# Patterns of Desired Fertility and Contraceptive Use in Kuwait

By Nasra M. Shah, Makhdoom A. Shah and Zoran Radovanovic

**Context:** Despite moderate levels of contraceptive use and a rapidly changing socioeconomic structure, fertility remains high in Kuwait. Little is known about what factors characterize women in a highly pronatalist society who have smaller families.

**Methods:** Interviews were conducted from January to March 1994 with a random sample of 615 currently married, nonpregnant Kuwaiti women aged 15–49 in two of the country's five major residential areas. Regression analyses were used to determine the predictors of ideal family size, desire for another child and contraceptive use.

**Results:** The mean ideal number of children desired by Kuwaiti women was 5.3. Fifty percent of the women were practicing contraception, mainly to space births. Forty-one percent said they wanted no more children, but only 45% of them were using a method. In comparison with non-Bedouins and women with fewer living children, Bedouins and women with more children desired significantly larger families and were significantly less likely to say they wanted to stop childbearing. Contraceptive use was significantly higher among non-Bedouins, women who had reached or exceeded their ideal number of children and those who had a primary or secondary education, and it rose with the number of living children and the husband's level of education.

**Conclusions:** In a social setting that encourages high fertility, number of living children and ethnic background are the most important factors in whether women want to stop childbearing and whether they use contraceptives, as well as in how many children they consider ideal.

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n analysis of trends in fertility desires among women in more than 20 developing countries based on Demographic and Health Survey data shows that the mean number of desired children declined in each country between the 1970s and the 1990s. However, the level of desired fertility varied significantly across geographical regions. The average ideal number of children in Sub-Saharan Africa was 5.8, compared with 2.5–4.0 children in Asian and Latin American countries.<sup>1</sup>

Desired fertility in Arab countries tends to fall between levels in Sub-Saharan Africa and levels in Asia and Latin America. Women interviewed in the 1989-1990 Sudan Demographic and Health Survey considered 5.9 children ideal,<sup>2</sup> while those participating in the 1990 Jordan Population and Family Health Survey wanted an average of 4.4 children<sup>3</sup> and respondents in the 1991/1992 Yemen Demographic and Maternal and Child Health Survey wanted 5.4.4 In 1995, the Panel Survey on Population and Health found that Moroccan women considered 3.7 children ideal;<sup>5</sup> in the same year, participants in the Egyptian Demographic and Health Survey said they wanted 2.8 children, on average.<sup>6</sup>

These surveys have generally found differences in desired fertility between urban and rural areas. Rural women wanted one child more than urban women in Sudan (6.3 vs. 5.3) and Morocco (3.7 vs. 2.7); in Yemen, the difference was slightly greater (5.6 vs. 4.4 children). In the other two countries, differences were small: In Jordan, rural women wanted 4.6 children and women in large urban areas 4.3, while in Egypt, rural women considered 3.0 children ideal, compared with 2.6 for urban women.

A 1996 analysis of survey data from 17 Arab states suggests that the fertility transition in most countries is being led by urban, literate women, resulting in the emergence of new "demographic inequalities." According to another study, the wife's education has a stronger negative impact than the husband's on desired and actual family size in urban areas, while the husband's educational level is more important in rural areas. 8

Several analyses in developing countries have examined the effect of desired fertility on contraceptive use. A longitudinal study in Bangladesh concluded that the intention to use a method and the desire for additional children are significant predictors of subsequent contraceptive use. <sup>9</sup> In Pakistan, women who have more children than their ideal and do not want any more are four times as likely to have used con-

traceptives as are women who have fewer children than their ideal and want more. <sup>10</sup> Data from 18 developing countries reveal that the impact of fertility preferences on contraceptive use and fertility is significant but highly variable across countries. <sup>11</sup> In a survey of rural women in Sri Lanka, however, neither reproductive intentions nor a woman's social and demographic background explain much of the variability in contraceptive use. <sup>12</sup>

Research has shown that women who desire fewer children and intend to stop childbearing achieve lower fertility levels. In an analysis of 18 developing countries, the average fertility rate of women who did not want additional children was 43% lower than the rate for women who had not completed their desired childbearing.<sup>13</sup> A 1991 study among Sri Lankan women revealed moderately strong consistency between the desire for another child and a subsequent birth. 14 In India, however, an analysis using longitudinal data found that women stop childbearing at levels lower than they desire once they achieve their ideal number of sons.<sup>15</sup>

Thus, research on the relationship between fertility desires and fertility control presents a varied picture across countries. Some studies suggest a fairly substantial association, while others suggest only a marginal one. Moreover, despite the observed inverse association between low desired fertility and higher contraceptive use, a substantial level of unwanted and unintended fertility is present in many countries. <sup>16</sup>

In this article, we report on the results of the first household survey in Kuwait to include questions on desired family size. We then analyse the determinants of ideal family size and desire for another child, and examine the impact of various measures of desired family size on contraceptive use.

