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# FAMILY PLANNING STUDIES THE TEACHERS' SURVEY

## Part II : Fertility Differentials and Practice of Family Planning

*by*

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### INTRODUCTION

This study deals primarily with the important biologic and socioeconomic fertility differentials of married female teachers in the Governorate of Alexandria. It also aims at portraying the fertility patterns of educated working females, their opinions about family limitation, their use of contraceptives and their knowledge and utilization of family planning services.

### METHODOLOGY

All teachers working in Alexandria Governorate were approached. Information was collected through a questionnaire distributed and collected through school health visitors. Field operation covered the period October 1966-February 1967. All forms were revised and complete opes were coded and checked.

### RESULTS

#### 1 (a) Age distribution of spouses

Of the 3893 teachers who responded 2626 or 65% were married. The age of married teachers varied, but the majority (92.5%) were

in the child bearing age. Only 7.5% were 45 years or more. The average age of teachers at the time of the survey was 32.70 years with the mode lying in the age group 30—34 years.

In general the husbands were older than their wives. The majority (87.4%) were between the ages 25—44 years, while those aged 45 years or more were 11.9% and only 0.7% were younger than 25 years. The average age of husbands was 6.6 years and mode lied in the age group 30—34 years. (Kamel et al 1970).

#### 1 (b) *Education of spouses*

Most of married teachers had a secondary education certificate (84.8%) while 11.3% had a university degree and only 3.9% obtained less than a secondary education. The husbands in general had a higher level of education compared to their wives, while 47.5% and 45% had successfully completed their university and secondary education, yet the proportion of husbands with less than secondary education was 7.5% compared to only 3.9% of the teachers.

#### 1 (c) *Occupation*

Most married teachers 88.1% were teaching in primary schools. Those instructing in preparatory and secondary schools were 6.7 and 5.2% respectively.

The majority of husbands were either professionals 33.5% or civil service employees 38.8%. Technicians constituted 14.7% of the husbands, owners 5.5% and merchants 4.2%. Only 3.2% of every married teachers were either widows or divorcee.

#### 1 (d) *Religion*

The majority of spouses were Moslems (92.0) and only 8.0% were Christians.

#### 1 (e) *Ages at Marriages :*

The majority (84.4%) of teachers mentioned that they got married when they were in the age group 20—29 years. The average age of teachers at marriage was 25.50 years. Table 1 shows that the lower the education attainment of the teacher the older the age of her marriage. The relation between the educational levels and age of marriage is statistically significant. It is likely that women

with lower levels of education had to discontinue their academic life and work early to support their parents. It is also possible that they postponed their wedding until they had saved their wedding until they had saved their contribution to the make up of their homes. In support of this economical status as a determinant of the age marriage, is that no such relation was observed between the attitudes of the different educational groups as regards the age at marriage (Kamel et al. 1970).

TABLE I

Percent Distribution of Ages of Teachers and their Husbands  
at marriage According to Educational Attainments. (Teachers'  
Survey, Alexandria)

Level of Educ		Under 20	20—	25—	30—	35+	Total
Less than Secondary	Teachers	5.2	28.9	53.6	10.3	2.0	100.0
	Husbands	1.3	9.0	34.0	39.7	16.0	100
Secondary Education	Teachers	5.2	44.5	39.8	8.6	1.9	100.0
	Husbands	0.4	11.1	48.9	28.5	11.1	100
University	Teachers	2.1	44.2	43.1	7.8	2.8	100.0
	Husbands	—	8.5	51.0	32.0	8.0	100
Total	Teachers	4.0	43.8	40.6	8.6	2.0	100.0
	Husbands	0.3	9.7	48.9	31.1	10.0	100.0

In general husbands married at an older age than their wives. The majority married when they were 25—34 years (80.0%). The average age of husbands at marriage was 29.56 years which means four years older than that of females and the mode was in the age group 25—29 years. An inverse significant relation was also observed between the age of the husbands at marriage and his educational attainment. This is in accord with the same findings observed in relation between the teachers' education and their age at marriage. It is as well suggesting that men with less than secondary education were not gaining enough to start a family of their own at young age. It is also possible that they may have had financial commitments forcing them to postpone their marriage.

