

137073

adgc.pdf

## CHAPTER EIGHT

TE →

# REPRODUCTIVE INTENTIONS AND FUTURE FERTILITY IN EGYPT .

By

Au → Ayman Gaafar Zohry<sup>1</sup>

### 1. INTRODUCTION

Information regarding whether women intend to postpone the next birth and, specially, whether they intend to avoid any additional childbearing does have the potential to anticipate future fertility (Wesfoff, 1991). The percentage of women who want no more children in Egypt increased from 54 percent to 67% within 12 years (from 1980 to 1992). This means that almost two-thirds of married women do not want any more children. Among women who express a desire for another child, the majority want to delay the next birth two or more years; only 12 percent of married women want another child within two years (EFS, 1980; EDHS, 1992).

#### 1.1 Objectives

The study attempts to analyze reproductive intentions and their differentials by socioeconomic and demographic and to use these intentions to

---

<sup>1</sup> Ministry of Population and Family Planning, and Cairo Demographic Center.

RS9

PG → 255-68

project total fertility rates in the future. More specifically, the study is carried out to accomplish the following objectives:

1. To analyze reproductive intentions by place of residence (Urban/Rural), region, number of living children, and other socioeconomic and demographic characteristics; and
2. To forecast the future total fertility rates five years after the 1992 Demographic and Health Survey, and to extrapolate total fertility rate up to the year 2012.

### ***1.2 Review of Literature***

Westoff (1991) forecasted the future fertility for twenty seven developing countries including Egypt. He expected that the percentage of women who want no more children would increase from 60 percent to 63 percent between 1988 and 1993. Also he expected contraceptive prevalence rate would increase from 38 percent to 45 percent in the same period. the estimated total fertility rate of 1993 was 3.9. If we compare this estimate with the results of the 1992 EDHS - One year deviation - it appears to be very consistent. The equivalent numbers come from the results of this survey are 67 percent, 47.1 percent, and 3.9 live birth.

### ***1.3 Methodology***

Westoff (1990) used the strong statistical links connecting reproductive intentions, contraceptive prevalence, and fertility to provide a basis for making short-term forecasts of these parameters. These roughly five-year forecasts are based on regression equations specifying the relationships among the three

variables over time. The predicting equations are drawn from data gathered in 137 surveys conducted since the early 1970s in 86 different (almost all nations) populations. These quantified relations are used to forecast or advance fertility five years more up to the year 1997.

#### **1.4 Data Sources & Limitations**

Egypt Demographic and Health Survey II (1992) included a number of questions about fertility preferences. The value of the responses to these questions for predicting the future childbearing behavior of individual women is questionable. Women's attitudes toward childbearing change over time. Moreover, women may not be able to act on their preferences due to social pressures or the desires of other family members, particularly the husband and the mid-wife specially in rural and remote areas. However, the data on fertility preferences and intentions provide an indicator of the direction that future fertility will take, as well as an assessment of the need for family planning and extent of unwanted fertility (Westoff, 1990). In this study currently married respondents were asked: "Would you like to have another child or would you prefer not to have any more children?". If they did indeed want another child they were asked: "How long would you like to wait from now before the birth of another child?".

## **2. REPRODUCTIVE INTENTIONS**

### **2.1 Desire for More Children**

As it was mentioned before, in the 1992 EDHS all married women were asked whether they would like to have another child or not. The

responses to this question and other related questions are tabulated by age of mother in Table 1.

For the whole country almost two-thirds of married women do not want any more children. Among women who express a desire for another child, the majority want to delay the next birth two or more years; only 12 percent of married women want another child within two years (El-Zanaty, et al., 1993). The desire to have a child soon is decreasing by age. This is due to the fact that young women did not achieve the desired family size yet. Limiting childbearing increases rapidly with age. The percent of women who want no more children for the age group 45-49 is about eight-times that of women in the first age group (15-19).