Nasra M. Shah is an associate professor in the Department of Community Medicine, Faculty of Medicine; Makhdoom A. Shah is chairman, Health Information Administration, Faculty of Allied Health Sciences and Nursing; and Zoran Radovanovic is a professor in the Department of Community Medicine and Behavioral Sciences, Faculty of Medicine, all at Kuwait University. The authors are grateful to Indu Menon for her committed research assistance. Funding for the study on which this article is based was provided by Kuwait University under grant MC 034.

# A Pronatalist Society

Kuwaitis consider large families ideal: In a 1996 survey, married women said, on average, that they wanted 5.7 children. Actual fertility is also high. The Kuwait Child Health Survey of 1987—the most recent source of data available—found a total fertility rate of 6.5 lifetime births per woman, based on births in the preceding year. 18

This high fertility rate is sustained by several demographic, social and political factors. Many Kuwaitis believe that the country needs more nationals, given the very high numbers of "temporary" foreign workers: Non-Kuwaitis constituted about 62% of all residents in the country in mid-1994. In addition, the need for political security is very acutely felt, particularly since the Iraqi occupation of the country in 1990–1991. Compared to its immediate neighbors (Iraq, Iran and Saudi Arabia), Kuwait has a small population and would therefore like to augment its numbers.

Although Kuwaiti law does not prescribe a "desirable" number of children, the government's policies are clearly pronatalist. For example, a monthly child allowance of KD 50 (U.S. \$170) is provided for each child, and mothers are given extended maternity leave for the delivery and postpartum care of the child. A Kuwaiti woman is entitled to two months' leave with full salary after delivery and another four months' leave with half salary.

Government policies aimed at enhancing the social welfare of families reduce the cost of children, and may thus contribute to the maintenance of a large ideal family size. Most notable are the government-financed education of Kuwaiti children through the university and postgraduate level; subsidies on food, housing, water and electricity; and government-financed health care.

In addition, a job is essentially guaranteed for any Kuwaiti seeking one, which further reduces the uncertainty that may be a part of the fertility decision-making process in other countries. Pension benefits are also guaranteed by the government. Finally, domestic workers brought in from Sri Lanka, the Philippines and India reduce the physical stress associated with rearing large numbers of children. (A housemaid's monthly salary is only about KD 35–40, less than the allowance

given by the government for one child.)

Childbearing is an essential social role for Kuwaiti women. Some women feel that if they cannot have more children, they have lost their femininity, and some fear that their husband will marry another wife. Kuwaiti women who have as many as 10 children but have not conceived for a few years have sought consultation at infertility clinics.<sup>20</sup>

In addition, Kuwaiti society has tribal roots in which members of the same clan are expected to help each other in many different ways, including election to a political office. Thus, the number of persons in a family is a source of social significance and strength, especially if some hold influential positions and are well connected. Such persons are a source of *wasta*, or the social influence that is often necessary to get things done.

# Methods

#### Data

This analysis is based on interviews conducted from January through March 1994 with 615 currently married, nonpregnant Kuwaiti women\* younger than 50 in two of the country's five major residential areas (governorates), one the most developed (Capital) and the other the least developed (Jahra) in the country. Women in each area were selected through a multistage stratified random sampling procedure.

We obtained a listing of all districts (*mantaqas*) and subdistricts (*qitaas*) in the Capital and Jahra governorates from the Public Authority for Civil Information, along with the number of households and the number of persons in each household. We randomly picked five districts from Jahra and four from Capital.

From each of the selected districts, we randomly chose one subdistrict for inclusion in the study. Within each subdistrict, we selected every second household, using a list obtained from the Public Authority for Civil Information that provided the name of the household head and the address and telephone number for each household.

For every household, we listed all members who usually lived and ate together and then collected information on the socioeconomic characteristics of each person and his or her relationship to the household head. We interviewed all evermarried women (regardless of age) who agreed to participate; the refusal rate was 2% in Jahra and 4% in Capital. The analyses described in this article, however, included only currently married, nonpregnant women younger than 50.

## **Explanatory Variables**

Our analysis of fertility focused on number of living children, wife's age at marriage, twife's work status, educational level of husband and wife, and ethnic group (Bedouin or non-Bedouin).

