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FERTILITY STUDIES IN THE ARAB REPUBLIC OF EGYPT

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Introduction:

Being a developing country, A.R.E. has suffered from the rapid growth of its population, and the annual rate of growth reached 2.54% between (1960-1966). This high rate of annual growth has its pressure on the limited economic resources.

High fertility is the main factor causing this population explosion. The death rate has been continuously decreasing owing to the considerable development in health services. It is expected that death rates will continue its downward trend in the future keeping the annual rate of growth above 2% unless fertility rates decline more rapidly.

High fertility rate has contributed to the increase of the dependency load on the population of working age and on Government expenditure, with the inevitable impact upon economic and social development.

Sources of Information:

Population Censuses:

1. The first census in A.R.E. was taken in 1882, the second was taken in 1897. And then there was a series of decennial censuses maintained up to 1947. The eighth census was supposed to be in 1957 but due to certain difficulties it was taken in 1960.

These complete censuses had a complete coverage and this permits analysis of the population characteristics. The last complete census which was the 1960 census included information for the study of fertility, like duration of married life - number of children born alive and occupation of husband.

2. The first micro-population census was carried out in 30/31 May 1966. A complete count of the population by sex, religion and nationality was considered as De Facto census. A sample of 5% of households was selected from the urban areas to represent the population in the urban areas. A sample of 3% of villages was selected to represent the population in rural areas, to obtain the census characteristics (age, industry, employment status, occupation, educational level and marital status) and the internal migration of each individual in the sample. Additional items for fertility and labour force data were collected from a subsample of households, its size 20% from the main sample. The fertility data derived from the census were: duration of marriage, occupation of husband and number of children born alive.

Sample Surveys:

1. In 1958 a survey on fertility trends was carried out in three different communities: an urban community of metropolitan areas, a semi-urban community covering mainly factory workers in an industrial locality, and a rural community in three villages deliberately chosen in both Lower and Upper Egypt.

A detailed questionnaire was designed in a way to obtain information revealing attitudes of wives towards family planning and their decisions regarding the desired number of children. The questionnaire included the following fertility topics: history of married life, and periods during which husband and wife lived apart, history of pregnancies, attempts to prevent or postpone conception and methods used, if any, and the reasons.

2. In 1966 a sample survey of vital rates in rural Lower Egypt was carried out in collaboration with the Demographic Centre at Cairo to test the completeness of vital statistic registration. The sample covered 25 villages which were selected to represent Rural Lower Egypt. The fertility information was collected from all women reporting as ever married in the sample.

Vital Statistics:

Registration of vital events, births and deaths, was compulsory by law in A.R.E. in 1912. At first there was under registration specially in non-health bureau areas, but with the expansion of health bureaus, registration is believed to be fairly complete.

Fertility Trends

According to the censuses data the annual rate of growth have increased rapidly after 1927 as a result of the decline in mortality.

Census Year	Population in thousands	Annual rate of growth
1927	14218	1.16
1937	15933	1.78
1947	19022	2.38
1960	26085	2.54
1966	30076	

The crude birth rate in the A.R.E. has retained a high level of more than 40 per thousand. A study of the crude birth rate in the period between 1920 and 1966 revealed that the rates have not greatly changed during that period except at the time when society was affected by unusual circumstances such as the Second World War (1941-1944). After 1966 the crude birth rate began its downward trend. The crude birth rate was about 35.1 per thousand in 1970, it was higher in rural areas than in urban areas. It decreased rapidly in urban areas than in rural areas, the decrease from 1966 to 1970 in urban areas was about 20% while it was only 10% in rural areas.

Year	Crude birth rate	
	Urban	Rural
1966	37.8	43.2
1967	35.5	41.7
1968	35.6	39.9
1969	34.2	38.9
1970	30.0	38.6

Crude Birth Rates in the A.R.E.
1920-1970

Year	C.B.R.	Year	C.B.R.	Year	C.B.R.
1920	42.2	1937	43.4	1954	42.6
21	41.8	38	43.2	55	40.3
22	43.1	39	42.0	56	40.7
23	43.1	40	41.3	57	38.0
24	43.8	41	40.4	58	41.1
25	43.5	42	37.6	59	42.8
26	44.2	43	38.7	60	43.1
27	44.0	44	39.8	61	44.1
28	43.6	45	42.7	62	41.5
29	44.2	46	41.2	63	43.0
30	45.4	47	43.7	64	42.3
31	44.5	48	42.6	65	41.7
32	42.5	49	41.6	66	41.2
33	43.8	50	44.2	67	39.2
34	42.2	51	44.6	68	38.2
35	41.3	52	45.2	69	37.0
36	44.2	53	42.6	1970	35.1

It is too early to judge whether the downward trend in C.B.R. is a continuous trend caused by social and economic factors awakening the consciousness of family planning or a temporary trend affected by the war of 1967 and will disappear after the end of the war conditions.

