages, with age at last birth averaging out to 37.6 years. There are signs, however, that childbearing among Filipino women could probably end at earlier ages due to the high prevalence of contraceptive use. This is particularly true for women in the peak childbearing ages of 25-34 years. Although contraceptive use is presently confined to highly fecund women, this determinant will probably be the most potent force in bringing about an early stopping pattern.

NOTES

¹A list of "intermediate" fertility variables affecting fertility was first proposed by Davis and Blake (1956) and was later modified to suit the quantitative models developed by Bongaarts (1978), and Hobcraft and Little (1984). The modified list includes the biological and behavioral factors that determine the outcome of fertility. The biological factors include involuntary abstinence, involuntary infecundity from lactational amenorrhea, and involuntary foetal loss; the behavioral (voluntary factors) include: age at entry into sexual unions, permanent celibacy, reproductive period spent after or between unions, voluntary abstinence, coital frequency, use of contraception, voluntary infecundity (sterilization) and voluntary foetal loss (abortion).

"Potential fertility" refers to the number of children a woman is expected to bear during her reproductive lifetime assuming that she remains continuously married from age 15 to 50, does not use contraception, does not breastfeed and does not resort to abortion.

²Note that there is a cohort selectivity factor at work here since the younger respondents consist entirely of women who married at a younger age (by definition). Late marriages among other members of these same birth cohorts will eventually bring up their average age at marriage somewhat.

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