

JULY 2010

BY FARZANEH
ROUDI-FAHIMI AND
AHMED ABDUL MONEM

UNINTENDED PREGNANCIES IN THE MIDDLE EAST AND NORTH AFRICA

In 2004, 58 percent of current pregnancies in Yemen were not planned when they occurred or not wanted at all.

**1 IN 5
PEOPLE**

in MENA is between ages 15 and 24, the ages when most people initiate sexual activity.

In Egypt, contraceptive failure accounts for 29 percent of unintended pregnancies.

Unintended pregnancies are widespread in the Middle East and North Africa (MENA), jeopardizing the health and well-being of women and their families.¹ These unplanned pregnancies also exert an unnecessary burden on their countries' health systems and socioeconomic development.

Throughout the world, including the MENA region, women too often become pregnant sooner than they wanted or when they do not want any more children. Such unintended pregnancies occur for a variety of reasons, in particular the lack of access to a preferred contraceptive method or incorrect use of a method. In addition, some women are vulnerable to social pressure from their husbands or other family members on family planning issues and do not have the power to decide for themselves whether or when to become pregnant. Over the past decade, between 15 percent and 58 percent of pregnancies in MENA countries were unintended (see Figure 1).

Individuals' freedom to decide the number and timing of their children is acknowledged as a basic human and reproductive right in international agreements.² Universal access to reproductive health services that include family planning is one of the targets included in the United Nations Millennium Development Goals (MDGs) for 2015. Providing all women access to high-quality family planning services would reduce unintended pregnancies, contributing directly to three MDGs: promoting gender equality and empowering women (MDG 3); reducing child mortality (MDG 4); and improving maternal health (MDG 5).³

Reducing unintended pregnancies also helps slow population growth, which would allow MENA governments more time and resources to improve their health and education systems. And, it can help reduce the region's high rates of youth unemployment. If women in Egypt could successfully avoid the births that result from an unintended pregnancy, the country's total fertility rate (average lifetime births per woman) would decline from 3.0 children per woman to 2.4. In Jordan, the average would decline from 3.6 to 2.8.⁴

The demographic realities of the MENA region make it imperative to address the issue of unintended pregnancy now. An unprecedented number of women are in their reproductive years and at risk of unintended pregnancy. According to United Nations estimates for 2010, more than 120 million women in MENA are in their childbearing years (ages 15 to 49). More than one-half are between 15 and 29—the ages at which most women in the MENA region marry, have children, and face the risk of unintended pregnancy.

Policymakers in MENA, particularly those working in health-related areas, need to know more about the frequency and risk factors for unintended pregnancies, as well as their wider implications for the well-being of individuals and society. This policy brief examines the issues surrounding unintended pregnancies in the MENA region. With the cooperation and assistance of our counterparts in the region, some of the data in this report are presented for the first time.

FIGURE 1
Percent of Pregnant Women Whose Pregnancy Was Unintended



Note: The data for Palestine refer to the Arab population of Gaza and the West Bank, including East Jerusalem.
Sources: Demographic and Health Survey (Egypt) and PAPPAM surveys.

When Is a Pregnancy ‘Unintended’?

The family is the basic unit of society in the MENA region and children play an important role in that social unit. Children are a source of joy, fulfillment, and old-age security for parents, and most young couples want to start a family soon after their marriage. Nevertheless, married couples do not always welcome the news of a pregnancy, especially after they already have their first child. The expense of raising another child, an infant’s demand for time and attention, the advanced age of the mother, health problems for the mother and fetus, and too many children of the same sex are among the reasons couples cite for wanting to delay or avoid the birth of another child.⁵

In general, the estimates of unintended pregnancies come from national household surveys in which women are asked whether they wanted their current or a previous pregnancy at the time they became pregnant, and if not, whether they would have preferred to delay the pregnancy or to avoid the pregnancy altogether. The estimates presented in this brief are based solely on women’s reported feelings toward their current pregnancy. This restriction allows comparisons among surveys from a maximum of countries within the MENA region. The surveys reported here were conducted as part of the Demographic and Health Surveys (DHS) project or the Pan Arab Project for Family Health (PAPFAM).⁶

Estimates based on women’s attitudes toward their last pregnancy or any pregnancy occurring three to five years prior to the survey tend to underestimate the percentage of mistimed or unwanted pregnancies. One reason is that women are often reluctant to say a previous pregnancy was unwanted because their response could be interpreted as a rejection of the child born from that pregnancy. This reluctance tends to increase as the child gets older. In addition, survey responses about the “wanted” status of a past pregnancy often miss pregnancies that ended in miscarriage or abortion. Any pregnancy is at risk of miscarriage and because of the social stigma and legal issues surrounding abortion, some women may choose not to report they had one. The New York-based Guttmacher Institute estimates that, globally, 12 percent of all unintended pregnancies end in miscarriage. In less developed countries (excluding China), about 43 percent are voluntarily aborted.⁷