## **2.2 Correlates of Reproductive Intentions**

Since there is a strong relationship between the percentage of women who want no more children and fertility, the determinants of these intentions are given more importance. The percentage of women who want no more children by place of residence (Urban/Rural), region of residence, education, work status, and number of children survivors are given in Table 2. Urban women are more likely than rural women to wish to terminate childbearing, they begin to want to limit family size at lower parities with three children say that they do not want another child versus about 70 percent of rural women.

The percent of women wanting no more children in all the regions of Egypt ranges between 71.4 and 69.0 percent except in rural Upper Egypt in which the percentage decreases to 56 only. This low percent is the outcome of the special characteristics of this region which can be considered as the less

developed region in Egypt with the highest TFR and traditional norms still hold strongly. The percent of women with five children wanting no more children in rural Upper Egypt is less than that of women in rural Lower Egypt with three children only (81.7 versus 84.7 percent).

The unexpected relation between educational level and the proportion wanting no more children among all women is at least partially a result of the concentration of more educated women at lower parities, where women are more likely to express a desire for more children. This result may be also due to the fact that age at marriage for educated women is higher than less educated women which leads to a short reproductive span. Women working for cash are more likely to want no more children than other women.

### 3. FORECASTING FERTILITY

#### 3.1 *Procedures*

According to Westoff (1991), the forecasting procedure begins with estimating the percentage of women who will want no more children (WNM at  $t+5$ ). Westoff used the regression of WNM at the time of a survey with its lagged value at an earlier survey. The estimated equation based on 33 countries with successive survey is:

$$\text{WNM}_t = 14.419 + 0.804 (\text{WNM}_{t+5}) + \text{error} \quad (1)$$

with an  $R^2$  of 0.93. Inserting the latest available observation of WNM on the right-hand side of the equation gives predicted future values of WNM for approximately five years hence.

Contraceptive prevalence rate in the future is estimated using the relation between CPR and WNM from the work of Westoff(1990), Mauldin and Segal (1988), and Westoff (1991). this equation was estimated using data from successive surveys in the same countries and yields an R2 of 0.89. The equation is:

$$\text{CPR}_{t+5} = 0.124 + 0.192 (\text{WNM}_{t+5}) + 0.859 (\text{CPR}_t) + \text{error} \quad (2)$$

The latest available CPR and the predicted value of WNM obtained from equation (1) are used.

Earlier research on the interrelationships of reproductive intentions, Contraceptive prevalence, and fertility rate showed a very high correlation with the TFR across time. This relation is modeled in the following equation:

$$\text{TFR}_{t+5} = 1.434 - 0.016 (\text{CPR}_{t+5}) + 0.728 (\text{TFR}_t) + \text{error} \quad (3)$$

with an R2 of 0.93. Equations (1), (2), and (3) are used in the following sub-sections to estimate CPR, WNM, and TFR.

### **3.2 Projecting Total Fertility Rates of 1997**

The estimates of the future percentage of married women wanting no more children and the future percentage of women practicing contraception are shown in columns 4 and 5 of Table (3). Subgroups with initially low levels are expected to achieve more increases in WNM and CPR than subgroups with initially higher levels.

The projected five-year declines in the TFR range from 0.71 birth in rural Upper Egypt to .33 birth in Urban Governorates. Women completed secondary education and more are expected to reach the reproductive fertility level in the year 1997. While women with no education are expected to have a TFR two-times its equivalent for highly educated women.

### ***3.3 Projecting Fertility Up To the Year 2012***

One may ask, Why the year 2012?. The population strategy of Egypt set an ambitious target of 2.3 TFR for the year 2012 - the last year in the strategy (NPC, 1995). In this sub-section I try to answer the following question:

*What will be the expected total fertility rate and the equivalent contraceptive prevalence rate if we used the results of 1997 in successive procedures up to the year 2012?.*

Applying equation number 3 to the forecasted WNM, CPR, and TFR reveals a total fertility rate of 2.2 live births in the year 2012. This result is too much consistent with the ambitious target of the national strategy. As shown in Table 4 the percentage of women who want no more children is expected to increase from 66.8 to 70.8 from 1992 to 2012 while CPR is expected to increase from 47.1 to 69.3. TFR is expected to decline from 3.93 to 2.2 live births per woman. The decline is 1.73 live births within 20 years period.