• *Number of living children*. The number of

- children already born is a very important influence on the desire for additional children and on the desire to stop childbearing.

   Age at marriage. The mean age at marriage among Kuwaiti women increased from 18.9 years in 1965 to 23.5 years in 1995. A rising age at marriage is strongly associated with higher levels of education and labor market participation for women. This variable can therefore affect desired fertility and contraceptive use through several pathways.
- Wife's employment. Over the last three decades, increasing numbers of Kuwaiti women have entered the workforce, mainly as teachers in schools for girls and young women or as clerical workers in settings not usually segregated by sex. The percentage of women employed outside the home rose from 2% in 1965 to more than 26% in 1995. Rising female participation in the workforce in other countries has been associated with a decline in desired fertility and an increase in contraceptive use, but little is known about this relationship in Kuwait.

Table 1. Average number of children that married Kuwaiti women consider ideal (and standard deviation), by selected socioeconomic and demographic characteristics, 1994

| Characteristic                                       | N                 | Ideal no.                              |
|--|-------------------|--|
| Total  | 581               | 5.3 (2.0)                              |
| No. of living children<br>0-2<br>3-5<br>≥6           | 221<br>204<br>156 | 4.8 (1.7)***<br>5.0 (1.6)<br>6.3 (2.3) |
| <b>Age at marriage</b><br><18<br>18–20<br>≥21        | 196<br>217<br>168 | 5.7 (2.4)***<br>5.2 (1.8)<br>4.8 (1.5) |
| <b>Ethnicity</b><br>Bedouin<br>Non-Bedouin           | 326<br>255        | 5.6 (2.1)***<br>4.8 (1.6)              |
| Wife's education<br>None<br>1–11 yrs.<br>≥12 yrs.    | 125<br>217<br>239 | 6.3 (2.5)***<br>5.0 (1.8)<br>4.9 (1.6) |
| Husband's education<br>None<br>1–11 yrs.<br>≥12 yrs. | 65<br>248<br>267  | 6.3 (2.7)***<br>5.3 (2.0)<br>4.9 (1.6) |
| Wife's employment<br>Not working<br>Working          | 425<br>156        | 5.4 (2.1)***<br>4.9 (1.5)              |

<sup>\*\*\*</sup>Difference within category is statistically significant at p<.001 (t test).

<sup>\*</sup>Our survey included only Kuwaiti nationals. Non-Kuwaitis were omitted from the survey because they are a highly diverse group including more than 100 different nationalities, and most are male migrant workers.

tWe did not include the wife's current age as a variable in our analyses because it was highly collinear with number of living children (Pearson's correlation=.696, p<.001).

Table 2. Coefficients (and standard errors) from multiple regression showing the effects of socioeconomic and demographic characteristics on ideal number of children

| Characteristic                                       | Coefficient                           | Mean value of variable |
|--|---------------------------------------|------------------------|
| No. of living children<br>Ethnic group†<br>Husband's | 0.197 (0.032)***<br>-0.735 (0.169)*** | 4.05<br>na             |
| education (years)<br>Wife's                          | 0.003 (0.003)                         | 9.6                    |
| education (years)                                    | 0.005 (0.021)                         | 8.4                    |
| Age at marriage                                      | -0.014 (0.022)                        | 19.25                  |
| Wife's employment‡                                   | -0.047 (0.212)                        | na                     |
| Constant<br>Adjusted R <sup>2</sup>                  | 5.794 (0.767)***<br>.145              |                        |

<sup>\*\*\*</sup>Significant at p<.001. †Bedouin coded 0; non-Bedouin coded 1. \*Nonworking coded 0; working coded 1. \*Note: na=not applicable.

- Educational level. The literacy and educational level of the Kuwaiti population has changed rapidly, with the gender gap narrowing substantially. Among women aged 10 or older, the proportion who were illiterate fell from 72% in 1965 to 16% in 1995. During the same period, the percentage with a secondary or higher education rose from less than 1% to 14%. In most developing countries, increases in women's education have been associated with a reduction in fertility.<sup>21</sup> In a male-dominated society like Kuwait, the husband's educational level is also likely to be a significant predictor of contraceptive behavior.
- Ethnic background. We consider Bedouins as a distinct ethnic group with relatively traditional customs and beliefs. For example, Bedouins marry earlier, are more likely to marry within the family and seem to have stronger family loyalties than non-Bedouins. Previous research in Kuwait found a significant difference in contraceptive knowledge and use between Bedouins and non-Bedouins. <sup>22</sup> In terms of population size and infrastructure development, Kuwait is almost completely urbanized. In the absence of a rural-urban distinction, Bedouins might be considered the equivalent of a rural population in Kuwaiti society.
- Measures of desired fertility. Our analysis of contraceptive use examined two measures of desired fertility as explanatory variables. We first asked women if they wanted more children. We also asked, "In your opinion, how many children should a married couple like you have?"