Unintended Pregnancies Can Harm Both Mother and Child

While couples often treasure a child born as the result of an unintended pregnancy as much as one born from a planned pregnancy, international studies have found that unplanned pregnancies are associated with a number of negative consequences. Women with an unintended pregnancy are more likely to have delayed or received inadequate prenatal care, which can affect the health of both mother and child. In general, children who are born as the result of an unintended pregnancy are at a higher risk of illness than other children because they are

more likely to be born with a low birth weight, be breastfed for fewer months, and experience developmental problems.⁸ These children are particularly at risk when they are born soon after a sibling. International studies show that children who were born less than two years after a sibling are less likely to survive than those born after an interval of three or more years.⁹

Abortion is another maternal health risk associated with unintended pregnancy when the procedure is performed in an unsanitary setting or by unskilled medical personnel. Women in MENA are particularly at risk because a majority live in countries where abortion is restricted; women in these countries who want to terminate an unintended pregnancy resort to clandestine abortions, which are often performed unsafely.¹⁰ Only about 20 percent of MENA’s population lives in the two countries in the region where abortion is legal on request during the first trimester of pregnancy—Tunisia and Turkey.¹¹

Women having an unsafe abortion face the risk of life-threatening complications that place additional demands on scarce health resources. Many women having an unsafe abortion may not seek medical care at all or receive it very late. A study in Egypt—where abortion is highly restricted—found that treatment of complications of unsafe abortion consumed a large share of resources in a nationally representative sample of hospitals. Almost one in every five obstetrical and gynecological hospital admissions in Egypt was for post-abortion care.¹²

According to the World Health Organization (WHO), an estimated 1.5 million abortions in MENA in 2003 were considered unsafe because they were performed in unsanitary settings, by unskilled providers, or both. Complications from those abortions accounted for 11 percent of maternal deaths in the region.¹³ For every maternal death due to unsafe abortion many more women are left with temporary or permanent injuries.

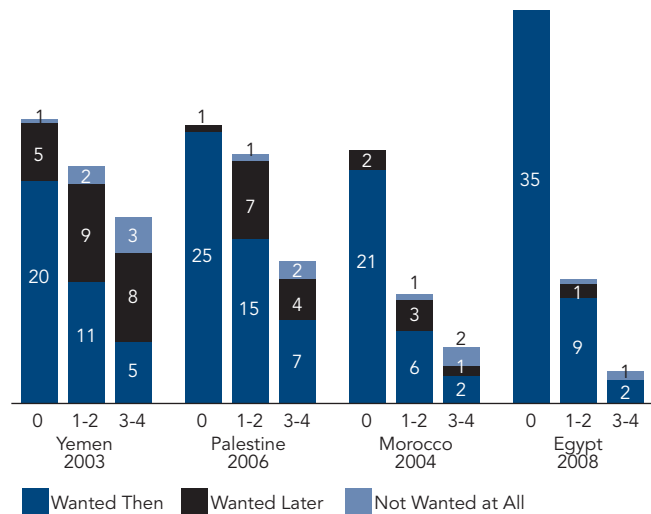
What Are the Risk Factors?

Like her other beliefs and actions, a woman’s desire to have a specific number of children—and whether to practice family planning to determine when to have them—is affected by socioeconomic characteristics. Key factors include how much education she and her husband completed; how easily she can access family planning services; and her family’s and community’s attitudes toward family size and contraceptive use. Thus, a woman’s risk of an unintended pregnancy depends in varying degrees on her socioeconomic status and the community where she lives.

In the family-centered cultures of MENA countries, however, women are expected to marry and have a child early in the marriage, regardless of their socioeconomic background. Indeed, the highest rates of pregnancy (and lowest rates of contraceptive use) are found among young women who have no children; few of these pregnancies are reported as unintended (see Figure 2). These women clearly are not trying to avoid

FIGURE 2

Percent of Married Women Who Are Pregnant by Number of Children and Planning Status of Their Pregnancy



Note: Data refer to married women ages 15-49. The data for Palestine refer to the Arab population of Gaza and the West Bank, including East Jerusalem. Values of less than 0.5 are not shown.

