The Arab World's "Quiet" Reproductive Revolution

Marcia C. Inhorn

In the seven years since the 2011 Arab uprisings, the challenges facing the Arab world have been profound, including various forms of war, displacement, political and economic instability, social upheaval, and societal rupture. Millions of Arab men, women, and children have been driven from their homes by conflict. Of the 10 most serious conflicts currently facing the world, seven of them are occurring in and around Muslim-majority countries, with the most devastating involving the Arab nation of Syria. However, other Arab nations are also at war, with Libya and Yemen suffering the disastrous consequences of 2011's failed revolutions.

Amid this bleak and violent moment in Arab history, ordinary people are enacting other, more positive social transformations that receive little media coverage. One of these is the Arab world's "quiet" reproductive revolution. Indeed, the Arab world is in the midst of one of the most dramatic fertility declines in world history, one that has occurred without major economic development or strong family planning programs. Through changing reproductive norms and behaviors, Arab couples have brought down the region's fertility levels from among the highest to among the lowest in the world.

To Western observers, this massive fertility decline may seem counterintuitive. The Arab world is often portrayed in popular media, academic circles, and policy reports as a region of high fertility, attributable to men's patriarchal control over women's bodies and religiously fueled pronatalism.³ However, this portrayal of male oppression as the source of hyper-fertility is both outdated

MARCIA C. INHORN is the William K. Lanman, Jr. Professor of Anthropology and International Affairs at Yale University. A medical anthropologist focusing on gender, religion, and health in the Middle East and Arab America, Inhorn is the author of six books on the subject, including *The New Arab Man: Emergent Masculinities, Technologies, and Islam in the Middle East* (Princeton University Press, 2012), *Cosmopolitan Conceptions: IVF Sojourns in Global Dubai* (Duke University Press, 2015), and *America's Arab Refugees: Vulnerability and Health on the Margins* (Stanford University Press, 2018).

Copyright © 2018 by the Brown Journal of World Affairs

and inaccurate. Not only are Arab men supporting their wives in reproductive decision-making, but the fertility declines recorded in the Arab world over the past 30 years (1988–2018) have also been profound, even revolutionary.⁴ According to the United Nations, seven of the world's top 15 fertility declines have occurred in Arab countries.⁵ This Arab demographic transition is part of a much wider Muslim fertility decline, which has been described as a "quiet revolution... hiding in plain sight."⁶

How did this revolution happen? The introduction of family planning programs and contraceptives in the Arab world is an important part of this story. However, increased contraceptive usage is not the key factor. Instead, attitudinal change—or the desire for fewer children on the part of both men and women—has led to what anthropologists have called "the new Arab family," a small family that is the tangible proof of the Arab fertility decline.⁷

FERTILITY AND FAMILY PLANNING IN THE ARAB WORLD

Concerns over fertility in the Arab world date back to the post—World War II period. A growing rhetoric of "overpopulation" in the "underdeveloped" world led Western population analysts to recommend government interventions into fertility.⁸ It was argued that, with the implementation of national family planning programs, governments in the "Third World" could effectively curb their high rates of population growth, thereby mitigating "resource shortages, economic catastrophe, and social and political instability." In this post-war period, the International Planned Parenthood Federation (IPPF), the Population Council, the Ford Foundation, and the United Nations Fund for Population Activities (UNFPA)—later renamed the United Nations Population Fund—were formed to initiate population control activities.

In the Arab world, the initial focus was on Egypt, a purportedly "overpopulated" country with a projected population doubling rate that was deemed alarming. In particular, Egypt was said to suffer from a problem of "geography versus demography"—namely, a rapidly expanding population that would eventually outstrip its arable, habitable land mass along the Nile. Although *prima facie* evidence of this Egyptian "population explosion" was questionable, the Egyptian government was nonetheless inclined to accept Western advice and UNFPA support for a state-sponsored population control program, becoming the first Middle Eastern Muslim country to do so. II