The great majority (94%) of women provided numerical responses to the latter question on ideal family size. The 34 women who provided nonnumerical responses were excluded from the analysis. Another four women were excluded because they did not provide a numerical response to the question on additional wanted children.

## **Results**

#### **Ideal Family Size**

On average, the women in our sample considered 5.3 children the ideal number that a married couple should have (Table 1). A very small proportion (7%) wanted 1-3 children, while about 40% desired six or more children (not shown). None thought childlessness was ideal. As expected, we found a significant positive association between the number of living children and desired fertility. Women with 0-2 living children considered 4.8 children ideal, compared with 6.3 among women with six or more children. Women who had married before they were 18 years old wanted about one child more, on average, than women who had married at age 21 or older (5.7 vs. 4.8 children).

Significant differences in the average ideal family size existed between Bedouin women (5.6 children) and non-Bedouin women (4.8). Women who were illiterate wanted 6.3 children, while those who had had formal schooling desired about five children. Differences in desired fertility according to husband's education followed a similar pattern. Women's employment had the expected effect, with women who did not work desiring significantly more children than those who did (5.4 vs. 4.9). Thus, for most of the social and demographic variables, the difference between the largest and the smallest ideal family size was only 1.0-1.5 children.

To assess the net effect of these explanatory variables on ideal family size, we conducted a multiple regression analysis. As Table 2 shows, only two variables—number of living children and ethnicity—had sta-

tistically significant effects. Ideal family size rose sharply with the number of living children, and Bedouin ethnicity was predictive of a significantly higher ideal. The six variables together explained almost 15% of the variance in ideal family size.

In a second model run without number of living children as an explanatory variable (not shown), the effect of ethnic group remained highly significant. The effects of age at marriage and wife's education were negative, while the effect of husband's education was marginally positive. However, this model explained only 9% of variance, indicating that the exclusion of the number of living children lowered its predictive power.

#### Desire for Another Child

At the time of the survey, 41% of married Kuwaiti women did not want another child (Table 3). Overall, that proportion rose from 13% of women who had 0–2 children to 37% of women who had 3–5 children and 82% of women who had six or more children. This strong association also occurred in each socioeconomic and demographic subgroup.

Surprisingly, when the number of living children was held constant, women with less than a secondary education were more likely to want to stop childbearing than were women with more education; this difference was greatest among women with 0–2 children.

The desire to stop childbearing differed notably according to the ethnic group to which the woman belonged. Non-Bedouin women were much more likely than Bedouin women to want no more children. Among those with 3–5 living children, for example, 43% of non-Bedouin women wanted to stop childbearing, compared with 27% of Bedouin women.

We conducted a logistic regression analysis to determine the independent effects of the socioeconomic and demographic characteristics on the desire to end childbearing. Apart from number of living children, ethnic group was the only variable that had a highly significant effect on the desire to end childbearing

Table 3. Percentage of married Kuwaiti women who want no more children, by selected characteristics, according to number of living children

| N   | INO. OI IIV  | ing children  |   |  |
|-----|--|---|---|--|
|     | Total  | 0–2   | 3–5   | ≥6   |
| 611 | 41.0   | 13.3  | 36.7  | 82.2   |
|     |  |   |   |  |
| 361 | 52.6   | 19.4  | 38.1  | 82.9   |
| 250 | 24.0   | 8.6   | 34.9  | 75.0   |
|     |  |   |   |  |
| 333 | 50.8   | 18.3  | 38.4  | 81.8   |
| 277 | 29.2   | 9.0   | 35.5  | 83.9   |
|     |  |   |   |  |
| 451 | 46.1   | 13.8  | 39.1  | 82.9   |
| 160 | 26.3   | 11.9†   | 32.5  | 70.0†  |
|     |  |   |   |  |
| 195 | 10.8   | 7.3   | 21.4†   | 50.0†  |
| 416 | 55.0   | 25.3  | 40.2  | 82.6   |
|     |  |   |   |  |
| 343 | 39.4   | 11.2  | 27.0  | 80.0   |
| 268 | 42.9   | 16.3  | 43.4  | 87.0   |
|     | 361<br>250<br>333<br>277<br>451<br>160<br>195<br>416 | 611     41.0       361     52.6       250     24.0       333     50.8       277     29.2       451     46.1       160     26.3       195     10.8       416     55.0       343     39.4 | 611     41.0     13.3       361     52.6     19.4       250     24.0     8.6       333     50.8     18.3       277     29.2     9.0       451     46.1     13.8       160     26.3     11.9†       195     10.8     7.3       416     55.0     25.3       343     39.4     11.2 | 611         41.0         13.3         36.7           361         52.6         19.4         38.1           250         24.0         8.6         34.9           333         50.8         18.3         38.4           277         29.2         9.0         35.5           451         46.1         13.8         39.1           160         26.3         11.9†         32.5           195         10.8         7.3         21.4†           416         55.0         25.3         40.2           343         39.4         11.2         27.0 |

