

Changes in Family-Building Patterns in Egypt and Morocco: A Comparative Analysis

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Context: Although both Egypt and Morocco experienced important declines in fertility over the past few decades, the pace of that decline was much faster in Morocco than in Egypt. Relatively little is known about the extent to which patterns of family building in both countries explain differentials in the pace of fertility decline.

Methods: The data for analysis come from the 1980 and 1979–1980 World Fertility Surveys conducted in Egypt and Morocco, respectively, and from each country's 1995 Demographic and Health Survey. These data are used to calculate life-table estimates of the cumulative proportions of women who progressed to each successive parity within five years of the previous one. The data are also used to calculate singulate mean age at marriage and the median length of birth intervals.

Results: From the late 1970s to the mid-1990s, fertility declined by 44% in Morocco and by 28% in Egypt, reflecting a drop in both the level and pace of childbearing. The cumulative proportions of women progressing to each successive parity fell by at least 25% at each parity transition after the transition between a third and fourth birth in Egypt; the pattern was more mixed in Morocco, with declines fluctuating between 11% and 27%, starting at the transition between a second and third birth. Moreover, the median length of time between births increased over the period, especially in the intervals between births at parities 2–4 in Morocco (increases of 4.2–4.7 months) and at parities 1–3 in Egypt (increases of 3.0–3.6 months). Among the factors contributing to these fertility declines was a rise over the period in the singulate mean age at marriage (by five years in Morocco and by one year in Egypt).

Conclusions: The adoption of effective family planning programs by both countries, which are increasingly enabling women to meet their desire for smaller families, may be responsible for the significant changes in the reproductive behavior of married women in Egypt and Morocco.

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Between the late 1970s and the early 1990s, the total fertility rate (TFR) declined in both Egypt and Morocco. The pace of the decline in Morocco was substantially faster than that in Egypt, however, a difference that surprised some analysts who were expecting Egypt's decline to outpace Morocco's.¹ This expectation was based on the former country's more favorable history of population efforts, its higher contraceptive prevalence rate, a longer median duration of breastfeeding and better socioeconomic conditions.

These two predominantly Muslim countries had a combined population of approximately 88 million in 1995. In that year, the estimated population of Egypt was more than double that of Morocco (62.1 million vs. 26.5 million). Both countries score in the medium range on the Human Development Index, the United Nations Development Programme's measure of social and economic development that incorporates life expectancy, educational attainment and standard of living indices.² The adjusted real gross domestic product per capita is higher in Egypt

(\$3,829) than in Morocco (\$3,477), as is the proportion of adults who are literate (51% vs. 44%). Life expectancy at birth is almost equal in the two countries (66 years in Morocco and 65 years in Egypt).

In Morocco, 52% of the population live in urban areas, compared with 45% of the Egyptian population. During recent years, urban growth has slowed somewhat in Egypt, as migration from rural areas to cities has tapered off because improvements in the transportation network have facilitated daily migration. In Morocco, on the other hand, entire rural families still move to the city to find work. Moreover, in both urban and rural areas, the population distribution is more concentrated in Egypt than in Morocco; for example, 23% of Egypt's total population lives in greater Cairo, while only 17% of Morocco's population resides in the megalopolis that stretches along the Atlantic coast from Casablanca to Kenitra.³

The Arab nation of Egypt is more ethnically and linguistically homogenous than Morocco, which has a large minority Berber population; for example, at least

one-third of the Moroccan population is Berber, and many Moroccans are bilingual in Arabic and one of the Berber languages.⁴

Both Egypt and Morocco have long recognized the negative impact of rapid population growth on socioeconomic development, and as a result adopted fertility reduction policies.⁵ However, concern with population growth started several decades earlier in Egypt than in Morocco. Population growth raised worries among Egyptian social scientists and academics as early as the mid-1930s.⁶ On the other hand, Morocco's French and Spanish authorities long viewed their colony as underpopulated, and opened the country to nearly 500,000 European immigrants in the 1930s and 1940s.⁷

The 1960s marked a turning point in population policies for both countries, with each initiating family planning programs. The approaches taken to achieve the goal of widespread contraceptive use differed, however, as a comparison of the current method mix illustrates. Egypt has relied heavily on trained medical personnel to provide family planning services; accordingly, the IUD, a method that must be inserted by a trained provider, accounts for 63% of current contraceptive use.⁸ Egyptian women are expected to travel to obtain these services, which lessens accessibility to services for many women. Despite the government's 3,700 family planning service outlets, the majority of Egyptian women use private-sector facilities.⁹