Egypt's early experiments in family planning—which promoted "scientific methods" of contraception, including diaphragms, foam tablets, contraceptive

jelly, douches, and eventually birth control pills—were soon replicated in several other Arab countries. ¹² The North African nations of Tunisia and Morocco were the first to follow the Egyptian lead, establishing national family planning programs in 1964 and 1966, respectively. ¹³ By 1980, nine other Arab nations had instituted either direct government family planning programs (i.e., Algeria and the two halves of a divided Yemen), or had agreed to establish "voluntary" family planning associations supported by IPPF (i.e., Bahrain, Iraq, Jordan, Lebanon, Sudan, and Syria). In the Arab countries with IPPF-sponsored programs, contraceptive information and guidance were provided freely, along with free or low-cost contraceptives to couples who could not otherwise afford them.

Nonetheless, by the mid-1980s, less than half of all Arab nations had instituted family planning programs. Two Arab nations, Iraq and Saudi Arabia, still restricted access to contraception, while the majority of countries refused to endorse family planning on a national level. Thus, a 1980s regional evaluation of Arab family planning programs undertaken by the Population Council deemed family planning program efforts to be "weak," "very weak," or "nonexistent" in most Arab countries, with the exception of Tunisia, which received a "moderate" rating. ¹⁴ In fact, it was noted that several Arab countries, especially those in the Gulf, were opposed to family planning because their governments hoped to increase population growth rates as a solution to perceived under-population (and resultant over-reliance on guest workers) in their rapidly modernizing countries.

Table 1—"Fertility Levels in Arab Countries: The 1980s" (see Appendix)—provides an overall picture of fertility rates and fertility policies in eighteen Arab nations during this period. ¹⁵ As shown in Table 1, total fertility rates (TFRs), or the average number of children born to a woman over her lifetime, were quite high across the region as of 1988, with several Arab nations manifesting TFRs of more than seven children per woman. During this period, population growth was occurring in every single Arab country except war-torn Lebanon, which was still considered exceptional in population circles because of its so-called "replacement fertility" level of only 2.0 children per Lebanese woman. ¹⁶

THE RISE OF CONTRACEPTION

Given the high total fertility rates shown in Table 1, it should come as no surprise that contraceptive prevalence rates across the Arab world at the time remained very low. In a survey of 11 Arab countries conducted in 1982, the mean contraceptive prevalence rate was only 19 percent.¹⁷ Egypt, which had put the most effort into a direct government program, had only achieved a contraceptive

prevalence rate of 30 percent. Even in Lebanon, with its low total fertility rate, slightly more than half of Lebanese couples reported using contraceptives. Several Arab countries lacked any form of contraceptive prevalence data, or they reported rates that were very low, ranging from 1 to 10 percent (e.g., Algeria and Syria).

However, female contraceptive prevalence rates began to increase over time in several Arab countries, even in the absence of explicit family planning information or country-wide policies. ¹⁸ In Jordan, for example—a country with no specific fertility policy (to either raise or lower population growth) and with-

Female contraceptive prevalence rates began to increase over time in several Arab countries, even in the absence of explicit family planning information or country-wide policies.

out any direct government family planning program—the contraceptive prevalence rate rose from an average of 40 percent in 1990 to 60 percent in 2009. By then, 82 percent of ever-

married Jordanian women aged 15 to 49 had used contraception at some point in their reproductive lives, with the average Jordanian woman able to describe nine different contraceptive methods.¹⁹

It is fair to say that by the beginning of the new millennium, knowledge of contraceptive methods among Arab women had become widespread. Surveys showed that between 90 and 98 percent of married Arab women reported knowledge of at least one modern method of contraception. However, the actual use of contraception remained much lower. In fact, surveys also showed that contraceptive use among married women aged 15–49 exceeded 40 percent in nine Arab nations, but was only 20 percent in nine others. By 2000, a female "contraceptive revolution" characterized by rapid adoption of a variety of methods was taking place in only four Arab countries—the three North African Arab nations of Algeria, Morocco, and Tunisia, as well as Lebanon—which, by this time, had emerged from 25 years of civil war and occupation.

