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Cite as:

Zohry, A. G. *Reliability of Data on Fertility Intentions in Egypt*. Paper presented in the 32nd Annual Conference on Statistics, Computer Sciences, and Operations Research, Institute of Statistical Studies and Research (ISSR), Cairo University. Cairo 13-15 December 1997.

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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 (Wesloff, 1991). The percentage of women who want no more children in Egypt increased from 60.5 percent to 65% within 7 years (from 1988 to 1995). This means that almost two-thirds of the 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 (EDHS, 1988; EDHS, 1995). The key question that this study attempts to answer can be expressed as follows: Are answers on reproductive intentions reliable? Can women practically apply their intentions as expressed in demographic surveys?

To answer the study's questions, analysis will be carried out in two levels:

First: Aggregate Level Analysis:

using data from 1988, 1992, and 1995 DHS data to calculate the Preference Implementation Index which was proposed by Bongaarts 1992. Preference Implementation is measured by an index with values ranging between 0 and 1. The level of implementation is the net result of a decision-making process in which couples weigh the cost of fertility regulation and the cost of unwanted childbearing. With full preference implementation (PI=1) no unwanted births occur and actual fertility equals wanted fertility ($F=WF$). At the other extreme, with no preference implementation (PI=0) observed fertility equals natural fertility.

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Index of Preference Implementation can be estimated using the following equation:

$$PI = (NF - F) / (NF - WF) \quad (1)$$

Where:

F = Total Fertility Rate.

WF = Wanted Total Fertility Rate¹.

NF = Natural Fertility Rate².

Second: Individual Level Analysis:

Using data from the 1991 EMCHS and the 1993 EUECS tracing the reproductive outcomes of women who would not want more children in 1991 and were reinterviewed in 1993. Factors associated with implementation of fertility intentions are also examined using ordinary least square regression technique.

PERCENT OF WOMEN WHO WANT NO MORE CHILDREN:

As it was mentioned before, the percentage of women who want no more children in Egypt increased from 60.5 percent to 65% within 7 years (from 1988 to 1995). In 1992 the percentage was higher than that of 1995 (66.8), but one can say that about two-third of Egyptian women want no more children. In urban areas the percentage increases to about 70, while in rural it is 63.2.

The percentage of women who want no more children in urban governorates increased from 66.0 to 68.5 between 1988 and 1995, while it remained the same in for women living in urban lower Egypt, which have the highest percentage of women who want no more children (70 percent). In rural lower

¹Wanted fertility is the rate of childbearing that would be achieved if all women were able to eliminate unwanted births. Births are considered unwanted if they occur after a woman has reached the point at which she does not want more children because she has achieved her childbearing objectives (Bongaarts, 1993).

²Natural fertility is defined by Henry (1961) as fertility in the absence of deliberate birth control. In practice, fertility may be considered natural if no contraception or induced abortion is used (Henry, 1979).

Table (1)
Percent of women who want no more children, 1988-1995

Characteristics	1988	1992	1995
Place of residence:			
Urban	65.2	70.2	69.7
Rural	56.1	63.7	63.2
Region of residence:			
Urban governorates	66.0	70.1	68.5
Urban lower Egypt	70.4	71.4	70.3
Rural lower Egypt	66.7	70.6	69.1
Urban upper Egypt	59.0	69.0	64.4
Rural upper Egypt	43.5	55.7	56.1
Education:			
No education	59.7	69.2	68.4
Some primary	65.8	74.2	73.1
primary - secondary	63.6	67.3	61.8
comp. sec. - higher	53.9	53.1	55.9
Total Egypt	60.5	66.8	65.4

Source: Calculated from EDHSI, EDHSII, and EDHSIII.

Egypt, the percent increased from 66.7 to 69.1. Urban upper Egypt's level is almost the same as the overall level of Egypt in 1988 and 1995. As expected, rural lower Egypt have the lowest percentage of women who want no more children in all the time points, but it have the highest rate of increase, where the percentage increased from 43.5 to 56.1.

The higher the education level the lower the percentage of women who want no more children. From the first impression, this conclusion may not be consistent with the theoretical findings regarding the impact of education on fertility and fertility intentions. Women with high level of education marry latter than less educated women, so that their reproductive span become shorter than less educated women. The percentage of women who want no more children for women with secondary and university education was 53.9 in 1988 and 55.9 in 1995, while for women with some primary education it was 65.8 in 1988 and 73.1 in 1995.

TRENDS IN PREFERENCE IMPLEMENTATION:

The value of PI chosen by couples determines where actual fertility falls within the range set by wanted and natural fertility. The implementation index rises as fertility regulation costs decline and its benefits (i.e. the elimination of unwanted births) rise.

The values of PI by selected background characteristics in 1988, 1992 and 1995 are given in Table (2). The value of the index raised for the whole country and for all segments. For the whole country, PI increased from 0.62 to 0.72 within 1988 and 1995. The change of the value of the index was higher in rural areas than urban areas. PI increased from 0.75 to 0.81 in urban areas between 1988 and 1995, while it increased from 0.45 to 0.64 in rural areas in the same period. The percent change in urban areas was lower than rural areas because it was initially high in 1980.