In Morocco, on the other hand, 64% of users rely on the pill. The Moroccan family planning program has a strong outreach system of home-based service delivery—known as the *Visite à Domicile de Motivation Systématique en Santé* (VDMS), or Home Visitation for Systematic Motivation in Primary Health. The number of provinces covered by the VDMS program continued to increase

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Table 1. Total percentage change in total fertility rate that occurred in Egypt and Morocco from the 1970s to the 1990s, and percentage of that change attributable to changes in the proximate determinants of fertility

Measure	Egypt	Morocco
Total change in fertility	-28.3	-44.1
% attributable to changes in		
Marriage	-9.7	-32.9
Contraception	-30.5	-36.6
Postpartum infecundability	13.7	21.0
Other proximate determinants	0.0	5.2
Interaction between determinants	-1.8	-0.8

Note: The equations used for the values in the table are as follows: Overall decline in TFR=(TFR[90s]/TFR[70s]-1)*100; percentage of change in TFR attributable to changes in marriage=(C_m[90s]/C_m[70s]-1)*100; percentage of change in TFR attributable to changes in contraceptive use=(C_c[90s]/C_c[70s]-1)*100; percentage of change in TFR attributable to changes in postpartum infecundability=(C_i[90s]/C_i[70s]-1)*100; percentage of change in TFR attributable to changes in other proximate determinants=(C_o[90s]/C_o[70s]-1)*100; and percentage of change in TFR attributable to changes in interactions between determinants=(C_l[90s]/C_l[70s]-1)*100 (where C=change, m=marriage, c=contraceptive use, i=infecundability, r=other determinants and l=interaction).

throughout the 1980s, from three in 1981 to 11 in 1983, to all 39 provinces as of 1986.¹⁰

This article attempts to examine the factors behind differences in the pace of fertility change in Morocco and Egypt. The approach is to analyze the dynamics of family building in both countries, by disaggregating this process into a series of stages. These begin with marriage and proceed to the first-, second- and successively higher-order births.

Methodology

Data Sources and Quality

This comparative study of Egyptian and Moroccan fertility decline is based on two data sets—data collected in the World Fertility Surveys (WFS) program and data collected through the third round of the Demographic and Health Surveys (DHS) program.

The WFS survey for Egypt (the 1980 Egyptian Fertility Survey, or EFS-80) and the WFS for Morocco (the 1979–1980 Enquête Nationale sur la Fécondité et la Planification Familiale, or ENFPF-79/80) covered 8,788 and 4,101 ever-married women aged 15–49, respectively. For the 1995 Egyptian Demographic and Health Survey

(EDHS-95), 14,779 ever-married women of reproductive age were interviewed. The Morocco DHS (the 1995 Enquête de Panel sur la Population et la Santé, or EPPS-95) was a panel survey based on a subsample of 3,168 ever-married women who were originally interviewed in the 1992 DHS (the Enquête Nationale sur la Population et la Santé, or ENPS-II), plus 1,585 other women who were substituted for those who had moved out of the cluster sample by the time the 1995 interview was conducted. These “replacement” women were older and less educated than the women who were included in the original sample.¹¹ Thus, the EPPS-95 sample may not be nationally representative, and fertility estimates derived from these data should be interpreted with caution, since they might be biased upward.

All four surveys collected detailed birth histories and information on the demographic and socioeconomic characteristics of both the respondents and their households. The WFS and DHS surveys used similar instruments, which allowed comparable variables to be constructed.

Retrospective surveys such as those used in this analysis represent the best available source for studying women's reproductive lives. However, recall errors are a common feature of this type of survey, although the extent of recall bias differs among surveys. Since the propensity to forget is stronger for events that occurred in the more distant past, this analysis is limited to births that occurred fewer than seven years before each survey. Moreover, because of limited exposure time, birth intervals that started within two years before each survey are excluded. Thus, the analysis covers all births between 1973–1974 and 1977–1978 for the WFS data, and all births occurring between 1989 and 1993 for the DHS-III data.

Analytic Methods

This article begins its examination of the respective fertility decline in each country by considering the extent to which the proximate determinants of fertility—primarily marriage, contraception and postpartum infecundability¹²—contributed to that decline.* Trends in TFRs over time are decomposed according to these factors.

Changes in nuptiality are then examined more closely by a consideration of trends in Egypt and Morocco in the singulate mean age at marriage,¹³ an estimate of the mean number of years lived by a cohort of women before their first marriage. As such, this period measure approximates the nuptiality experience of a birth cohort.

However, during periods of rapid change in nuptiality (e.g., a rise in the age at first marriage), the measure may bias upward the estimate of the average number of years spent never-married.