In the absence of widespread female contraception, how did the Arab world achieve the dramatic fertility declines that began in the 1980s? Part of that answer lies in men's and women's changing notions of the "ideal" Arab family—namely, a small nuclear family—and hence the family planning support offered by Arab husbands to their wives, particularly in the form of male-controlled methods. Studies conducted in a variety of Arab countries demonstrated men's strong advocacy of male-controlled birth control—not with condoms, which were shown to be negatively perceived in a variety of Arab countries, but rather through the

time-tested method of 'azl (withdrawal, or coitus interruptus).²⁴ 'Azl has played an important role in the history of Islamic societies.²⁵ Not only does 'azl receive support within the Islamic scriptures as a viable means of male-enacted contraception, but Arab men also tend to prefer withdrawal as a "safe" method of family planning that is more "natural" than most female-controlled methods.²⁶

THE NEW ARAB FAMILY, THE NEW ARAB MAN

Between the contraceptive efforts of both Arab men and women, Arab couples have brought the new Arab family into being—a small nuclear family with two to three children on average.²⁷ A variety of anthropological studies conducted in the Arab world since the 1980s have explored the emerging norms and practices supporting this smaller family size.²⁸ As these studies show, economic considerations, changing household configurations, and increased contraceptive acceptance have all played major roles in the emergence of the new small Arab family. But so has ideational change, or the belief that having fewer children to cherish, love, and support is beneficial to the married couple on the financial and affective levels and psychologically beneficial to the children themselves.

For example, in my own research conducted in the late 1980s, I discovered strong desires on the part of poor urban women living in Alexandria, Egypt, to reside in nuclear family households with their husbands and children. ²⁹ Nuclear households allowed poor women some measure of marital privacy as well as a space to raise their children free from family interference (especially from mothers-in-law). But, given small apartment spaces and fragile household economies, women in my study reported that they and their husbands wanted no more than two children. They used the Arabic term *usra* to describe this small nuclear family, differentiating it from the 'a'ila, or larger extended family. Already in the late 1980s, the usra had become the well-entrenched norm among the urban Egyptian working poor who were the focus of my study, a reflection in part of the powerful family planning discourses that had circulated through the country by then.

Middle-class couples, too, wanted small nuclear families, as shown in anthropologist Rhoda Kanaaneh's path-breaking work with Palestinian couples.³⁰ In her study in the Galilee, many of Kanaaneh's Palestinian interlocutors were convinced of the merits of having children—not only to build a family, but also to increase the size and strength of the Palestinian nation as a whole. However, among the growing Palestinian middle class, small "high-quality" families were the norm. As these middle-class Palestinian couples explained, they were limiting

their fertility through contraception in order to invest more time, energy, and money into the education and success of each individual child.

Similarly, in my 2003 study in neighboring Lebanon, I found that Lebanese men of all social classes and religious sects were eager to become fathers. Tatherhood, in their view, was one of life's most important joys and masculine ambitions. Yet, with very few exceptions, Lebanese men were adamant that having more than three children was unfeasible and unwise in the current post-war political and economic climate. "Two boys and one girl" was often stated as men's ideal family composition. Yet, despite traditions of son preference within the region's patrilineal kinship system, some men in my study were insistent that girls were superior to boys in terms of their affection and lifelong commitment to their parents. Thus, they intended to stop at two (or three), even if all of their children were daughters.

In *The New Arab Man*—the book that I wrote following this research—I coined the term "emergent masculinities" to capture all that is new and transformative in Arab men's lives in the twenty-first century.³² Emergent masculinities encompass change over the life course; generational change as male youth grow into manhood; and historical change involving men in transformative social processes. These emergent masculinities may be most apparent in the intimate domains of marriage and family life. As I showed in my research, Arab men are increasingly eschewing arranged marriages to form romantically committed, companionate marriages with women they love. Marriage is no longer just about having children—children who were once believed to "tie" a husband to his wife within an arranged marriage system.³³ Today, Arab men still want children within marriage, but they want fewer children in order to provide adequate financial support, a good education, and paternal love to both their sons and daughters. Furthermore, when faced with the crisis of marital infertility, most Arab men willingly seek treatment with their wives and accept a wide range of assisted reproductive technologies. In other words, "new" Arab men's fertility attitudes and practices are changing alongside women's. Thus, together, Arab men and women have revolutionized reproduction, the results of which are just now becoming clear.