Source: Special tabulations of the Egypt 2008 Demographic and Health Survey and PAPPAM surveys.

pregnancy until after they have that important first child. In both Egypt and Palestine, less than 1 percent of married women with no children practice family planning.¹⁴

The likelihood of becoming pregnant diminishes once women bear their first child and begin to use family planning. But the probability that these subsequent, or higher-order, pregnancies are unintended also increases. There is a clear progression over time: As the number of children increases, so does the share of pregnancies that were unintended, as well as the proportion of unintended pregnancies that were not wanted at all. The 2008 Egypt Demographic and Health Survey (DHS) recorded that 35 percent of women with no children were pregnant, compared with less than 4 percent of women with three or four children. While nearly all the pregnancies among the childless women had been wanted, only about one-half of the higher-order pregnancies had been wanted at the time.¹⁵ In Morocco, about one-fourth of unintended pregnancies among women with one or two children were reported as not wanted at all, compared with two-thirds of unintended pregnancies among women with more than two children.¹⁶

The share of higher-order pregnancies that were unintended is particularly high in Yemen and Palestine: Two-thirds of Yemeni women and two-fifths of Palestinian women with three or four children reported their current pregnancy as unintended. This greater incidence of unintended pregnancies corresponds to the

higher overall fertility in these countries. Yemeni and Palestinian women have the highest fertility in the MENA region. They have an average of 5.5 children and 4.6 children, respectively, during their childbearing years, compared with 3.0 for Egyptian women, 2.4 for Moroccan women, and even lower averages in several other MENA countries.¹⁷

OLDER WOMEN HAVE FEWER PREGNANCIES, BUT MORE ARE UNINTENDED

A woman's risk of becoming pregnant declines as she ages for several reasons, including more effective use of family planning and more health problems that can interfere with conception. The risk of miscarriage also increases with age, so older women are less likely to carry a pregnancy to term.¹⁸ Because women in MENA start childbearing early—soon after they marry—many women have had most if not all the children they want by around age 30. In Egypt, Lebanon, and Palestine, the percent of married women who are pregnant drops from more than 30 percent among 15-to-19-year-olds to around 10 percent for women in their early 30s (see table). Again, Yemen is an exception. A relatively large percentage of Yemeni women in their early 30s (18 percent) were pregnant according to the 2003 Yemen PAPPAM survey, although more than two-thirds of these pregnancies were unintended.

Because older women generally have at least one child—and many may already have achieved their desired family size—they are more likely than younger women to report their current pregnancy as unintended. In the countries shown here, the percentage of women ages 30 to 34 whose current pregnancy was unintended ranges from 69 percent in Yemen to 22 percent in Lebanon. Compared with younger women, these older women were more likely to report their pregnancies as not wanted at all rather than mistimed. Nearly one-half of unintended pregnancies among older women in Yemen and Palestine had not been wanted at all, as were nearly three-fourths in Lebanon. Conversely, younger women are less likely to report an unintended pregnancy, and when they do, they are likely to say that they wanted it later rather than not at all (see Figure 3, page 4).

Percent of Married Women Ages 15-34 Who Are Pregnant by Age Group

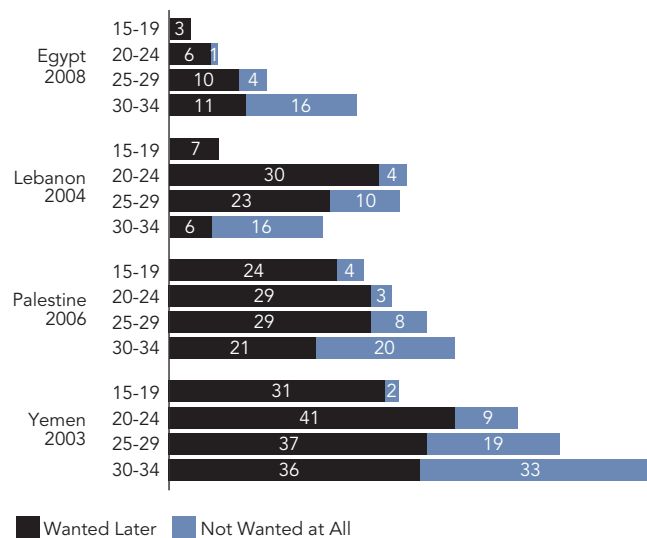
AGE GROUP	EGYPT 2008	LEBANON 2004	PALESTINE 2006	YEMEN 2003
15 - 19	31	32	34	24
20 - 24	22	20	25	22
25 - 29	13	15	18	19
30 - 34	8	9	11	18

Note: The data for Palestine refer to the Arab population of Gaza and the West Bank, including East Jerusalem.

Source: Special tabulations conducted by PAPPAM and El-Zanaty and Associates.

FIGURE 3

Percent of Pregnant Women Whose Pregnancy Was Unintended by Woman's Age



Note: The data for Palestine refer to the Arab population of Gaza and the West Bank, including East Jerusalem.
Source: Special tabulations of the Egypt Demographic and Health Survey and PAPPAM surveys.