†Fewer than 10 cases

(Table 4). Net of other characteristics, non-Bedouin women were 2.7 times as likely as Bedouin women to say they wanted no more children.

#### Contraceptive Prevalence

Among the women in our sample, 67% had ever used a contraceptive method (Table 5). Of the social and demographic characteristics included in the analysis, five—number of live births,\* ethnicity, desire for more children, ideal number of children and ideal vs. actual number of children—were significantly associated with ever-use. The proportion who had ever used a method was highest among women who had had 3-5 live births (84%), non-Bedouins (74%), women who wanted no more children (79%), those who considered 5-6 children ideal (74%) and those whose actual number of children matched their ideal number (83%).

Fifty percent of the women were using a method at the time of the survey. Of these, 75% were relying on the pill, 16% had an IUD, 3% were using condoms, 1% were sterilized and the remaining 5% were using other methods such as withdrawal (data not shown).

In general, the patterns of current use in the social and demographic subgroups were similar to those for ever-use (Table 5). However, two characteristics not associated with ever-use—the husband's level of

Table 4. Logistic regression coefficients (and standard errors) and odds ratios indicating effects of women's characteristics on the desire for no more children

| Characteristic                                       | Coefficient                               | Odds ratio            |  |
|--|---|-----------------------|--|
| No. of living children<br>0-2<br>3-5<br>≥6           | ref<br>1.185*** (.255)<br>2.823*** (.323) | 1.00<br>3.27<br>16.83 |  |
| Age at marriage<br><18<br>18–20<br>≥21               | ref<br>-0.418 (.252)<br>-0.607* (.299)    | 1.00<br>0.66<br>0.54  |  |
| Ethnicity<br>Bedouin<br>Non-Bedouin                  | ref<br>0.987*** (.248)                    | 1.00<br>2.68          |  |
| Wife's education<br>None<br>1–11 yrs.<br>≥12 yrs.    | ref<br>-0.352 (.324)<br>-0.674 (.412)     | 1.00<br>0.70<br>0.51  |  |
| Husband's education<br>None<br>1–11 yrs.<br>≥12 yrs. | ref<br>-0.600 (.398)<br>-0.743 (.434)     | 1.00<br>0.55<br>0.48  |  |
| <b>Wife's employment</b><br>Not working<br>Working   | ref<br>-0.246 (.258)                      | 1.00<br>0.78          |  |

\*p<.05. \*\*p<.01. \*\*\*p<.001. Notes: Women who wanted no more children were coded one, while those who wanted more were coded zero; ref=reference group.

education and the wife's employment—were significantly associated with current use. The wife's education was the only variable not associated with either measure.

To analyze the net effect of desired fertility on current contraceptive use, we conducted a logistic regression analysis, using the six socioeconomic and demographic characteristics described earlier as predictors of use. We then constructed two additional models that added measures of desired fertility. Table 6 shows the adjusted odds ratios of current use according to the various models.

In the basic model, the number of living children was the most important variable: Women who had six or more living children were 5.6 times as likely to be using a method as were women who had two or fewer children. Husband's education was also a highly significant predictor of current use. Women whose husband had a secondary or higher education were 3.5 times as likely as women whose husband was illiterate to be current users.

The woman's own education had an unexpected curvilinear association with current use. Compared with women who were illiterate, those with 1–11 years of education were twice as likely to be using a method. However, the likelihood of use among women with a secondary or higher education was not significantly different from that among illiterate women. Finally, non-Bedouin women were 1.6 times as likely as Bedouin women to practice contraception. Neither age at marriage nor the wife's participation in the labor force had a significant effect on current use.