THE ARAB FERTILITY DECLINE

The reproductive revolution in the Arab world is evident in the numbers. Table 2—"Decline in Arab Fertility Levels Over Four Decades" (see Appendix)—charts the momentous decline in Arab fertility levels.³⁴ When TFRs were first recorded

in the 1975–1980 period, women in all 17 Arab nations had TFRs far exceeding the world average at that time, which was 3.85 children per woman. Seven Arab countries—Algeria, Kuwait, Libya, Oman, Saudi Arabia, Syria, and Yemen—had TFRs greater than 7.0, with the highest recorded TFR of 8.58 in Yemen.

Today, only three of these Arab countries—Egypt, Jordan, and Yemen—have TFRs above 3.0. In nine Arab countries—Algeria, Jordan, Libya, Oman,

Qatar, Saudi Arabia, Syria, the United Arab Emirates, and Yemen— TFRs have declined by nearly four births per woman. For example, an

What is most impressive about this Arab fertility decline is that it has occurred even in resource-poor Arab nations.

Algerian woman in 1980 would have been expected to have more than seven children on average. But an Algerian woman today has only two to three—four to five less than her mother.

Seven Arab countries are included in the list of the world's top 15 fertility declines occurring between 1950 and 2010.³⁵ In each of these countries, fertility levels declined by more than 60 percent. These fertility declines are presented in Table 3—"Arab Countries in the Top 15 by Percentage of Fertility Decline" (see Appendix).³⁶ These countries include Algeria, Lebanon, Libya, Oman, Qatar, Tunisia, and the United Arab Emirates, with Libya showing the largest fertility reduction of nearly 70 percent.

What is most impressive about this Arab fertility decline is that it has occurred even in resource-poor Arab nations. As noted by demographers, most Arab countries have fewer resources (including income, education, urbanization, and modern contraception) than "more developed regions," such as North America, with which Arab fertility levels today correspond.³⁷ Put another way, the Arab world has achieved its reproductive revolution with far fewer preexisting resources than a country such as the United States. Instead, the Arab fertility decline has occurred largely through human agency—namely, the decision of Arab couples to have fewer children to love and support.

FUTURE FERTILITY DECLINE AND ITS IMPLICATIONS

The massive Arab fertility decline described above is predicted to continue well beyond 2018. As shown in Table 4—"Projected Decline in Arab Fertility Rates by the Year 2100" (see Appendix)—fertility rates are expected to drop well below replacement level in most Arab countries by the year 2100.³⁸ Replacement

fertility, also known as zero population growth, is the number of children per woman needed in order to maintain current population levels. In other words, replacement fertility is the birth rate at which the population remains constant. It is approximated at a TFR of 2.1 rather than 2.0, to account for some infant death. As shown in Table 4, most countries in the Arab world will have dipped well below replacement fertility by 2100. Only Iraq and Sudan, with TFRs of 2.2 and 2.17, are predicted to remain slightly above replacement level.

What do these sharp fertility declines mean for the future of the Arab world? First, rapidly declining fertility rates will change population structures dramatically. In rapid downturns, the percentage of young people aged fifteen to thirty temporarily increases in the overall population. The resulting "youth bulge" leads to a wave of "youth quakes" of the kind that are already being felt across the Arab world.³⁹ For example, in resource-poor countries such as Egypt, Morocco, and Tunisia, millions of un- and under-employed youth are stuck in what political scientist Diane Singerman has called "waithood"—a prolonged adolescence, in which economic futures are grim and young people must "wait and wait" for marriage and family formation.⁴⁰ Prolonged waithood—well into an individual's 30s or even 40s—has real implications for population decline in resource-poor countries with large "stuck youth" populations.