Finally, parity progression analyses are used to identify whether changes occurred in the family-building process and the extent of those changes. Life-table methods are used to calculate the probability of progressing from one parity to the next within five years; this measure solves the problem of censoring that is commonly encountered when cross-sectional data are used to study demographic events.¹⁴ Further, by incorporating the exposure time contributed by both open and closed birth intervals, life-table techniques avoid the bias toward shorter durations that results from examining closed intervals only.¹⁵

Separate life tables are calculated for each birth transition (i.e., marriage to first birth, first to second birth, second to third birth, and so on). Two summary measures of the level and pace of childbearing are estimated—the cumulative proportion of women of a given parity who progress to the next within five years, and the median length of the interval between successive births among women who will give birth within five years (i.e., the duration at which 50% of these women have done so).

Results

Trends in Fertility and Marriage

According to the earlier surveys conducted in both countries, the estimated TFRs for the period 1976–1980 were 5.3 lifetime births per woman in Egypt and 5.9 in Morocco. By 1991–1995, the later surveys indicate a decline of 44% in Morocco, to 3.3 births, and a decline of 28% in Egypt, to 3.8 births, (Table 1).

These considerable drops in fertility rates were produced by changes in the proximate determinants of fertility: The Bongaarts-Potter model, which quantifies the relative contribution of the proximate determinants to overall fertility decline, indicates that changes in both contraceptive use (i.e., an increase in prevalence) and in marriage (i.e., a decrease in the proportion married) were important contributors to overall fertility decline in Morocco, but that change in contraceptive practice was the primary determinant of the drop in fertility in Egypt (Table 1).

The importance of marriage in influencing fertility levels in Egypt and Morocco is related to the fact that in Muslim society, marriage represents the only recognized institution within which childbearing is permitted. In both countries,

*Induced abortion, the fourth major proximate determinant of fertility, is illegal in both countries, except in cases where continuing the pregnancy endangers the life of the mother. While this does not mean that abortion is absent in Egypt and Morocco, the lack of reliable data on its incidence has led researchers working with data from Arab countries to drop abortion from analyses of the proximate determinants of fertility.

Table 2. Cumulative proportions (estimated using life-table techniques) of ever-married women of reproductive age who progress from one parity to the next within five years, by country and year of survey, and percentage change in that probability between surveys

Country and survey date	Parity							
	M*-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8
Egypt								
EFS-80	92.2	94.9	91.9	88.8	84.7	81.6	80.5	78.8
EDHS-95	93.7	93.7	79.7	64.7	62.5	61.4	59.7	56.4
% change	1.6	-1.2	-13.2	-27.1	-26.2	-24.7	-25.8	-28.4
Morocco								
ENFPF-79/80	94.9	93.3	95.5	91.6	89.8	85.4	85.6	84.3
EPPS-95	90.2	90.1	72.5	76.2	69.4	76.3	73.4	61.5
% change	-4.9	-3.4	-24.0	-16.8	-22.7	-10.6	-14.2	-27.0

*M refers to marriage (parity 0). Note: The parity progression data cover the following periods for each survey: 1974-1978 for the EFS-80 and 1989-1993 for the EDHS-95; and 1973-1974 through 1977-1978 for the ENFPF-79/80, and 1989-1993 for the EPPS-95.

marriage and childbearing are viewed as interrelated social and demographic processes, and as sequential phases in the life cycle of women. Thus, any increase in age at first marriage constitutes an important demographic event.

In 1980, the singulate mean age at marriage among Egyptian and Moroccan women was identical—21.3 years. By 1995, however, the measure had increased much more among Moroccan women (an increase of five years, to 26.3), than among Egyptian women (an increase of just one year, to 22.3).

In addition to Moroccan women's greater likelihood of postponing marriage, the proportion of women of reproductive age who were married was also considerably lower in Morocco than in Egypt (52% vs. 65%). Among the many factors that might explain such changes in age at marriage are gains in female education and economic pressures that hinder accumulating sufficient money to marry.¹⁶

Parity Progressions

Having documented the impact of changes in nuptiality on fertility decline in both countries, we now investigate whether the changes in fertility involved changes in the family-building process. Table 2 presents the cumulative proportions, derived from life tables, of ever-married Egyptian and Moroccan women at each parity who progressed to the next within five years. In the period of childbearing covered by the earlier surveys, 95% of ever-married Moroccan women and 92% of comparable Egyptian women had their first birth within five years of marrying. However, by the later period, this probability had increased slightly in Egypt (to 94%), while it declined in Morocco (to 90%). The trend among Moroccan women who remained childless for

five years after marriage may be attributable to their increased contraceptive practice, which went from 3% of women who had never given birth in 1980 to 13% in 1995.¹⁷

The data on progressions from the first to succeeding births suggest that the proportion of Egyptian women who went on to have a second birth within five years of a first declined by only 1% over the study period (from 95% in 1974-1978 to 94% in 1989-1993). The

proportions of Egyptian women who progressed from a second birth to a third within five years declined by 13%, and the proportion of Egyptian women with three children who went on to have a fourth fell even more (by 27% from the late 1970s to the mid-1990s). The earlier Egyptian data further show that the probability of bearing another child within five years of a preceding one did not drop below 80% until a woman had already had seven children; by 1989-1993, the probability of having another child dropped below 80% much sooner, at parity three.