In the second model, the woman's desire for another child was added to the socioeconomic and demographic variables. The results remained essentially unchanged, suggesting that the desire to stop childbearing, net of the other variables, did not have a significant effect on current use.

In the third model, we introduced a measure of desired fertility that compared the respondent's ideal number of children with her actual number of children. When the effects of the socioeconomic and demographic variables were accounted for, women who had achieved or exceeded their ideal number of children were about twice as likely to be current users as were women who had not yet reached their ideal number. Fertility desires thus had a significant impact on contraceptive behavior. As in the basic model, current use rose significantly with the number of living children and the level of husband's education, and was significantly and positively associated with non-Bedouin ethnicity.

Table 5. Percentage of married Kuwaiti women who have ever used or are currently using a contraceptive, by selected characteristics

| Contraceptive, by   | 3010010                        | o characte              | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
|---|--------------------------------|-------------------------|---|
| Characteristic  | N                              | Ever<br>used            | Currently using                         |
| Total   | 615                            | 66.5                    | 49.8                                    |
| No. of living children<br>0-2<br>3-5<br>≥6  | n†<br>227<br>212<br>176        | 40.7***<br>83.7<br>77.8 | 32.2***<br>64.2<br>55.1                 |
| Ethnicity<br>Bedouin<br>Non-Bedouin   | 347<br>268                     | 60.8***<br>73.9         | 42.4***<br>59.3                         |
| Wife's education<br>None<br>1–11 yrs.<br>≥12 yrs.   | 142<br>222<br>251              | 64.8<br>69.4<br>64.9    | 40.1<br>54.5<br>51.0                    |
| Husband's education<br>None<br>1–11 yrs.<br>≥12 yrs.  | 73<br>264<br>277               | 63.0<br>65.2<br>68.6    | 31.5*<br>48.9<br>55.2                   |
| Wife's employment<br>Not working<br>Working   | 455<br>160                     | 64.4<br>72.5            | 46.6*<br>58.8                           |
| <b>Desire more childre</b><br>Yes<br>No   | <b>n</b><br>361<br>250         | 57.9***<br>79.2         | 46.3***<br>54.8                         |
| Ideal no. of children<br>1–4<br>5–6<br>≥7   | 260<br>236<br>87               | 61.2*<br>73.7<br>59.8   | 48.1**<br>57.6<br>34.5                  |
| Ideal vs. actual no. o<br>Ideal>actual<br>Ideal=actual<br>Ideal <actual< td=""><td>of childre<br/>367<br/>79<br/>135</td><td>55.2***<br/>83.3<br/>82.4</td><td>42.5***<br/>63.3<br/>61.5</td></actual<> | of childre<br>367<br>79<br>135 | 55.2***<br>83.3<br>82.4 | 42.5***<br>63.3<br>61.5                 |

\*Difference within category is statistically significant at p<.05  $(\chi^2$  test). \*\*Difference within category is significant at p<.01  $(\chi^2$  test). \*\*Difference within category is significant at p<.001  $(\chi^2$  test). †In the case of ever-use, number of children ever born.

# Discussion

Our analyses suggest that the number of living children is the single most important factor in determining whether Kuwaiti women desire to stop childbearing and whether they use contraceptives. Although the married women in our study wanted an average of 5.3 children, many of them began some form of fertility control before reaching that number. Of those who had ever used a contraceptive method, Bedouin women had had an average of 3.1 children when they first used a method, and non-Bedouin women had had an average of 1.9 children. It is clear, therefore, that many women use contraceptives to space births.

Our study also showed that a woman's ethnic background is a significant predictor of fertility desires and contraceptive use in Kuwait. Compared to Bedouin women, non-Bedouins desired fewer chil-

<sup>\*</sup>In the analysis of ever-use, the number of live births was used as a variable instead of the number of living children.

dren, were more likely to want to stop childbearing and reported higher levels of current use, net of socioeconomic and demographic characteristics.

The wife's educational level was not a significant predictor of her ideal family size or her desire to stop childbearing. Contraceptive practice varied little among educated women by years of schooling; nevertheless, illiterate women were significantly less likely than educated women to practice contraception. Moreover, the ideal family size of women with no schooling was significantly larger than that of those with any education. It seems that once a woman enters the school system, her attitudes toward fertility change, even if she completes only a few grades.