These current youth bulges will eventually lead to "elderquakes," or very rapidly aging populations. ⁴¹ The "graying" of the Middle East is already apparent, as shown in Table 5 (see Appendix), "Current and Future Life Expectancy in the Arab World." ⁴² With the exception of Sudan and Yemen, all of the Arab countries have exceeded the world's current average life expectancy of 71.9 years. Moreover, the life expectancy in most of the Gulf states (with the exception of Yemen) is now closer to 80. Although longer, healthy lifespans are good news for individual Arab citizens, rapid population aging has sobering future demographic consequences for the population as a whole. Currently, few Arab nations are well equipped to handle millions of aging elders. These elderquakes will not happen for several decades, but they could provoke potential crises of caretaking for millions of future Arab senior citizens.

Finally, many Arab countries are currently heading toward very low fertility, well below replacement level. In the future, these Arab countries may join the ranks of the so-called "barren states"—nations with drastic losses of national population, ongoing labor shortages, a swelling population of people over 65, and inverted population pyramids (i.e., too many old people, too few children).⁴³ Ongoing fertility decline could lead to the threat of significant depopulation and loss of productive citizenry among Arab nations, suggesting that fertility

CONCLUSION

How these Arab futures will unfold is, of course, difficult to predict, especially given the current political instabilities and substantial emigration from the region. In the most recent United Nations population report, the Syrian refugee crisis received special attention, given the outflow of 4.2 million Syrians in the period from 2010–2015. 44 Most of these refugees headed to neighboring Arab states, especially Lebanon and Jordan, but also Turkey. In addition to the refugee crisis, millions of North Africans have migrated to Europe in search of work. Thus, net outflows of Arab men, women, and children—either as migrants or refugees—may have long-term demographic implications for the region as a whole.

As stated at the beginning of this essay, the Arab refugee crisis is a grim reminder of the region's failed revolutions. However, as we have also seen in this report, not all Arab revolutions are disasters. A quiet reproductive revolution has taken place in the Arab world, leading to major transformations in fertility levels and family life. New reproductive aspirations and investments among both Arab men and women have been the driving force in this revolution. In many ways, this reproductive revolution is one of the most significant social transformations to have shaped the Arab world. Thus, the time has come to reveal this untold story, and to herald the results of the Arab world's quiet revolution.

APPENDIX

Table 1. Fertility Levels in Arab Countries: The 1980s

| Country | 1988 Pop. (millions) | TFR | % Pop Increase (annual) | Fertility Policy | FP Program |
|---------|-------------------------|-----|-------------------------|---------------------|------------------------------------|
| Algeria | 23.9 | 6.7 | 3.2 | Lower | Direct government |
| Bahrain | 0.5 | 4.6 | 2.8 | None | IPPF member |
| Egypt | 50.3 | 4.6 | 2.5 | Lower | Direct government |
| Iraq | 17.6 | 6.7 | 3.6 | Raise | IPPF member, but restricted access |
| Jordan | 4.0 | 7.4 | 3.7 | None | IPPF member |
| Kuwait | 2.1 | 6.2 | 3.6 | Raise | None |
| Lebanon | 2.8 | 3.8 | 2.0 | None | IPPF member |
| Libya | 4.0 | 7.2 | 3.5 | None | None |
| Morocco | 23.5 | 5.1 | 2.5 | Lower | Direct government |

| 3.7 | | т |
|--------|----------|--------|
| Marcia | (| INHORN |

| Oman | 1.4 | 7.1 | 3.3 | Maintain | None |
|--------------|------|-----|-----|----------|-------------------------|
| Qatar | 0.4 | 6.8 | 3.4 | Maintain | None |
| Saudi Arabia | 13.0 | 7.1 | 3.3 | Raise | None; restricted access |
| Sudan | 23.5 | 6.6 | 2.9 | None | IPPF member |
| Syria | 12.0 | 7.2 | 3.8 | None | IPPF member |
| Tunisia | 7.6 | 4.8 | 2.3 | Lower | Direct government |
| UAE | 1.5 | 5.9 | 2.6 | Raise | None |
| N. Yemen | 7.5 | 7.0 | 3.0 | Lower | Direct government |
| S. Yemen | 2.3 | 6.8 | 3.0 | Lower | Direct government |