These marked changes in the pattern of childbearing in Egypt indicate that increasingly higher proportions of younger women stopped childbearing earlier in their reproductive years. At the same time, high-parity women (who are likely to be older) were also limiting childbearing.

In Morocco, the data indicate that from the late 1970s to the early 1990s, the probabilities of progressing from marriage to a first birth and from a first to a second birth both declined slightly (by 5% and by

3%, respectively). However, the likelihood of progressing from a second to a third birth within five years declined considerably over the period (by 24%). Among Moroccan women who had already had three children, the probability that they would go on to have more children within five years declined by values ranging from 11% (for the probability of progressing from a fifth to a sixth birth) to 27% (for the probability of progressing from a seventh to an eighth birth).

Thus, the proportion of ever-married women who were limiting childbearing in both countries increased substantially from the late 1970s to the early 1990s. This increase occurred among both low-parity women (i.e., those who had had at least three births in Egypt, and those who had had at least two in Morocco) and high-parity women. At most parity levels, declines in the pro-

Figure 1. Cumulative proportions (estimated using life-table techniques) of married women of reproductive age who progress from one parity to the next within five years, by survey, Egypt and Morocco

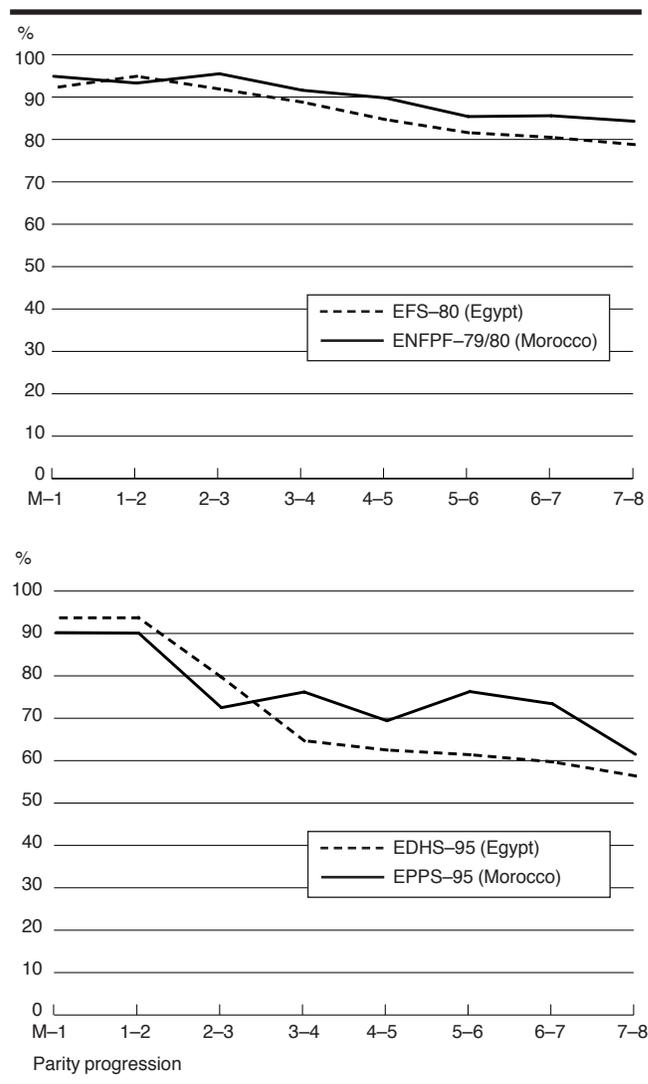


Table 3. Median birth interval (in months) among ever-married women who gave birth within five years of a previous birth (or within five years of marriage), and change in median birth interval length (in months), by parity, according to country and survey date

Country and survey date	Parity							
	M*-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8
Egypt								
EFS-80	16.8	23.9	27.1	26.9	27.8	28.2	28.3	28.5
EDHS-95	13.9	27.5	30.6	29.9	29.2	30.9	29.7	31.2
Change (in mos.)	-2.9	3.6	3.5	3.0	1.4	2.7	1.4	2.7
Morocco								
ENFPF-79/80	18.9	23.4	25.6	26.6	27.0	27.5	27.0	28.1
EPPS-95	16.1	26.2	29.9	31.3	31.2	30.3	28.7	29.9
Change (in mos.)	-2.8	2.8	4.3	4.7	4.2	2.8	1.7	1.8

*"M" refers to marriage (parity 0).

portions progressing to the next parity were steeper in Egypt than in Morocco.