#### **4. CONCLUSIONS**

In this study an attempt is made to study the relationship between reproductive intentions, contraceptive prevalence, and total fertility rate. This relationship is used to forecast future fertility up to the year 2012. Data used in the study come from the 1992 Egypt Demographic and Health Survey.

The conclusions to be drawn from the analysis that carried out in this study can be summarized in the following points:

- First; almost two-thirds of married women do not want any more children. Among women who express a desire for another child, the majority want to delay the next birth two or more years; only 12 percent of married women want another child within two years.
- Second; the percent of women wanting no more children in all the regions of Egypt ranges between 71.4 and 69.0 percent except in rural Upper Egypt in which the percentage decreases to 56 only.
- Third; total fertility rate is expected to decline from 3.93 live births in 1992 to 3.44 live births per woman in 1997. The decline in TFR vary by region and education. It ranges from 0.71 birth in rural Upper Egypt to .33 birth in Urban Governorates. Women completed secondary education and more are expected to reach the reproductive fertility level in the year 1997. While women with no education are expected to have a TFR two-times its equivalent for highly educated women.



Fourth; total fertility rate is expected to decline to 2.2 live births per woman in the year 2012. This result is consistent with the prospects of the national population strategy (2.3 live births). The decline in TFR is expected to be 1.73 live births within 20 years period (from 1992 to 2012).

## BIBLIOGRAPHY

- Sayed, H. A. A., et al. (1989): "Egypt Demographic and health Survey, 1989", Columbia, Maryland: NPC & Institute for Resource Development/Macro Systems, Inc.
- El-Zanaty, F. H., et al. (1993): "Egypt Demographic and health Survey, 1992", Columbia, Maryland: NPC & Institute for Resource Development/Macro Systems, Inc.
- National Population Council (1991): "National Population Strategy, 1992-2007", [in Arabic], NPC, Cairo, Egypt.
- National Population Council (1995): "National Population Strategy, 1992-2012", [Revised Version, in Arabic], NPC, Cairo, Egypt.
- Hallouada, A. M., et al. (1983): "The Egyptian Fertility Survey", Central Agency for Public Mobilization and Statistics, Cairo.
- Mauldin, W., et al. (1988): "Prevalence of Contraceptive Use: Trends and Issues", *Studies in Family Planning*, 19(6):335-353.
- Westoff, Charles F., (1990): "Reproductive Preferences and Fertility Rates", *International Family Planning Perspectives*, 16(3):84-89.
- Westoff, Charles F., (1991): "Reproductive Preferences: A Comparative View", Institute for Resource Development/Macro Systems, Inc, Columbia, Maryland, USA.
- Zohry, Ayman G., (1994): "Excess Births Due to Unwanted Fertility in Egypt", Cairo Demographic Center, Paper presented in the 24th Annual Seminar on Population and Development, December, 1994.

**Table(1)**  
**Percent Distribution of Currently Married Women By**  
**Reproductive Intentions and Age, Egypt, 1992**

Reproductive Intention	Age of Woman							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Want within 2 years	36.5	20.1	14.5	10.8	7.5	5.5	2.9	12.0
Want after two years	48.4	43.0	23.9	9.0	3.3	0.8	0.4	15.9
want, undecided when	2.1	1.3	0.7	0.6	0.6	0.1	0.4	0.7
Undecided	2.0	2.9	3.0	1.8	3.0	1.3	0.5	2.2
Want no more	10.7	32.6	57.7	77.1	83.0	87.3	84.0	66.8
Declared infecund	0.3	0.2	0.1	0.7	1.7	5.1	11.8	2.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	415	1324	1956	1743	1582	1231	902	9153

Source: Calculated from EDHS, 1992.