Table 2. Decline in Arab Fertility Levels Over Four Decades

| Country | Population 1988 | on (millions) 2017 | Total Fer 1975–80 | tility Rate 2000–5 | 2010–15 | 2015–20 |
|--------------|-----------------|-----------------------|----------------------|-----------------------|---------|---------|
| World | 5,100 | 7,550 | 3.85 | 2.53 | 2.45 | 2.47 |
| Algeria | 23.9 | 41.3 | 7.18 | 2.72 | 2.82 | 2.65 |
| Bahrain | 0.5 | 1.49 | 5.23 | 2.98 | 2.10 | 2.00 |
| Egypt | 50.3 | 97.6 | 5.5 | 2.98 | 2.79 | 3.15 |
| Iraq | 17.6 | 38.3 | 6.8 | 4.38 | 4.06 | 4.27 |
| Jordan | 4.0 | 9.7 | 7.38 | 3.64 | 3.27 | 3.26 |
| Kuwait | 2.1 | 4.1 | 5.89 | 2.71 | 2.60 | 1.97 |
| Lebanon | 2.8 | 6.1 | 4.23 | 1.58 | 1.51 | 1.7 |
| Libya | 4.0 | 6.4 | 7.94 | 2.67 | 2.38 | 2.21 |
| Morocco | 23.5 | 35.7 | 5.90 | 2.38 | 2.78 | 2.42 |
| Oman | 1.4 | 4.6 | 8.1 | 2.89 | 2.91 | 2.54 |
| Qatar | 0.4 | 2.6 | 6.11 | 2.21 | 2.05 | 1.88 |
| Saudi Arabia | 15.2 | 32.9 | 7.28 | 3.03 | 2.68 | 2.48 |
| Sudan | 18.9 | 40.5 | 6.92 | 4.83 | 4.46 | 4.43 |
| Syria | 11.7 | 18.2 | 7.32 | 3.19 | 3.0 | 2.84 |
| Tunisia | 7.9 | 11.5 | 5.69 | 2.05 | 2.02 | 2.15 |
| UAE | 1.7 | 9.4 | 5.66 | 1.97 | 1.82 | 1.73 |
| Yemen | 11 | 28.2 | 8.58 | 4.91 | 4.15 | 3.84 |

Table 3. Arab Countries in the Top 15 by Percentage of Fertility Decline

| Country | | tility Rate 2005–10 | Difference | Percentage Decline |
|---------|------|------------------------|------------|--------------------|
| Libya | 7.94 | 2.67 | -4.39 | 69.9 |
| UAE | 5.66 | 1.97 | -3.69 | 65.2 |
| Oman | 8.10 | 2.89 | -5.21 | 64.3 |
| Tunisia | 5.69 | 2.05 | -3.64 | 63.9 |

| Qatar | 6.11 | 2.21 | -3.90 | 63.8 |
|---------|------|------|-------|------|
| Lebanon | 4.23 | 1.58 | -2.66 | 62.8 |
| Algeria | 7.18 | 2.72 | -4.45 | 62.0 |