## 1 (f) *Duration of Marriage*

All women teachers, except 26 (1%) married only once. The duration of marriage for ever married teachers varied from few months up to 38 years, with an average of 7.18 years. Just less than 3/4 of the respondents were married for less than ten years, including 6.2% who were recently married (i. e. married for less than one year). Those married for 10—14 years were 14.7%, while the rest 11.2% were married for 15 years or more.

Women teachers were asked about the number of surviving children, total number of deliveries and abortions they ever had. The information was analysed according to various socio-economic and biologic characteristics of women teachers since the surviving children are more important as an index of the net reproduction experience of females it is discussed first.

## 2 (a) *Number of surviving children*

Of the 2626 women teachers who responded to the questionnaire 21.1% were childless at the time of the survey including the 6.2% who were recently married. Just half (50.8%) of the married teachers had one or two children, 16.4% three, 7.7% four, and only 4.0% had five or more children. On the average a married woman teacher had 1.8 children with a mode of two.

### 2 (a) 1. *Number of surviving children in relation to religion :*

Table II gives the percent distribution of the teachers by number of surviving children and their religion. While more percentage of Christians (55.9%) had one or two children, only 49.7% of Moslems had the same number of children. On the other hand more percentage of Moslems than Christians had four or more children where 12.5% of Moslems stated having more than four children compared to 8.9%. The differences observed between the two religious groups are statistically significant where P. is less than 0.01. Again Moslems had an average larger number of children than Christians, as the average number of surviving children were 1.8 and 1.3 respectively. (



TABLE II  
Percent Distribution of the Number of Living Children  
in Relation to the Teachers' Religion

Religion	No. of Children						Total	X
	None	1	2	3	4	5+		
Moslems	21.4	21.9	27.8	16.4	7.9	4.6	100%	1.8
Christians	16.9	22.1	33.8	18.3	6.6	2.3	100%	1.3
Total	21.1	22.4	16.4	16.4	7.7	4.0	100%	1.8

The data available from the teachers survey (Kamel et al. 1970) and the present work suggest that religion plays a role in formulating the concept of the teacher and is also a factor in fertility differential.

These findings are in accord with the observation of Yaukey, D. 1962 in Lebanon. The differences in fertility may be partially explained by the relatively older age of marriage among Christians (Kamel et. al. 1970).

2 (a) 2 Number of living children in relation to the level of education of spouses :

Table III gives the percent distribution of the teachers by the number of surviving children and their education.

TABLE III  
Percent Distribution of Teachers According to the Number  
of Living Children and Their Educational Attainments.

No. of Children	Level of Education			
	Less than Secondary Secondary University			
None	21.4	21.5	18.1	21.1
One	17.3	22.0	26.7	22.4
Two	27.6	27.4	36.3	28.4
Three	15.3	16.9	12.8	16.4
Four	10.2	7.9	5.0	7.7
Five+	8.2	4.3	1.1	4.0
Total	100.0	100.0	100.0	100.0

Although the mode was two children for the three educational groups yet the % with 4 or more children was 18.4% among those with less than secondary education and 12.2% of teachers with secondary education & only 6.1% of those having a university degree.

An inverse relation was observed between the number of surviving children and education. The higher the educational attainment was, the less likely that the teacher will have a large number of children. The differences observed between the three educational groups was statistically significant where  $P$  is less than 0.1.

The data available from the first part of the teachers' survey (Kamel et al, 1970) and the present work suggest that education plays a role not only in formulating the concept of the teacher but also as a factor affecting her fertility. Table IV gives the percent distribution of the number of surviving children and the education of the husbands. Again an inverse relation was observed between the number of surviving children and the education of husbands. Among families whose head was a university graduate 54.8% had one or two children compared to 49.8% and 41.6% of those with secondary and less than secondary education respectively. The proportion of families with

TABLE IV.  
Percent Distribution of the Number of Living Children  
and the Educational Attainments of the Teacher's Husbands.

Educ. level	No. of Living Children			
	Less than Secondary	Secondary	University	Total
None	21.8	21.1	19.7	21.1
One	17.4	21.7	23.3	22.4
Two	24.2	21.8	31.5	28.4
Three	17.4	17.3	15.8	16.4
Four	12.4	7.7	7.1	7.7
Five+	6.8	4.1	2.7	4.0
Total	100.0	100.0	100.1	100.0

four or more children was lowest among families having a university graduate father (9.8%) compared to 11.8%, 19.2% for those with secondary and less than secondary education respectively. The differences observed are statistically significant where  $P$  is less than .01.