Young Women and Unintended Pregnancy

One in five people in MENA is between ages 15 and 24—the age at which most people initiate sexual activity.¹⁹ Meeting the needs of this youth population for family planning information and services is imperative to avoid the negative consequences associated with unintended pregnancies.

MENA countries have unprecedented numbers of people in their late teens and early twenties. According to UN estimates, the largest number of youth in MENA live in Egypt—17 million were ages 15 to 24 in 2010—followed by Iran (16 million), Turkey (13 million), and Morocco and Iraq (6 million each).²⁰ The UN projects the number of youth in Egypt to peak at around 19 million in the early 2030s. The Iraqi youth population will exceed 10 million by 2050. The youth population in Palestine and Yemen is expected to double or nearly double between 2010 and 2050—rising from 0.9 million to 1.8 million in Palestine, and from 5.3 million to 9.2 million in Yemen.

About one-half of these youth are young women who are or will be at risk of an unintended pregnancy. Because younger married women have the highest pregnancy rates, as shown in the table (page 3), and because they make up a large share of all married women of childbearing age in MENA, they have the largest number of unintended pregnancies. Women

in their 20s accounted for nearly 60 percent of all unintended pregnancies in Palestine and 45 percent of such pregnancies in Egypt.²¹ Preventing an unwanted pregnancy among young women will go a long way toward reducing the overall number of unintended pregnancies in the MENA region. Young women who married in their teens require special attention from health providers and policymakers who want to promote safe motherhood and reduce unintended pregnancies in the region.

UNINTENDED PREGNANCIES OUTSIDE OF CONVENTIONAL MARRIAGE

Another trend that makes some young women vulnerable to unintended pregnancy is the increasing likelihood that they will enter into an unconventional marriage. Throughout the MENA region, conventional marriage is the standard and culturally acceptable prerequisite for a couple to engage in sexual relations. Public ceremonies mark the union and both families are involved in the marriage.²²

Many young men and women, however, particularly in urban areas, enter into unconventional marriages—such as *urfi* marriages in Egypt and temporary marriages in Lebanon and Iran—to give religious legitimacy to a sexual relationship. *Urfi* marriages were practiced in the past when the official registration of a marriage was not required, but today's *urfi* marriages among young urbanites are often secret and confer limited legal protection for women and their children.

Although many young women may see these secret unions as a step toward a conventional marriage, a 2004 report from Cairo University found that most of these unions end within two years, leaving the former wives in legal limbo and socially stigmatized. *Urfi* marriages are associated with many contested paternity cases in Egypt—an estimated 14,000 such cases were pending in 2006.²³

Throughout the MENA region, women in unconventional marriages are at a disadvantage in preventing pregnancy because almost all reproductive health services are tailored to the needs of women in conventional marriages. Social and legal constraints, inability to pay for the service, and shyness can deter them from seeking family planning services.²⁴ Because of the secrecy and lack of social acceptance of unconventional marriages, pregnancies that occur within such marriages are most likely to be unintended and often voluntarily aborted, putting young women's health and life in danger. Pregnant women in unconventional marriages face more barriers to obtaining a safe abortion or postabortion care.

In Iran and Lebanon, temporary marriages are legal and can be registered, which gives women and their children some legal rights. But these marriages are not socially accepted and generally remain secret from their families and the community, limiting couples' access to reproductive health services.



Family planning is one of the most cost-effective health interventions in the developing world. For a relatively modest investment, family planning reduces unintended pregnancies, saves lives, and improves maternal and child health. Making quality family planning services accessible and acceptable to everyone is essential for reducing unintended pregnancies.

There are no reliable data on how many young people enter into unconventional marriages in the region, but these marriages are receiving increasing media attention and they appear to have become more common among the large urban youth populations. These marriages put more young women in MENA at risk of unintended pregnancy—unless their needs for family planning information and services are met.

Unmet Need for Family Planning Still High

Because of the expanding availability of family planning services, an increasing number of women and men in MENA are using contraception. Use has increased in rural as well as urban areas, and among women of all educational and income levels. Contraceptive use among married women of reproductive age ranges from 74 percent in Iran to 28 percent in Yemen. More than one-half of married women in Algeria, Egypt, Iran, Morocco, and Tunisia use a modern contraceptive method.