The husband's educational level was a stronger predictor of contraceptive use than was the wife's educational level, suggesting that husbands exert great influence on their wife's contraceptive behavior. Moreover, the husband's desire for

Table 6. Odds ratios from logistic regression showing effects of selected characteristics on current use of contraceptives, according to adjustment for fertility desires

| Characteristic  | Odds ratio                                  |  |  |
|---|---|--|--|
|   | Unadjus-<br>ted for<br>fertility<br>desires | Adjusted<br>for desire<br>for more<br>children | Adjusted<br>for ideal<br>vs. actua<br>family siz |
| No. of living childre   | en  |  |  |
| 0–2<br>3–5<br>≥6  | 1.00<br>3.47***<br>5.63***                  | 1.00<br>3.46***<br>5.42***                     | 1.00<br>2.94***<br>3.43***                       |
| Age at marriage   |   |  |  |
| <18<br>18–20<br>≥21   | 1.00<br>1.04<br>0.85                        | 1.00<br>1.05<br>0.86                           | 1.00<br>1.15<br>0.87                             |
| Ethnicity   |   |  |  |
| Bedouin<br>Non-Bedouin  | 1.00<br>1.55*                               | 1.00<br>1.55*                                  | 1.00<br>1.64*                                    |
| Wife's education  |   |  |  |
| None<br>1–11 yrs.   | 1.00<br>2.01*                               | 1.00<br>1.98*                                  | 1.00<br>2.14*                                    |
| ≥12 yrs.  | 1.54  | 1.53   | 1.53   |
| Husband's educati   | on  |  |  |
| None  | 1.00  | 1.00   | 1.00   |
| 1–11 yrs.<br>≥12 yrs.   | 2.62**<br>3.48***                           | 2.67**<br>3.54***                              | 2.78**<br>3.93***                                |
| Wife's employment   | t   |  |  |
| Not working   | 1.00  | 1.00   | 1.00   |
| Working   | 1.48  | 1.47   | 1.61   |
| Desire for children   |   | 1.00   |  |
| Want more<br>Want no more   | na<br>na                                    | 1.00<br>1.02                                   | na<br>na   |
| Ideal vs. actual  |   |  |  |
| no. of children<br>Ideal>actual                                     | na  | na   | 1.00   |
| Ideal=actual  | na  | na   | 1.93*  |
| Ideal <actual< td=""><td>na</td><td>na</td><td>2.13*</td></actual<> | na  | na   | 2.13*  |

\*p≤.05. \*\*p≤.01. \*\*\*p≤.001. *Note:* na=not applicable.

children and his attitude toward contraception are likely to have an impact on the wife's desires as well as on her contraceptive behavior. Thus, obtaining the husband's support is likely to be a major factor in advancing contraceptive practice in Kuwait. It is important, therefore, that future studies ascertain the role of both partners in contraceptive decision-making.

Women's participation in the labor market, which was included to reflect women's changing roles in Kuwaiti society, was not a significant predictor of desired fertility or contraceptive use once the effects of all other variables were accounted for. Female employment is expected to be a liberating force in a transitional society, because exposure to nontraditional ideas and support for such ideas are likely to be greater in the workplace. In addition, women with a career orientation may find that repeated childbearing creates conflicts for them. Nevertheless, such factors as liberal maternity benefits might reduce the possible dampening effect of work on women's desire for children.

The stated desire to stop childbearing did not have a significant effect on reported contraceptive use, once the effects of other variables were accounted for. However, women who had reached or exceeded their ideal family size were significantly more likely to be using a method than were women who had not reached their ideal. Hence, it appears that the ideal number of children is the more useful predictor of the woman's actual fertility behavior.

In the pronatalist setting described earlier, a slow transition toward lower desired fertility is gradually emerging, with non-Bedouin women leading the way toward smaller family ideals and contraceptive use. A relatively high demand for contraception exists, with almost half of all nonpregnant women of reproductive age currently using a modern method, mainly to delay their next birth. However, a fair amount of unmet need for contraception also exists, judging from the high level of nonuse among women who do not desire another child.

Although Kuwait does not have a government-sponsored family planning program, contraceptives are easily available, affordable and acceptable to a majority of the population. The pill and the IUD are available through the government health services. In addition, various brands of pills, as well as condoms and foam, may be bought at private pharmacies without prescription.

In this environment, prevalence may increase rapidly if ideal family size declines.

Contraceptives at present are being used mainly for spacing of births. If the ideal family size declines, the use of contraceptives to end childbearing will become more important, and women may need methods other than the pill and the IUD. Although religious attitudes may not readily permit recourse to sterilization, injectables and other long-term methods might be used effectively if marketed properly through the already existing government health care facilities.