The results obtained confirm the widely held view that there is a strong negative correlation between educational level and fertility. (Miro Carmen A., 1966).

2. (a) 3. *Number of surviving children in relation to occupation :*

No significant relation was found between the occupation of the head of the family and the number of surviving children, Table V. However, significant differences are found in relation to the level of school in which the teacher was working and the number surviving children. Table V shows that fewer teachers in secondary schools (that fewer teachers in secondary schools) had no children (13.9%) compared to 20.8 and 21.8% for those working in preparatory and primary schools respectively. More than two thirds (66.7%) of teachers working in the secondary schools had one or two children compared to 50.0% and 48.6% for those working in preparatory and primary schools. Only 19.4% of those working in secondary schools had three or more children compared to 29.2 and 29.6% for those working in preparatory and primary schools respectively. The differences observed are statistically significant where  $P$  is less than 0.01.

TABLE V

Percent Distribution of Number of Children in Relation  
to the Level of School in Which the Teacher is Working.

School	No. of children				Total
	None	One	Two	Three	
Secondary Schools	13.9	20.1	46.6	19.4	100.0
Preparatory Schools	20.7	20.8	29.2	29.2	100.0
Primary Schools	21.8	22.0	26.6	29.6	100.0
Total	21.1	22.4	28.4	28.1	100.0

2 (a) 4. *The number of surviving children in relation to the age of the teacher at the time of the survey :*

Table VI presents the distribution of teachers by age at the time of the survey and the number of surviving children. As expected, young teachers had smaller number of children as compared with teachers in older age group. While 47.4% of the teachers who were younger than 25 years of age were childless, the proportion decreased gradually in the elder age groups and was lowest in the age group 35—40 years of age. The same pattern was also found among teachers with a single child or two children. As expected most teachers who had three or more children were older than 35 years. However, it is of interest to observe that 1.9% of teachers under 25 years and 11.3% of the teachers in the age group 25—29 had more than three children.

The differences observed in the number of children among the different age groups are highly significant where P is less than .01.

TABLE VI  
Percent Distribution of Teachers by Their Age and  
Number of Surviving Children.

Age	No. of Children						
	None	One	Two	Three	Four	Five +	
Under 25	47.4	40.5	10.2	1.4	0.5	—	100
25—	26.8	29.8	32.1	9.0	2.3	—	100
30—	15.6	18.9	33.9	20.3	8.7	2.5	99.9
35—	11.4	11.1	23.3	25.7	14.6	8.9	100
40—	11.9	9.6	19.8	26.9	15.6	16.2	100
45—	13.6	9.1	20.0	22.7	17.3	17.3	100
50—	21.1	15.6	13.3	20.4	14.4	15.6	100
Total	21.1	22.4	28.4	16.4	7.7	4.0	100.0

2 (a) 5. *The number of surviving children in relation to the age at marriage :*

A significant inverse relation was observed between the number of children and the age of the teacher at marriage where  $P$  is less .01. More than half of the teachers who were married when they were younger than 20 years had three or more children, as compared to 31.7% of those who were married at the age group 20—24 years. This proportion decreased gradually and was lowest (15.3%) among those married when they were 35 years or more. So in general, teachers married in older age group had fewer number of children or none. While 44.0% of the teachers who were married when they were 35 years or more were childless, the proportion dropped gradually among those married at younger age groups, and was lowest among those who were married younger than 20 (9.4%). This inverse relation can be explained by the duration of marriages. The younger the teacher at marriage the longer the duration of marriage will be, hence the higher her risk will be of being pregnant.

2 (b) *Abortion :*

In this survey, out of the 6822 total pregnancies which occurred to the married teachers, 76.4% ended by a full term delivery and 23.60 in an abortion. These figures are very near to that reported in Chile where abortions constituted 26.5% of the total pregnancies. (Romere H. 1966).

TABLE VII  
Percent Distribution of Teachers by Their Age at  
Marriage and Number of Children.