Moreover, when we compare the patterns of parity progressions using data from the earlier surveys (upper panel in Figure 1, page 75), the line depicting the proportions of Egyptian women who progress to parities above two falls below that of Moroccan women. (In other words, in the late 1970s, fewer Egyptian than Moroccan women went on to have a fifth child within five years of having had a fourth child, for example.) By the early 1990s (lower panel of Figure 1), however, the gap between the two lines widens after parity two, and is especially great after a woman has had four children.

The later surveys indicate that at parity three or lower, Moroccan women are less likely than Egyptian women to go on to have another child. Thus, among women who have relatively small families (those at parities below three), Moroccans are slightly more likely than Egyptians to limit childbearing. The reverse situation is true among women who have larger families, however; Egyptian women at parity four or higher are more likely than similar Moroccan women to stop childbearing.

Tempo of Childbearing

Data on how soon after marrying women begin to form their families show that the median interval between marriage and a first birth fell by nearly three months in both countries over the study period, from 16.8 months in the mid-1970s to 13.9 months in the mid-1990s among Egyptian women, and from 18.9 months to 16.1 months, respectively, among Moroccan women (Table 3). This decline in the amount of time separating marriage and a first birth in both countries may be related to an increase in the age at first marriage, as women who marry later may want to begin childbear-

ing sooner, to make up for lost time. Also, the increased use of family planning methods has given women more power to regulate their reproduction—that is, they feel able to start childbearing sooner after marriage (which now occurs at relatively older ages), because they can space succeeding births when they want to, or they can stop childbearing altogether after reaching their desired number of children.

In the period covered by the earlier surveys, subsequent births after the first occurred relatively quickly in both countries, with the tempo being slightly faster in Morocco (intervals ranging from 23.4 months to 28.1 months) than in Egypt (intervals ranging from 23.9 months to 28.5).

By the early 1990s, however, the tempo of childbearing had slowed in both countries, as the intervals between births (as opposed to that between marriage and a first birth) lengthened at each parity level. Intervals between successive births ranged from 27.5 to 31.2 months in Egypt and from 26.2 months to 31.3 months in Morocco.

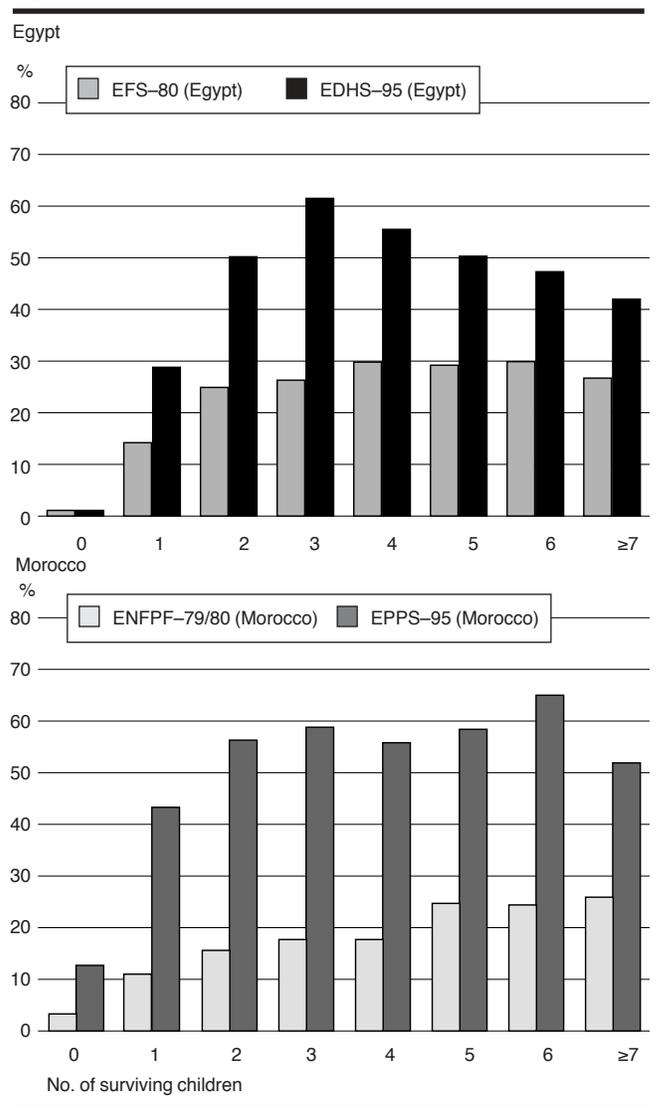
In both Egypt and Morocco, birth intervals at every parity (except the interval between marriage and a first birth) were consistently longer in the early 1990s than in the late 1970s. In Egypt, the greatest increase in the amount of time between births was in the interval separating first and second births (an increase of 3.6 months from the mid-1970s to the early 1990s) and in the intervals separating second and third births (an increase of 3.5 months). In Morocco, on the other hand, the birth