Still, a significant number of married women throughout the region who say they do not want to get pregnant are not practicing family planning—which can easily result in an unintended pregnancy. These women are referred to as having an unmet need for family planning. In Egypt, where almost all married women have access to family planning services and 58 percent

use a modern method, 9 percent of women have an unmet need for family planning. In Jordan and Morocco, around one in 10 married women has an unmet need for family planning.²⁵

Women who do not want to become pregnant and still are not using contraception cite different reasons for not using a method. In Egypt, infrequent sex (24 percent), fear of side effects (13 percent), and health concerns (12 percent) were the main reasons they reported for not using contraception, according to the 2008 DHS.²⁶

Many women have an unmet need for family planning because they have stopped using a method. Data from the 2008 Egypt DHS show that 26 percent of women who started using a method stopped using it within 12 months; only 8 percent switched to another method. Women practicing prolonged breastfeeding as a method of contraception and those using the pill were most likely to stop.²⁷ Women using IUDs were least likely to stop—although one in 10 did.²⁸

CONTRACEPTIVE FAILURE LEADS TO UNINTENDED PREGNANCIES

Women who use contraception can still have an unintended pregnancy because of contraceptive failure. Contraceptive failure can happen for two reasons: incorrect use of a method or a problem with the method itself. Oral contraceptives are almost 100 percent effective when used properly, but, on average, 8 percent of women relying on the pill experience an unintended pregnancy within a year. Male condoms, even if used correctly all the time, occasionally fail because of breakage. Traditional methods, such as withdrawal, are more prone to failure than modern methods. Typically, 27 percent of women relying on withdrawal become pregnant within a year, even though the method can be more effective if used correctly.²⁹

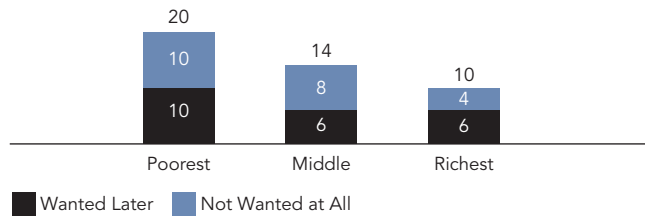
Contraceptive failure seems to be a major issue in Egypt and some other MENA countries. In Egypt, 7 percent of all pregnancies and 29 percent of unintended pregnancies are due to contraceptive failure. The percentages are higher for Jordan, where 14 percent of all pregnancies and 39 percent of unintended pregnancies result from contraceptive failure.³⁰

Poverty, Women's Education Affect Reproductive Behavior

The social and economic circumstances under which women live influence their reproductive behavior. Poor families tend to marry off their daughters at a young age, which usually means these young wives start having children right away. This often perpetuates a vicious cycle of poverty, low education, and high rates of unintended pregnancy and fertility. Girls from poor families are more likely than their male siblings not to attend school or to be withdrawn from school. In fact, in MENA, marriage is the main reason girls drop out of school.

FIGURE 4

Percent of Pregnant Women Whose Pregnancies Were Unintended by Wealth Quintile*, Egypt 2008



*Wealth quintiles (five groups of equal size) were created using an index of household assets. **Note:** The data for Palestine refer to the Arab population of Gaza and the West Bank, including East Jerusalem. **Source:** Special tabulation by El-Zanaty and Associates of the 2008 Egypt Demographic and Health Survey.

Women from the poorer segments of society are more likely to have an unintended pregnancy than wealthier women for a variety of reasons. Their young marriage age exposes them to the risk of unintended pregnancy for more of their reproductive years. More important, poor women are less likely to decide independently about using contraception, and they may have less access to family planning information and services. In Egypt, pregnant women in the poorest fifth of the population are twice as likely to report their pregnancy as unintended as those in the wealthiest fifth (see Figure 4).

EDUCATION HELPS LOWER UNINTENDED PREGNANCY

Achieving universal primary education (MDG 2) and eliminating gender disparity at all education levels (a target under MDG 3) are international development goals that can help break the vicious cycle of poverty that traps so many women throughout the world. The benefits of girls' education for the individual, family, community, and country are widely documented.³¹ Fewer unintended pregnancies are an additional benefit of greater educational attainment: More-educated women generally marry and begin their childbearing later than those who are less educated; they tend to know more about family planning, including where to obtain family planning services. As a result, they are less likely to have an unplanned pregnancy.