Child woman ratio, a ratio of children 5-9 to women of "20-49" years old. This ratio demands caution because it is based on the survivors of previous births i.e. it includes the effects of infant and childhood mortality during this period. The child woman ratio has increased during the census years as a result of the declining mortality.

Census year	Child woman ratio
1927	642
1937	686
1947	629
1960	784
1966	772

The ratio was higher in rural areas "784 in 1966" than in urban areas "755 in 1966" and this may reflect the higher fertility level in rural areas than in urban areas inspite of the higher mortality level in rural areas.

A study on general fertility rates in the census years 1917-1966 (and estimation of 1970) shows a marked increase until 1960 especially in the period from 1947-1960. The significant increase in the general fertility rate from 1947 to 1960 may be due to the development of the health care given to pregnant women which decreased the maternal death rate by about 39%. On the other hand this increase in the rate is due to the improvement of the vital statistics registration as a result of expansion of health bureaus.

The general fertility rate has risen to the maximum limit in 1960 and then began to decline from 1966 to 1970.

Year	General fertility rate
1917	169.6
1927	178.5
1937	181.4
1947	171.8
1960	190.3
1966	179.6
1970	156.1

The general fertility rate varies from urban to rural areas, it was higher in rural areas than in urban areas, and declined more rapidly in urban areas than in rural areas.

Year	General fertility rate	
	Urban	Rural
1966	160.4	193.3
1970	129.5	175.2

It is well known that age of mother is one of the biological factors that determine fertility. In A.R.E. it has been revealed that fertility of females starts at a low level for young women, and it gradually increases reaching its maximum for those 25-34 years and then has a reverse trend decreases gradually as women draw nearer to the end of the child bearing age.

Age of Mother	Age Specific fertility rates			
	1947	1960	1966	1970
15-	47.8	34.0	35.4	31.7
20-	256.7	248.6	205.0	204.1
25-	338.0	343.4	340.7	235.5
30-	270.0	366.1	282.4	239.7
35-	163.1	195.8	240.4	175.3
40-	40.8	58.0	109.7	100.0
45+	16.8	18.2	53.3	43.9

Comparing age specific fertility rates in 1947, 1960, 1966 and 1970, it is obvious that 1960 rates are higher than corresponding rates in 1947 for most of the age groups. Rates in 1970 are less than rates in 1966 for each of age groups.

Age of mother	1966		1970	
	Urban	Rural	Urban	Rural
15-	37.6	33.5	32.0	31.5
20-	199.4	209.4	185.8	219.4
25-	316.1	359.0	214.6	251.1
30-	248.7	305.3	188.0	276.1
35-	211.5	258.8	129.1	205.4
40-	82.5	125.9	60.5	124.0
45+	38.9	61.4	21.8	56.9

In urban areas women seem to have their children at early ages and control their births after that. It is observed in 1970 that mothers in the ages below 34 years are responsible for about 45% of the total live births in urban areas while mothers in these ages in rural

areas are responsible for only 67% of the birth in rural areas which means that rural women are continuing their deliveries after this age. In 1970, rural rates for age 40 + seem to be more than double the urban rates.

The level of the specific fertility rates in rural areas is higher than that of urban areas on the whole except for the age group under 20 years and this may be due to under registration.

The gross reproduction rate has risen from 2.71 in 1947 to 3.00 in 1960, while the net reproduction rate has increased from 1.77 to 2.01 during the same period.

	1947	1960	1966	1970
G.R.R.	2.71	3.00	3.07	2.50
N.R.R.	1.77	2.01	2.16	1.85

There is no difference in the G.R.R. between 1960 and 1966, but there is significant decline from 1966 to 1970. This decline affects in return, the N.R.R. which declined from 2.16 in 1966 to 1.85 in 1970.

	1966		1970	
	Urban	Rural	Urban	Rural
G.R.R.	2.75	3.28	2.01	2.82

In fact both "G.R.R. and N.R.R." have taken a downward trend since 1966, however, it is still high. The declining trend is obvious for both urban and rural areas. The percentage of decline amounted 27% in urban areas and 14% in rural areas.

Fertility vary greatly according to the different social, demographic and economic factors. Foremost among the factors affecting these rates is the education of women. There is a negative correlation between educational and fertility level. For the educated woman is more apt to believe in family planning and to realize its importance and its advantages to the family and consequently shows a readiness to use contraceptives.

There is an obvious relation between educational attainment and the average number of live births per married woman, and this is particularly clear in the case of a long period of marriage. For a period of 20-29 years of marriage we find that an illiterate woman has an average of 7 children, while in the case of a woman with university education this average falls to under 3 children.

Average Number of Live Births by Educational Attainment of Mother and Duration of Married Life in Urban Areas, A.R.E. 1966 Census.