interval that lengthened the most was that separating third and fourth births (an increase of 4.7 months). These longer birth intervals over time imply increased use of spacing methods; the specific parity at which these intervals lengthened most suggests that Egyptian women began to practice birthspacing sooner (i.e., when they had fewer children) than did Moroccan women.

The Role of Contraception

The apparent decline in the cumulative proportions of women progressing to each successive parity within a five-year period, and the rise in the median length of intervals between births, resulted from important increases in contraceptive prevalence in both countries. In Egypt, the proportion of married women who were practicing contraception at the time of the

Figure 2. Proportion of married women who were currently practicing family planning, by number of surviving children, according to date of survey, Egypt and Morocco



survey doubled between 1980 and 1995 (from 24% to 48%), and the increase was even greater in Morocco (from 19% in 1979–1980 to 50% in 1995). A decline in the desire for large families among married women probably motivated the increase in prevalence: In Egypt, the mean ideal family size declined by 32% over the study period (from 4.1 children to 2.8), and this measure also declined, by 26%, in Morocco (from 5.0 children to 3.7).

The proportion of married women who do not want an additional child is a further important indicator of family size preferences. The earlier survey data indicate that the “effective” family size at which at least 50% of women wished to cease childbearing was at three surviving children in Egypt and at five in Morocco; by the time the later surveys were carried out, the median parity at which women wanted to stop having children had fallen to two children in Egypt and to three in Morocco.¹⁸

The increased desire for smaller families, which can be achieved through extending the spacing between children as well as by limiting their number, could lead more married women at each given parity to adopt family planning. In fact, contraceptive use increased markedly in both countries over the period between surveys among women of all parities (Figure 2). The gains in prevalence were especially great among Moroccan women, since their levels of use were at a much lower starting point than Egyptian, but then rose to levels that exceeded those among Egyptian women at nearly every parity.

Discussion and Conclusions

This analysis has shown how delays in age at marriage and changes in patterns of childbearing among ever-married women have led to important declines in fertility in Morocco and Egypt from the mid-1970s to the early 1990s. Both the level and pace of childbearing changed considerably in each country, particularly after parity two in Morocco and after parity three in Egypt; these changes reflect pervasive changes in reproductive behavior in both countries. Notably, changes occurred among both low- and high-parity women.

Clearly, the increased adoption of family planning methods over the period between surveys made these changes in reproductive behavior possible. The proportion of

married women practicing family planning doubled in Egypt and increased even more in Morocco over the period.

However, while consistent increases in contraceptive use continued throughout the period in Morocco, contraceptive practice seems to have plateaued in the early 1990s in Egypt. In 1991, for example, that country’s contraceptive prevalence stood at 47%, and had reached only 48% by 1995.* This stagnation in prevalence signals the need to examine the adequacy of Egypt’s current family planning delivery system, which is heavily oriented toward delivering services in a highly medicalized environment. It may need to be supplemented by a strong outreach program. The Moroccan system, which has a long history of outreach, could serve as an instructive example.

Despite considerable progress, both countries’ family planning programs continue to face many challenges, especially that of finding ways to increase women’s access to the means to fulfil their reproductive desires. Egyptian and Moroccan women currently have roughly one child more than they say they want to have: The wanted TFR is 2.6 births in Egypt and 2.2 births in Morocco, while the observed TFRs are 3.8 and 3.3 births, respectively.¹⁹

Another challenge facing programs in both countries is the need to narrow, and eventually eliminate, the persistent wide gaps in prevalence by area of residence and education. Women who live in rural areas and those who have had no schooling have especially low rates of use, despite the fact that these two subgroups represent a sizable proportion of the population in each country. Overcoming these gaps will ensure expansion of prevalence and lead to lower future fertility.