**Table (2)**  
**Percentage of Currently Married Women Who Want No More Children by**  
**Number of Living Children and Selected Background Characteristics,**  
**Egypt, 1992**

Background Characteristics	Number of Living Children							Total
	0	1	2	3	4	5	6+	
<b>Place of Residence</b>								
Urban	2.7	13.3	68.3	88.4	94.4	94.6	94.1	70.2
Rural	1.2	4.3	47.2	71.6	83.6	88.2	92.7	63.7
<b>Region of Residence</b>								
Urban Govs.	1.0	16.0	69.0	87.6	94.5	93.4	94.8	70.1
Urban Lower	2.7	12.4	69.9	91.7	95.3	94.9	92.5	71.4
Rural Lower	1.8	5.4	59.1	84.7	90.4	93.3	94.9	70.6
Urban Upper	(8.1)	8.9	64.6	85.6	93.2	96.7	94.3	69.0
Rural Upper	0.7	3.1	30.8	54.6	74.9	81.7	90.5	55.7
<b>Education</b>								
No Education	2.1	7.2	51.2	74.0	87.1	88.2	92.4	69.2
Some Primary	0.2	12.5	57.5	84.4	89.4	92.7	94.7	64.2
Primary to LT Secondary	4.0	12.0	65.6	83.2	92.6	97.6	98.1	67.3
Completed Sec. & Higher	2.0	7.7	64.9	86.0	91.4	95.8	(77.7)	53.1
<b>Work Status</b>								
Working For Cash	2.2	13.4	71.8	89.3	92.7	87.5	96.8	68.5
Not working for Cash	1.9	8.0	55.4	78.4	88.4	91.0	92.9	66.5
<b>Total</b>	1.9	8.8	59.0	80.5	88.9	90.7	93.1	66.8

Source: Calculated from the EDHS, 1992.

Notes: (1) Women who have been sterilized are considered to want no more Children.

(2) Figures in parentheses are based on less than 50 cases.

**Table (3)**  
**Current Levels and Forecasts of the Percentage of Women Who Want**  
**No More Children (WNM), the Contraceptive Prevalence Rate (CPR),**  
**and the Total Fertility Rate (TFR), Egypt, 1992-97**

	1992			1997		
	WN M	CPR	TFR	WN M	CPR	TFR
Column Number	1	2	3	4	5	6
<b>Place of Residence</b>						
Urban	70.2	57.0	2.91	70.9	62.7	2.55
Rural	63.7	38.4	4.91	65.6	45.7	3.57
<b>Region of residence</b>						
Urban Governorates	70.1	59.1	2.69	70.8	64.5	2.36
Urban Lower Egypt	71.4	60.3	2.8	71.8	65.7	2.42
Rural Lower Egypt	70.6	50.6	4.10	71.2	57.2	3.50
Urban Upper Egypt	69.0	48.1	3.58	69.9	54.9	3.16
Rural Upper Egypt	55.7	24.3	5.97	59.2	32.4	5.26
<b>Education</b>						
No Education	69.2	37.5	5.03	70.1	45.8	4.36
Some Primary	74.2	53.5	3.98	74.1	60.3	3.37
Primary to LT Secondary	67.3	56.1	3.03	68.5	61.5	2.66
Completed Sec. & Higher	53.1	58.0	2.91	57.1	71.9	2.12
<b>Work Status</b>						
Working For Cash	68.5	58.3	2.90	69.5	63.5	2.53
Not working for Cash	66.5	45.2	4.10	67.9	52.0	3.59
Total	66.8	47.1	3.93	68.1	53.7	3.44

Source: Calculated from EDHS, 1992.

**Table (4)**  
**Projections of the Percentage of Women Who Want No  
More Children (WNM), the Contraceptive Prevalence Rate (CPR),  
and Total Fertility Rate (TFR) for Egypt up to the Year 2012**

Year	WNM	CPR	TFR
1992	66.8	47.1	3.93
1997	68.1	53.7	3.44
2002	69.2	59.5	2.99
2007	70.1	64.7	2.58