Table (2)
Preference Implementation by place and region of residence, and
education, 1988-1995

Characteristics	1988	1992	1995
Place of residence:			
Urban	0.75	0.81	0.81
Rural	0.45	0.60	0.64
Region of residence:			
Urban governorates	0.82	0.84	0.84
Urban lower Egypt	0.75	0.84	0.84
Rural lower Egypt	0.56	0.70	0.76
Urban upper Egypt	0.68	0.71	0.72
Rural upper Egypt	0.29	0.44	0.47
Education:			
No education	0.47	0.56	0.61
Some primary	0.62	0.72	0.68
primary - secondary	0.76	0.81	0.80
comp. sec. - higher	0.84	0.89	0.87
Total Egypt	0.62	0.70	0.72

Source: Calculated from EDHSI, EDHSII, and EDHSIII.

In spite of its lowest level of PI, rural upper Egypt achieved the highest relative increase among all regions (0.29 in 1988 versus 0.47 in 1995). In rural lower Egypt, PI increased from 0.56 to 0.76. The increase of PI in urban regions was somewhat lower than that of rural regions.

Due to its initially high level, the increase of PI for more educated women is lower than that of less (or not) educated. PI for not educated women increased from 0.47 to 0.61 while it increased from 0.84 to 0.87 for highly educated.

The increase of the value of PI in all regions, specially rural areas, may be attributed, in part, to the family planning practice and the availability of medical services plus the impact of media.

RELIABILITY OF WOMEN'S INTENTIONS:

In the Egypt maternal and Child Health Survey, 1991 (EMCH, 1991), currently married women who were not pregnant were asked if they want to have more children in the future. The same question was addressed to women in the Egypt Use Effectiveness of Contraceptive Survey, 1993 (EUECS, 1993), which was a follow up survey of the EMCHS, 1991 using the same sample scheme. Among women who were re-interviewed in 1993 and wanted no more children in the future in the earlier survey, 19 percent gave another child between 1991 and 1993.

This means that about one-fifth of women changed their opinions about future fertility or may gave incorrect answer to the questions in the earlier survey. These findings suggest more caution when analyzing fertility intentions of women in the future.

To trace factors underlying the change in opinions regarding future fertility and the ability to stop childbearing as expressed by women, the ordinary least square regression technique was employed for women who said that they want no more children in the earlier survey. The dependent variable was whether those women got more children after 1991 or not. The independent variables were number of surviving children in the earlier survey, urban/rural residence, wife and husband's education, and currently work status of woman (See Appendix I for the distribution of the variables in the model).

Table (3)
Percentage distribution of currently married women according to their desire for more children in 1991 and births between 1991-1993, Egypt 1991-93

Desire for more children in 1991	Did not give additional births after 1991	Gave additional births after 1991	Total
Want more children	45.1	54.9	100 (1485)
want no more children	81.0	19.0	100 (3973)
can not get pregnant	94.7	5.3	100 (340)
Total	72.4	27.6	100 (5798)

Source: Calculated from EMCHS, 1991 & EUECS, 1993.

Table (4)
Factors associated with not having an additional child for women who said that they want no more births in 1991 EMCHS

Variables	Unstandardized regression coefficient (b)	Standardized regression coefficient (β)
Number of living children in (1991)	0.0224** (0.0042)	0.0908
Place of residence (Urban)	0.1029** (0.152)	0.1174
Husband's education (Any Certificate)	0.0391* (0.0158)	0.0445
Woman's education (Any Certificate)	0.0843** (0.0197)	0.0878
Woman's work status (Currently working)	0.0377* (0.0215)	0.0310
Constant	0.5548	
Coefficient of determination (R^2)	0.037	

** Significant at P 0.01

* Significant at P 0.05

Note: Numbers between parentheses are Standard error of (b).

Residence in urban was found to be associated with a significant positive relationship with not having additional children after 1991 (Beta=0.1174). Number of surviving children in the earlier survey ranked second (Beta=0.0908), followed by women's education which seem to have a significant impact on achieving fertility decisions (Beta=0.0878). Women's current work status and husband's education ranked last (See Table 4).

CONCLUSIONS:

In this study, an attempt was made to assess the reliability of fertility intentions among Egyptian women and their ability to implement their reproductive preferences. The conclusions of the study can be summarized in the following points:

First, the percentage of women who want no more children in Egypt increased from 60.5 in 1988 to 65% in 1995.

Second, the value of Preference Implementation index increased from 0.62 to 0.72 between 1988 and 1995. The change of the value of the index was higher in rural areas than urban areas because urban areas had initially high level of implementation.

Third, among women who were re-interviewed in 1993 EUECS and wanted no more children in the future in 1991 EMCHS, 19 percent gave another child between 1991 and 1993. This means that about one-fifth of women changed their opinions about future fertility or may gave incorrect answer to the questions in the earlier survey. These findings suggest more caution when analyzing fertility intentions of women in the future.

Forth, tracing factors associated with the assessment of fertility intentions between 1991 and 1993, revealed that residence in urban was found to be associated with a significant positive relationship with not having additional children. Number of surviving children in the earlier survey ranked second, followed by women's education which seem to have a significant impact on achieving fertility decisions.

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APPENDIX I

Variables in the ordinary least square model

Variables	Measurement
Number of living children in the earlier survey (1991)	Number of children
Place of residence	1 for urban 0 for rural
Husband and woman's education	1 for any certificate 0 for no certificate
Woman's current work status	0 for not currently working women 1 for currently working women
Woman gave births after the earlier survey (1991)*	1 for no births after 1991 0 for gave birth after 1991

* The dependent variable