Finally, rates of contraceptive discontinuation among Egyptian appear to be unacceptably high. For example, a recent Egyptian study estimated that one-half of married women practicing family planning stopped use of their method within two years, with the majority doing so because they had experienced side effects (40% of those who discontinued) or because their method had failed (20% of those who stopped).²⁰ This pattern of discontinuation requires putting more effort into screening and counseling prospective users on what would be the most appropriate method for them. Also, the range of contraceptive choices available to women needs to be expanded, so women are offered the opportunity to switch between methods rather than discontinue use entirely if side effects arise.

References

1. Courbage Y, Fertility transition in the Mashriq and the Maghrib: education, emigration, and the diffusion of ideas, in Obermeyer CM, ed., *Family, Gender and Population in the Middle East: Policies in Context*, Cairo: American University in Cairo (AUC) Press, 1995; and Courbage Y, Demographic change in the Arab World: the impact of migration, education and taxes in Egypt and Morocco, *Middle-East Report*, 1994, 24(5):19–22.
2. United Nations Development Programme, *Human Development Report 1998*, New York: Oxford University Press, 1998.
3. Ibid.
4. *Morocco: Country Profile 1993/94*, London: The Economist Intelligence Unit Limited, 1994.
5. Ayad M, Sayed H and Way A, Policy implications of the DHS findings for Egypt, Morocco and Tunisia, in: *Proceedings of the Demographic and Health Surveys World Conference*, Vol. III, Columbia, MD, USA: Institute for Resource Development (IRD)/Macro International, 1991, pp. 2037–2051.
6. Ibrahim S, State, women, and civil society: an evaluation of Egypt’s population policy, in: Obermeyer CM, ed., 1995, op. cit. (see reference 1).
7. Courbage Y, 1994, op. cit. (see reference 1).
8. El-Zanaty F et al., *Egypt Demographic and Health Survey, 1995*, Cairo: National Population Council; and Calverton, MD, USA: Macro International, 1996.
9. Amin S and Lloyd C, *Women’s Lives and Rapid Fertility Decline: Some Lessons from Bangladesh and Egypt*, Policy Research Division Working Papers, New York: Population Council, 1998, No. 117.
10. Ayad M, Sayed H and Way A, 1991, op. cit. (see reference 5).
11. Azelmat M, Ayad M and Housni E-A, *Enquête de Panel sur la Population et la Santé (EPPS) 1995*, Rabat, Morocco: Ministère de la Santé Publique; and Calverton, MD, USA: Macro International, 1996.
12. Bongaarts J, A framework for analyzing the proximate determinants of fertility, *Population and Development Review*, 1978, 4(1):105–32; and Bongaarts J and Potter RG, *Fertility, Biology, and Behavior: An Analysis of the Proximate Determinants*, New York: Academic Press, 1983.
13. Hajnal J, Age at marriage and proportions marrying, *Population Studies*, 1953, 7(2):111–136.
14. Nambodiri K and Suchindran C, *Life Table Techniques and Their Applications*, New York: Academic Press, 1987; and Rodriguez G et al., A comparative analysis of determinants of birth intervals, *World Fertility Surveys Comparative Studies*, Voorburg, The Netherlands: International Statistical Institute, 1984, No. 30.
15. Trussell J et al., Determinants of birth-interval length in the Philippines, Malaysia, and Indonesia: a hazard model analysis, *Demography*, 1985, 22(2):145–168; and Njogu W and Castro Martin T, Fertility decline in Kenya: the role of timing and spacing of births, in: *Proceedings of the Demographic and Health Surveys World Conference*, Vol. III, Columbia, MD, USA: IRD/Macro International, 1991, pp. 1883–1901.
16. Westoff C, *Age at Marriage, Age at First Birth, and Fertility in Africa*, World Bank Technical Paper, Washington, DC: World Bank, 1992, No. 169.
17. Ministère de la Santé Publique, *Enquête Nationale sur la Fécondité et la Planification Familiale au Maroc, 1979–1980*, Rapport National, Huddersfield, England: Enquête Mondiale sur la Fécondité, 1984; and Azelmat M, Ayad M and Housni E-A, 1996, op. cit. (see reference 11).

*Preliminary results of the 1998 Egyptian Demographic and Health Survey indicate a contraceptive prevalence rate of 52%.

18. Farid S, A review of the fertility situation in the Arab countries of Western Asia and Northern Africa, in: *Fertility Behavior in the Context of Development: Evidence from the World Fertility Survey*, New York: United Nations, 1987, No. 100, pp. 340–354.

19. El-Zanaty F et al., 1996, op. cit. (see reference 8); and Azelmat M, Ayad M and Housni E-A, 1996, op. cit. (see reference 11).