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#### Resumen

**Contexto:** A pesar de los niveles moderados de uso de anticonceptivos y de una estructura socioeconómica que registra cambios rápidos, la fecundidad permanece elevada en Kuwait. Se conoce muy poco de los factores que caracterizan a aquellas mujeres que tienen pocos hijos en una sociedad altamente pronatalista. **Métodos:** Se realizaron entrevistas desde enero a marzo de 1994 a una muestra aleatoria de 615 mujeres actualmente casadas, no embarazadas, de entre 15 y 49 años, en dos de las principales zonas residenciales de Kuwait. Se utilizaron análisis de regresión para determinar las variables predictivas sobre el número ideal de hijos, deseos de tener otro hijo y uso de anticonceptivos. **Resultados:** El número promedio ideal de hijos de la mujer de Kuwait fue de 5,3. El 50% de las

mujeres se encontraban practicando la anticoncepción, sobre todo para espaciar los nacimientos. El 41% indicaron que no deseaban tener más hijos, aunque solamente el 45% de ellas se encontraban usando un método. Las beduinas y las mujeres que tenían más hijos deseaban familias significativamente más numerosas y eran significativamente menos proclives a indicar que querían suspender la procreación. El uso de anticonceptivos fue significativamente más elevado entre las mujeres no beduinas, mujeres que habían alcanzado o excedido su número ideal de hijos y aquellas que tenían educación primaria o secundaria, y su uso incrementó con el número de hijos vivos y el nivel de educación del marido.

Conclusiones: En un entorno social donde se alienta la fecundidad elevada, los factores de número de hijos vivos y antecedentes étnicos son los más importantes para determinar si la mujer desea suspender la procreación y si usa anticonceptivos, y cuál es el número de hijos que considera ideal.

## Résumé

Contexte: En dépit de taux de pratique contraceptive modérés et d'une structure socioéconomique en rapide évolution, la fécondité demeure élevée au Koweït. Les facteurs caractéristiques des mères de famille relativement peu nombreuse au sein d'une société nataliste sont actuellement peu connus.

**Méthodes:** Des interviews ont été menées, de janvier à mars 1994, auprès d'un échan-

tillon aléatoire de 615 Koweïtiennes mariées, non enceintes, âgées de 15 à 49 ans, dans deux des cinq principales zones résidentielles du pays. Les facteurs de prédiction du nombre idéal d'enfants, du désir d'avoir encore un enfant et de la pratique contraceptive ont été évalués par analyse de régression.

**Résultats:** Les Koweïtiennes souhaitent avoir, en moyenne, 5,3 enfants. Cinquante pour cent des femmes pratiquaient la contraception, à des fins d'espacement des naissances surtout; 41% ont déclaré ne plus vouloir d'enfants, mais 45% d'entre elles seulement pratiquaient une méthode contraceptive. Par comparaison avec les nonbédouines et les mères d'un moindre nombre d'enfants vivants, les bédouines et les mères de famille nombreuse désiraient un nombre d'enfants nettement supérieur et étaient nettement moins susceptibles de se déclarer désireuses de ne plus avoir d'enfants. La pratique contraceptive s'est révélée nettement plus élevée parmi les non-bédouines, les femmes qui avaient atteint ou dépassé leur nombre d'enfants idéal et celles qui avaient bénéficié d'un enseignement primaire ou secondaire. Cette pratique était également d'autant plus élevée que le nombre d'enfants vivants était grand et que le niveau d'éducation du mari était élevé.

Conclusions: Dans un cadre social qui encourage une fécondité élevée, le nombre d'enfants vivants et les origines ethniques sont les facteurs les plus importants dans la volonté des femmes de ne plus avoir d'enfants et de pratiquer la contraception, et la détermination du nombre d'enfants considéré comme idéal.

### Correction

In "Couples' Fertility and Contraceptive Decision-Making in Developing Countries: Hearing the Man's Voice," by Akinrinola Bankole and Susheela Singh [1998, 24(1):15–24], the first paragraph of page 22 should read as follows:

"When spouses' fertility intentions disagree, there is no clear pattern with respect to the direction of contraceptive use. The difference in use according to which spouse wants no more children is generally trivial—less than eight percentage points in 12 countries. For the remaining six countries, however, the differences are more substantial: In four countries (Burkina Faso, Côte d'Ivoire, Malawi and Senegal), the proportion using a method is at least nine points higher when only the husband wants to stop having children, while in two countries (Egypt and Tanzania), it is at least 12 points higher when only the wife wants no more children."

The corrected text can be downloaded at <a href="http://www.agi-usa.org/pubs/journals/2401598.html">http://www.agi-usa.org/pubs/journals/2401598.html</a>

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