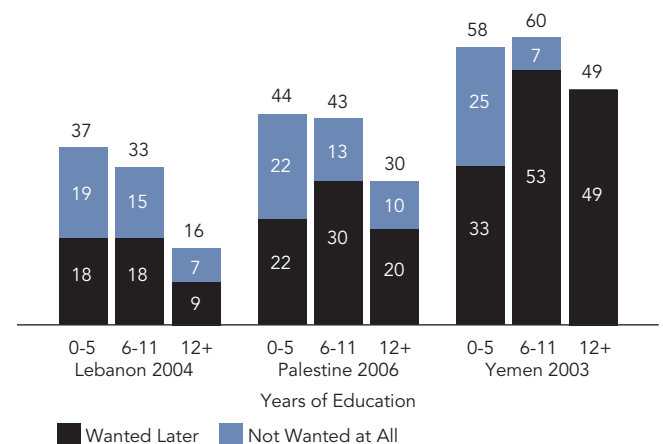
Despite significant improvements in female education throughout the region, a large number of girls and women have been left behind. According to the 2008 Egypt DHS, one-third of married women ages 15 to 49 in Egypt had never been to school. According to the UN database for the Millennium Development Goals, one in five women ages 15 to 24 in Egypt and Iraq is illiterate; in Morocco and Yemen, the figure is one in three. Illiteracy, however, has been eliminated among youth in Lebanon and Palestine, and it is close to eradication in several other MENA countries.

Education—particularly secondary and higher education—helps women adopt a more modern world view and to think independently. Educated women appear to be more empowered to avoid pregnancies that they do not feel prepared for. They are more likely to report that they wanted their current pregnancy and less likely to say that they wanted it later or not at all. In Lebanon, for example, pregnant women with 12 or more years of schooling are less than half as likely as those with some primary or no education to report their pregnancy as unintended (see Figure 5). In Palestine, 10 percent of pregnant women with 12 or more years of schooling said they had not wanted their pregnancy at all, compared with 22 percent of those with less than six years of schooling. Among more-educated Yemeni women who reported an unintended pregnancy, all said the pregnancy was mistimed rather than unwanted.

Education opens more opportunities for women to work outside their homes and earn incomes. Women who work outside the home and contribute to the household income are more likely to feel confident about making decisions about their lives, including whether to use contraception. PAFAM surveys show that married women who are employed are less likely to be pregnant. But the surveys reveal a mixed pattern among countries on the planning status of women's pregnancies. In Algeria, Lebanon, Palestine, and Syria, pregnant women who were employed were more likely than women who were not employed to say they wanted their pregnancy when it occurred. But the reverse was true in Morocco and Yemen. And in Egypt, employed women were twice as likely as women who were not employed to report their pregnancy as not wanted at all.

FIGURE 5

Percent of Pregnant Women Whose Pregnancies Were Unintended by Woman's Education



Note: The data for Palestine refer to the Arab population of Gaza and the West Bank, including East Jerusalem. **Source:** PAFAM surveys.

Conclusion

Unintended pregnancies are common in the MENA region. They are more than a couple's private concern: They also have broad health, social, and economic consequences that require a public policy response. Reducing unintended pregnancies will help MENA countries meet their development goals, most notably their Millennium Development Goals of improving maternal health (MDG 5), reducing child mortality (MDG 4), and promoting gender equality and empowering women (MDG 3).

Ensuring that pregnancies are planned and wanted is not only a human rights issue, it is also crucial for health and gender equity. Women with unintended pregnancies are at an even higher risk of injury and death due to the pregnancy than those whose pregnancies are planned. Young women in unconventional marriages are particularly at risk of unintended pregnancy and its negative consequences because of their limited access to reproductive health services.

Effective use of contraceptives can prevent unintended pregnancies. Ensuring women's access to quality family planning information and services improves their health and well-being as well as that of their children. Giving special attention to poor and less-educated women—who tend to be at a higher risk of unintended pregnancy and less prepared to deal with it—is a matter of social justice and health equity.

Acknowledgments

Farzaneh Roudi-Fahimi, director of the Middle East and North Africa Program at PRB, and Ahmad Abdul Monem, manager of the PAFAM surveys of the League of Arab States, prepared this report with assistance from other PRB staff. The report draws in part from a paper presented at the IUSSP International Population Conference held in Marrakech, Morocco, in 2009.

Special thanks are due to Fatma El-Zanaty of El-Zanaty and Associates, who provided data on Egypt not published elsewhere; Sara Bradley of ICF Macro, who provided data on pregnancies resulting from contraceptive failure in Egypt and Jordan; and Mona El-Sayed Ahmed who helped tabulate the PAFAM data. The authors also thank individuals who reviewed various drafts: Mary Mederios Kent and James Gribble of PRB, Montasser Kamal of the Ford Foundation office in Cairo, independent consultant Lori Ashford, and Rozzet Jurdi of the University of Regina in Canada.