20. El-Tawila S, Contraceptive use dynamics in Egypt, in: Mahran M et al., eds., *Perspectives on Fertility and Family Planning in Egypt: Results of Further Analysis of the 1992 Egypt Demographic and Health Survey*, Cairo: National Population Council, 1995.

Resumen

Contexto: Si bien Egipto y Marruecos han experimentado importantes reducciones de fecundidad durante las últimas décadas, el ritmo de esta reducción fue mucho más acelerado en Marruecos que en Egipto. Se conoce relativamente poco acerca de hasta qué punto los patrones de constitución de la familia en ambos países expliquen las diferencias de ritmo de reducción de la fecundidad.

Métodos: Los datos utilizados en el análisis se obtuvieron de las Encuestas de Fecundidad Mundial de 1980 y de 1979–1980 realizadas en Egipto y Marruecos, respectivamente, y de la Encuesta Demográfica y de Salud de 1995 de cada uno de estos países. Se utilizaron estos datos para calcular las tablas de vida del porcentaje cumulativo de mujeres que pasan a cada parto sucesivo dentro de un período de cinco años después del parto anterior. Se los utilizaron también para calcular el número cumulativo de años que viven las mujeres solteras sin casarse, y la duración mediana del intervalo intergenésico.

Resultados: Desde fines de los años 70 hasta mediados de los años 90, la fecundidad disminuyó en Marruecos en un 44% y en un 28%

en Egipto, reflejando una reducción del número y el ritmo de los nacimientos en ambos países. En Egipto, el porcentaje cumulativo de mujeres que pasaron a la próxima paridad disminuyó en por lo menos un 25% en cada transición de paridad después de la entre el tercer y cuarto parto; esta tendencia fue un poco más mixta en Marruecos, donde las reducciones fluctuaron entre un 11% y un 27%, comenzando en la transición entre el segundo y el tercer parto. Además, el intervalo intergenésico mediano aumentó durante el período, especialmente la duración de intervalos entre los nacimientos a las paridades 2 a 4 en Marruecos (aumentos de 4,2–4,7 meses) y a las paridades 1–3 en Egipto (aumentos de 3,0–3,6 meses). Entre los factores que contribuyeron a la disminución de la fecundidad se encontró el aumento registrado durante ese período de la edad promedio al contraer matrimonio (aumentos de cinco años en Marruecos y de un año en Egipto).

Conclusiones: La adopción de programas de planificación familiar eficaces en ambos países, lo cual está facilitando a las mujeres a satisfacer sus deseos de tener familias menos numerosas, puede ser la causa por la cual se han registrado cambios significativos en la conducta reproductiva de las mujeres casadas de Egipto y Marruecos.

Résumé

Contexte: Malgré l'important déclin de la fécondité enregistré en Egypte et au Maroc ces dernières décennies, ce déclin est survenu à un rythme beaucoup plus rapide au Maroc. L'on dispose de relativement peu de données sur la mesure dans laquelle les modèles familiaux des deux pays expliquent la différence observée dans le rythme du déclin.

Méthodes: Les données analysées proviennent des Enquêtes mondiales de fécondité menées en 1980 et en 1979–1980 en Egypte et au Maroc, respectivement, et de l'Enquête démographique et de santé menée dans chaque pays en 1995. Ces données servent au calcul d'estimations de table de survie des proportions cumulatives de femmes passées à chaque parité successive dans un intervalle de cinq ans à compter de la précédente, de nombre des années moyen que les femmes sont célibataires et de l'intervalle génésique médian.

Résultats: Entre la fin des années 1970 et le milieu des années 1990, la fécondité a diminué de 44% au Maroc et de 28% en Egypte, reflétant une baisse du niveau et du rythme de la procréation. Les proportions cumulatives des femmes passées à chaque parité successive présentent une baisse d'au moins 25% à chaque transition après celle de la troisième à la quatrième naissance en Egypte. La tendance est moins nette au Maroc, où le déclin fluctue entre 11% et 27% à partir de la transition entre la deuxième et la troisième naissance. De plus, l'intervalle médian entre les naissances s'est accru durant la période à l'étude, surtout au niveau des parités 2 à 4 au Maroc (plus 4,2 à 4,7 mois) et 1 à 3 en Egypte (plus 3,0 à 3,6 mois). Parmi les facteurs ayant contribué au déclin de fécondité observé, on notera la hausse, durant la période, de nombre des années moyen que les femmes sont célibataires (de cinq ans au Maroc et d'un an en Egypte).

Conclusions: L'adoption de programmes de planning familial efficaces dans les deux pays, en aidant de plus en plus les femmes à satisfaire leur désir de familles moins nombreuses, peut expliquer l'évolution significative du comportement procréateur des femmes mariées en Egypte et au Maroc.

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