Table 4. Projected Decline in Arab Fertility Rates by the Year 2100

| Country | | ertility Ra 30 2045–5 | te 50 2095–2100 | Difference 2025–2100 | Percentage Decline (or Increase) |
|-------------|--------|--------------------------|--------------------|-------------------------|----------------------------------|
| World | 2.39 | 2.24 | 1.97 | 42 | 17.6 |
| Algeria | 2.29 | 1.98 | 1.87 | 42 | 18.3 |
| Bahrain | 1.80 | 1.66 | 1.76 | 04 | 2.2 |
| Egypt | 2.80 | 2.36 | 1.88 | 92 | 32.9 |
| Iraq | 3.79 | 3.11 | 2.20 | -1.59 | 41.9 |
| Jordan | 2.78 | 2.21 | 1.80 | 98 | 35.6 |
| Kuwait | 1.88 | 1.82 | 1.83 | 05 | 2.7 |
| Lebanon | 1.69 | 1.70 | 1.78 | +.09 | +5.3 |
| Libya | 1.94 | 1.76 | 1.80 | 14 | 7.2 |
| Morocco | 2.17 | 1.89 | 1.80 | 37 | 17.1 |
| Oman | 2.09 | 1.74 | 1.79 | 30 | 14.6 |
| Qatar | 1.71 | 1.62 | 1.76 | +.05 | +2.9 |
| Saudi Arabi | a 2.14 | 1.78 | 1.76 | 38 | 17.8 |
| Sudan | 3.89 | 3.11 | 2.17 | -1.72 | 44.2 |
| Syria | 2.45 | 1.97 | 1.77 | 68 | 27.8 |
| Tunisia | 2.00 | 1.86 | 1.84 | 16 | 8.0 |
| UAE | 1.61 | 1.63 | 1.77 | +.16 | +9.9 |
| Yemen | 3.07 | 2.19 | 1.70 | -1.37 | 44.6 |

Table 5. Current and Future Life Expectancy in the Arab World

| Country | Life Expectancy at Both Sexes Combi 2015–2020 | |
|---------|---|------|
| World | 71.9 | 82.6 |
| Algeria | 76.4 | 88.6 |
| Bahrain | 77.1 | 86.9 |
| Egypt | 71.7 | 83.6 |
| Iraq | 70.1 | 81.2 |
| Jordan | 74.5 | 85.4 |
| Kuwait | 74.9 | 84.7 |
| Lebanon | 79.8 | 91.0 |
| Libya | 73.7 | 83.5 |
| Morocco | 76.1 | 88.9 |

| Oman | 77.4 | 89.9 |
|--------------|------|------|
| Qatar | 78.4 | 88.8 |
| Saudi Arabia | 74.8 | 85.9 |
| Sudan | 64.8 | 76.7 |
| Syria | 71.3 | 86.2 |
| Tunisia | 76.1 | 87.5 |
| UAE | 77.5 | 88.3 |
| Yemen | 65.2 | 76.7 |

Notes

- 1. World Population Prospects: The 2017 Revision (New York: United Nations, 2017).
- 2. Jean-Marie Guéhenno, "10 Conflicts to Watch in 2017," Foreign Policy, January 5, 2017.
- 3. Kamran Asdar Ali, *Planning the Egyptian Family: New Bodies, New Selves* (Austin: University of Texas Press, 2002).
- 4. Marcia. C. Inhorn, *The New Arab Man: Emergent Masculinities, Technologies, and Islam in the Middle East* (Princeton: Princeton University Press, 2012); Nicholas Eberstadt and Apoorva Shah, "Fertility Decline in the Muslim World," *Policy Review* 173 (2012): 29–44.
 - 5. World Population Prospects: The 2012 Revision (New York: United Nations, 2012).
- 6. Jennifer Johnson-Hanks, "On the Politics and Practice of Muslim Fertility," *Medical Anthropology Quarterly* 20, no. 1 (2006): 12–30; Eberstadt and Shah, "Fertility Decline in the Muslim World," 43–44.
 - 7. Nicholas Hopkins, ed. The New Arab Family (Cairo: American University in Cairo Press, 2004).
- 8. Laura Bier, "From Birth Control to Family Planning: Population, Gender, and the Politics of Reproduction in Egypt," in *Family in the Middle East: Ideational Change in Egypt, Iran, and Tunisia*, ed. Kathryn M. Yount and Hoda Rashad (London and New York: Routledge, 2008), 55–79.
 - 9. Ibid., 59.
- 10. Dudley Kirk, "Prospects for Reducing Natality in the Underdeveloped World," *Annals of the American Academy of Political and Social Science* 369 (1967): 48–60.
- 11. J. Mayone Stycos et al., *Community Development and Family Planning: An Egyptian Experiment* (Boulder, CO: Westview Press, 1988); Tim Mitchell, "America's Egypt: Discourse of the Development Industry," *Middle East Report* 21, no. 2 (1991): 18–36.
 - 12. Bier, "From Birth Control to Family Planning," 65.
 - 13. Robert J. Lapham, "Population Policies in the Maghrib," Middle East Journal 26, no. 1 (1972): 1–10.
- 14. Muhammad Faour, "Fertility Policy and Family Planning in the Arab Countries," *Studies in Family Planning* 20, no. 5 (1989): 254–63.
- 15. Muhammad Faour, "Fertility Policy and Family Planning in the Arab Countries"; Robert J. Lapham and W. Parker Mauldin, "Contraceptive Prevalence: The Influence of Organized Family Planning Programs," *Studies in Family Planning* 16, no. 3 (1985): 117-137; *World Population Prospects: Estimates and Projections as Assessed in 1984* (New York: United Nations, 1986); *World Population Trends and Policies: 1987 Monitoring Report* (New York: United Nations, 1987).
- 16. Youssef Courbage, "Economic and Political Issues of Fertility Transition in the Arab World—Answers and Open Questions," *Population and Environment: A Journal of Interdisciplinary Studies* 20, no. 4 (1999): 353–79.
 - 17. Lapham and Mauldin, "Contraceptive Prevalence."
- 18. Valeria Cetorelli and Tiziana Leone, "Is Fertility Stalling in Jordan?," *Demographic Research* 26, no. 13 (2012): 293–318.
 - 19. Ibid.
- 20. Dominique Tabutin and Bruno Schoumaker, "The Demography of the Arab World and the Middle East from the 1950s to the 2000s," *Population* 60, nos. 5–6 (2005): 505–615.