References

- 1 The Middle East and North Africa (MENA) region as defined in this policy brief includes Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, the Palestinian Territories (Palestine), Qatar, Saudi Arabia, Syria, Tunisia, Turkey, the United Arab Emirates, and Yemen.
- 2 United Nations, *Programme of Action of the International Conference on Population and Development*, paragraph 7.3, accessed at www.unfpa.org, on June 15, 2010; and African Union, *Plan of Action on Reproductive Health and Rights (Maputo Plan of Action)*, accessed at www.unfpa.org/africa/newdocs/maputo_eng.pdf, on June 15, 2010.
- 3 United Nations, *Millennium Development Goals*, accessed at www.un.org/millenniumgoals, on June 15, 2010.
- 4 ICF Macro, STATcompiler, accessed at www.measuredhs.com, on June 15, 2010.
- 5 Family Health International, "Egypt: The Social and Behavioral Outcomes of Unintended Pregnancy," accessed at www.fhi.org/en/RH/Pubs/wsp/fctshs/Egypt4.htm, on Oct. 25, 2009.
- 6 Demographic and Health Surveys (DHS) have been conducted in the following MENA countries: Egypt, Jordan, Morocco, Turkey, and Yemen (see www.measuredhs.com). PAFAM surveys were carried out in Algeria, Lebanon, Morocco, Palestine, Syria, Tunisia, and Yemen (see www.papfam.org). A joint PAFAM-DHS survey was conducted in Morocco in 2003/2004.
- 7 Susheela Singh et al., *Abortion Worldwide: A Decade of Uneven Progress* (Washington, DC: Guttmacher Institute, 2009): 52-53.
- 8 Amber J. Hromi-Fiedler and Rafael Perez-Escamilla, "Unintended Pregnancies Are Associated With Less Likelihood of Prolonged Breast-feeding: An Analysis of 18 Demographic and Health Surveys," *Public Health Nutrition* 9, no. 3 (2006): 306-12; "Unintended Pregnancy Is Linked to Inadequate Prenatal Care, But Not to Unattended Delivery or Child Health," *DIGEST, International Family Planning Perspectives* 29, no. 3 (2003); A.A. Shaheen et al., "Unintended Pregnancy in Egypt: Evidence From the National Study on Women Giving Birth in 1999," *Eastern Mediterranean Health Journal* 13, no. 6 (2007): 1392-1404; and Nancy Felipe Russo and Henry P. David, "When Pregnancies Are Unwanted" (2002), accessed at www.prochoiceforum.org.uk/psy_ocr2.php, on Jan. 21, 2010.
- 9 Vidya Setty-Venugopal and Ushma D. Upadhyay, "Birth Spacing: Three to Five Saves Lives," *Population Reports, Series L*, no. 13 (Baltimore: Johns Hopkins Bloomberg School of Public Health, Population Information Program, 2002), accessed at <http://info.k4health.org/pr/113edsum.shtml>, on June 15, 2010.
- 10 Unsafe abortion is defined as terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards, or both.
- 11 Rasha Dabash and Farzaneh Roudi-Fahimi, *Abortion in the Middle East and North Africa* (Washington, DC: Population Reference Bureau, 2008): 1; and Singh et al., *Abortion Worldwide: A Decade of Uneven Progress*: figure 6.2.
- 12 Dale Huntington et al., "The Postabortion Caseload in Egyptian Hospitals: A Descriptive Study," *International Family Planning Perspectives* 24, no. 1 (1998): 25-31.
- 13 World Health Organization, *Unsafe Abortion: Global and Regional Estimates of the Incidence of Unsafe Abortion and Associated Mortality in 2003* (Geneva: WHO, 2007): table 2.
- 14 Weeam S. Hammoudeh and Niveen ME Abu-Rmelieh, "Factors Associated With the Use of Family Planning Among Palestinian Women," paper presented at the 26th International Population Conference of the International Union for the Scientific Study of Population, Marrakech, Morocco, October 2009.
- 15 Special tabulations by El-Zanaty and Associates.
- 16 Special tabulations by PAFAM.
- 17 Carl Haub, *2010 World Population Data Sheet* (Washington, DC: Population Reference Bureau, 2010).
- 18 Anne-Marie Nybo Andersen et al., "Is Maternal Age an Independent Risk Factor for Fetal Loss?" *Western Journal of Medicine* 173, no. 5 (2000): 331; and Graziella Caselli, Jacques Vallin, and Guillaume J. Wunsch, *Demography: Analysis and Synthesis* (London: Elsevier, 2006).
- 19 Ragui Assaad and Farzaneh Roudi-Fahimi, *Youth in the Middle East and North Africa: Demographic Opportunity or Challenge?* (Washington, DC: Population Reference Bureau, 2007); and Jocelyn DeYong et al., *Young People's Sexual and Reproductive Health in the Middle East and North Africa*

(Washington, DC: Population Reference Bureau, 2007), accessed at www.prb.org, on June 15, 2010.