Educational Attainment	Duration of Married Life "in years"					Total
	Less than 5	5-9	10-19	20-29	30 or more	
Illiterate	1.1	2.7	5.0	6.6	6.8	3.5
Able to read and write	.8	2.6	4.9	6.1	6.3	3.2
Intermediate certificates	.6	2.5	3.2	4.6	5.3	1.8
University Degrees	.5	1.8	2.6	2.3	...	1.2
Total	1.0	2.6	4.9	6.5	6.7	3.3

The study of average number of live births by marriage period and age of mother revealed that there is a strong positive correlation between the period of marriage and the number of live born children. The number of live born children increases with the increase of duration of marriage and this trend was found in every age group of mother, which may be evident that most Egyptian families do not plan their families but continue to have as many children as they can during the marriage period. The ever-married women who had been married for less than five years produced one child on the average; this average of children rises to about 7 for women who had been married for more than 30 years.

Average Number of Live Births by Age of Mother and Duration of Married Life in the Urban Areas, A.R.E. 1966 census

Age of Mother	Duration of Married Life					Total
	Less than 5	5-9	10-19	20-29	30 and over	
Less than 20	.5	...	...	...	...	...
20-	.7	2.6	1.3	...	...	...
25-	.6	2.8	4.3	...	...	...
30-	.7	2.5	5.1	...	...	...
35-	1.0	2.5	5.4	6.7	...	...
40-	1.2	1.7	4.6	6.8	...	...
45-	1.4	1.9	3.7	6.3	7.5	...
50+	1.5	1.5	2.0	4.4	6.5	...
Total	1.0	2.6	4.9	6.5	6.7	...

Comparing the percentage distribution of annual births in 1966; 1969 by birth order in urban and rural areas, we find that the percentage of births of the order more than five constitutes 26.2% in 1966, and 24.8% in 1969 in urban areas. While the percentage decreased in urban, it increased in rural from 25.7% to 29.6%. This may mean that urban women are more accepting for family planning than rural women.

Percentage distribution of annual births by birth order in Urban and Rural, A.R.E. 1966, 1969

Order of New Born	Urban		Rural	
	1966	1969	1966	1969
Less than 5	73.8	75.2	74.3	70.4
5-7	21.7	20.5	21.8	25.1
8 and over	4.5	4.3	3.9	4.5
Total	100.0	100.0	100.0	100.0

Percentage Distribution of Annual Births by Birth Order and Occupation of Father, A.R.E. 1966, 1969

Occupation	1966			1969		
	Less than 5	5-7	8 and over	Less than 5	5-7	8 and over
0. Professional etc.	83.6	13.5	2.9	85.7	12.3	2.0
1. Administrative	67.3	24.7	8.0	81.4	14.9	3.7
2. Clerical	79.5	16.5	4.0	77.3	18.1	4.6
3. Sales	66.9	26.8	6.3	65.0	28.4	6.6
4. Farmers	73.8	22.2	4.0	69.5	25.7	4.8
5. Miners and quarrymen	75.5	20.4	4.1	74.9	20.3	4.8
6. Workers in transport	72.1	23.3	4.6	71.9	23.4	4.7
7/8 Craftsmen	75.6	20.8	3.6	74.1	21.8	4.1
9. Service workers	71.3	24.1	4.6	66.6	27.5	5.9

The above table presents the percentage distribution of annual births by birth order and occupation of father. As it is shown, the percentage of live births of the order five or more and their fathers were professional, and administrative have decreased from 16.4% and 32.7% in 1966 to 14.3% and 18.6% in 1969 respectively.

Population Programmes

The rapid growth of population is an obstacle to economic development because a greater part of the national income is used every year in providing for necessities, thus leaving no surplus for saving and investment.

The main objective that national policy seek to accomplish is to maintain an optimum population size through balancing its numbers with available resources by way of educating and encouraging families to restrict and space their offspring in order to sustain an adequate level of living.

It is thought sometimes that raising the legal age at marriage of girls from its minimum of 16 years at present would result in a decrease of births. The fact is that the contribution of married women below 20 years to total births does not exceed 3.5%.

The Ministerial committee formed for the purpose, approved and adopted a ten-year programme for family planning, aiming among other things to reduce fertility in a way to bring the crude birth rate down to 30 per thousand population by 1978; thus reducing the rate of natural increase to about 1.7 per cent. The executive Board for family Planning which operates under supervision of the supreme council has been entrusted to carry out the plan.

The national family planning project started in February 1966. A total of 1991 clinics were operated, 575 in urban areas and 1416 in rural areas. In June 1972 the number of clinics reached 1055 in urban areas; 1948 in rural areas and 3003 in total Republic.

The pills was provided in June 1972 to 299897 women in urban areas, 104681 in rural areas and 404578 in total Republic, and these figures constitutes about 14.8%, 3.6% and 8.2% of married women in child bearing age in urban, rural and total Republic respectively. The IUD'S (loops) was provided in the same month to 5846 women i.e the total number of (loops) which have been inserted until June 1972 was 259989.