- 21. Ibid.
- 22. Ibid.
- 23. Ibid.
- 24. Cynthia Myntti et al., "Challenging the Stereotypes: Men, Withdrawal, and Reproductive Health in Lebanon," *Contraception* 65 (2002): 165–70; Andrej Kulczycki, "The Sociocultural Context of Condom Use within Marriage in Rural Lebanon," *Studies in Family Planning* 35 (2004): 246–60.
- 25. Basim F. Musallam, Sex and Society in Islam: Birth Control before the Nineteenth Century (Cambridge, UK: Cambridge University Press, 1983); Abdel Rahim Omran, Family Planning in the Legacy of Islam (New York: Routledge, 1992).
 - 26. Cynthia Myntti et al., "Challenging the Stereotypes."
 - 27. Hopkins, ed., The New Arab Family.
- 28. For example, the Arab Families Working Group (AFWG) is a scholarly community founded in 2001 by University of California-Davis anthropologist Suad Joseph to focus on youth and families in Palestine, Lebanon, Egypt, and their diasporas.
- 29. Marcia C. Inhorn, *Infertility and Patriarchy: The Cultural Politics of Gender and Family Life in Egypt* (Philadelphia: University of Pennsylvania Press, 1996).
- 30. Rhoda Ann Kanaaneh, *Birthing the Nation: Strategies of Palestinian Women in Israel* (Berkeley: University of California Press, 2002).
 - 31. Inhorn, The New Arab Man.
 - 32. Ibid.
 - 33. Inhorn, Infertility and Patriarchy.
 - 34. World Population Prospects: The 2012 Revision; World Population Prospects: The 2017 Revision.
 - 35. World Population Prospects: The 2012 Revision.
 - 36. Ibid.
 - 37. Eberstadt and Shah, "Fertility Decline in the Muslim World," 35.
 - 38. World Population Prospects: The 2017 Revision.
 - 39. Eberstadt and Shah, "Fertility Decline in the Muslim World."
- 40. Diane Singerman, "Youth, Gender, and Dignity in the Egyptian Uprising," *Journal of Middle East Women's Studies* 9, no. 3 (2013): 1–27.
 - 41. Eberstadt and Shah, "Fertility Decline in the Muslim World."
 - 42. World Population Prospects: The 2017 Revision.
- 43. Carrie B. Douglass, *Barren States: The Population Implosion in Europe* (London: Bloomsbury Academic, 2005).
 - 44. World Population Prospects: The 2017 Revision.