- 20 UN Population Division, *World Population Prospects: The 2008 Revision—Data Online*, accessed at <http://esa.un.org/unpp/index.asp>, on June 25, 2010.
- 21 Calculated based on data from UN Population Division, *World Population Prospects: The 2008 Revision—Data Online*, the Palestine PAPFAM, and the Egypt DHS survey.
- 22 Rashad, Osman, and Roudi-Fahimi, *Marriage in the Arab World*.
- 23 "Patrimony Blues," *Al-Ahram Weekly Online*, issue no. 747 (2005), accessed at <http://weekly.ahram.org.eg/2005/747/fe1.htm>, on Feb. 25, 2010; "Egypt: Landmark Paternity Case Highlights Dangers of Urfi Marriage" (2006), accessed at <http://irinnews.org/report.aspx?reportid=26954>, on Feb. 25, 2010; and Jill Carroll and Ahmed Maher, "Young Egyptian Couples in a Hurry Tie Temporary Knot," *The Christian Science Monitor* (Sept. 20, 2007), accessed at www.csmonitor.com/2007/0920/p01s08-wome.html, on June 15, 2010.
- 24 Interagency Youth Working Group, "Postabortion Care for Youth," *Youth Lens on Reproductive Health and HIV/AIDS*, no. 31 (May 2010).
- 25 ICF Macro, STATcompiler, accessed at www.measuredhs.com, on June 15, 2010.
- 26 Fatma El-Zanaty and Ann Way, *Egypt Demographic and Health Survey 2008* (Cairo: Ministry of Health, El-Zanaty and Associates, and Macro International, 2010): table 9.5.
- 27 Prolonged breastfeeding is not an effective family planning method after a breastfed infant reaches six months of age or supplemental food is introduced. James Trussell, "Contraceptive Efficacy," in *Contraceptive Technology: 19th Rev. Ed.*, ed. Robert A. Hatcher et al. (New York: Ardent Media, 2007): summary table, accessed at www.contraceptivetechnology.org/table.html, on June 15, 2010.
- 28 El-Zanaty and Way, *Egypt Demographic and Health Survey 2008*: table 7.1.
- 29 Trussell, "Contraceptive Efficacy": summary table.
- 30 Special tabulations produced by Sara Bradley of ICF Macro using the 2008 Egypt DHS and the 2007 Jordan DHS.
- 31 UN Population Fund (UNFPA), *Empowering Women Through Education*, accessed at www.unfpa.org/gender/empowerment2.htm, on June 25, 2010; and Cynthia B. Lloyd, *New Lessons— the Power of Educating Adolescent Girls: A Girls Count Report on Adolescent Girls*, accessed at www.popcouncil.org/pdfs/2009PGY_NewLessons.pdf, on June 25, 2010.

This work was funded by the Ford Foundation office in Cairo.

© 2010 Population Reference Bureau. All rights reserved.



PRB's Middle East and North Africa Program

The goal of the Population Reference Bureau's Middle East and North Africa (MENA) Program is to respond to regional needs for timely and objective information and analysis on population, socioeconomic, and reproductive health issues. The program raises awareness of these issues among decisionmakers in the region and in the international community in hopes of influencing policies and improving the lives of people living in the MENA region. MENA program activities include: producing and disseminating both print and electronic publications on important population, reproductive health, environment, and development topics (many publications are translated into Arabic); working with journalists in the MENA region to enhance their knowledge and coverage of population and development issues; and working with researchers in the MENA region to improve their skills in communicating their research findings to policymakers and the media.

MENA Policy Briefs: Selected Titles

Abortion in the Middle East and North Africa (August 2008)

Advancing Research to Inform Reproductive Health Policies in the Middle East and North Africa (July 2008)

Young People's Sexual and Reproductive Health in the Middle East and North Africa (April 2007)

Investing in Reproductive Health to Achieve Development Goals: The Middle East and North Africa (December 2005)

Marriage in the Arab World (September 2005)

Islam and Family Planning (August 2004)

Progress Toward the Millennium Development Goals in the Middle East and North Africa (March 2004)

These policy briefs are available in both English and Arabic and can be ordered free of charge by audiences in the MENA region by contacting the Population Reference Bureau via e-mail (prborders@prb.org) or at the address below. They can also be viewed online at PRB's website (www.prb.org).

POPULATION REFERENCE BUREAU

The Population Reference Bureau **INFORMS** people around the world about population, health, and the environment, and **EMPOWERS** them to use that information to **ADVANCE** the well-being of current and future generations.

www.prb.org

POPULATION REFERENCE BUREAU

1875 Connecticut Ave., NW
Suite 520
Washington, DC 20009 USA

202 483 1100 **PHONE**
202 328 3937 **FAX**
popref@prb.org **E-MAIL**