Age of marriage	No. of Children						Total
	None	One	Two	Three	Four	Five+	
Less than 20	9.4	12.6	22.9	19.7	18.9	16.5	100
20—	17.2	20.3	30.8	18.3	8.9	4.5	100
25—	21.3	24.8	28.1	7.0	7.0	4.0	100
30—	35.4	20.6	27.1	15.1	1.8	—	100
35+	44.0	28.8	11.9	8.5	3.4	3.4	100
Total	21.1	22.4	28.4	16.4	7.7	4.0	100.20

Just less than two thirds of the teachers who over had been pregnant (65.7%) claimed that they had never aborted and the 34.3% of them mentioned at least one abortion. This coincides with what was reported by Dr. Reguena in Santiago 1961. The number of abortions varied from one to nine abortions with an average of 0.64 and the mode was one.

Analysis of the number of abortions in relation to religion did not show any significant difference. The mean number of abortions for Moslem teachers was .64 while that for Christians was .67.

Further analysis of the abortions by the educational levels of the teachers showed no relation between the two variables. The average number of abortions for the university graduates and those with less than secondary education was slightly higher than that for secondary teachers (0.71 and 0.74 compared to 0.62).

2 (b) 1. *Age of the teachers at interview and number of abortions :*

Table VIII presents the percent distribution of teachers according to their age at the time of the survey and the number of abortions they had. A direct relation was observed between the frequency of abortions and the age of the teacher.

**TABLE VIII**  
**Percent Distribution of the Number of Abortion in**  
**Relation to the Teachers' Age at the Time of the Survey.**

Age	No. of Abortions				Total	Average
	None	One	Two	Three+		
Less than 25	85.2	10.6	3.7	0.5	100.0	0.194
25—	74.3	15.8	0.7	2.9	100.0	0.405
30—	62.9	20.2	9.0	7.9	100.0	0.689
35—	55.2	18.3	14.2	12.3	100.0	0.946
40+	52.8	22.2	11.4	13.6	100.0	0.994
Total	65.7	18.1	9.1	7.1	100.0	0.64

Among those younger than 25 years of age, 85.2% had no history of abortion. This proportion dropped with the increase in age. to 74.3% in the age group 25—29 and reached only 52.8% among those 40 and more.

A direct relation was also observed between the age of the teacher and the number of abortions. The average number of abortions for these younger than 25 was 0.194 compared to .405 and .689 for women teachers aged 25—29 and 30—34 years.

For women teachers in older age group namely 25—39 and 40 years or more the mean number of abortions was .946 and .994 respectively. However, the mode was one abortion for all age groups

2 (b) 2. *Age of teachers at marriage and number of abortions :*

Table I gives the number of abortions in relation to the age of the teacher at marriage. Teachers married at an age less than 20 years were more likely to abort than other teachers, where 44.1% of them stated one abortion or more compared to 35.4%, 31.0% and 35.9% for those married in the age groups 20—24, 25—29, and 30 years or more respectively. The differences observed between teachers in this age group (less than 20) and others is statistically significant (where P is less than .01.)

**TABLE IX**  
**Percent Distribution of the Number of abortions by**  
**Age of the Teachers at Marriage**

Age	Abortions				Total	Average
	None	One	Two	Three+		
Less than 20	55.9	10.2	14.2	19.8	100.1	1.25
20—	64.6	20.1	8.8	7.1	100.6	.64
25—	69.0	16.7	8.9	5.4	100.0	.55
30+	64.1	19.6	8.3	8.0	100.0	.70
Total	65.7	18.1	9.1	7.1	100.0	.64

Teachers married younger than 20 years were also more likely to state more than one abortion than other teachers. On the average they had 1.25 abortions compared to .64, .55 and .70 for those married



at the age groups 20—24, 25—29, and 30 years or more respectively. These differences may be explained by the fact that teachers married young most probably will have a longer duration of marriage and also will tend to have a bigger family size. These two factors may explain the picture portrayed by teachers.

2 (c) *Number of Deliveries :*

Of the total number of married teachers (2626), 19.8% had never had a confinement (and of these 6.2% were recently married). The frequency of deliveries among those who ever delivered varied between one and thirteen deliveries . Less than half the teachers (47.4%) had one or two or two deliveries, 17.2% three times, while 15.6% delivered four times or more. The average number of deliveries per married teachers was 2.03 with a mode of two deliveries.

2 (c) 1. *Number of deliveries in relation to the age of the teachers :*

Table X presents the percent distribution of deliveries by the age of the teacher at the time of the survey. As expected, there was a direct relationship between the age of the teacher and the number of deliveries she had (P is less than .01). Among those younger than 25 the mode number of deliveries was one. For those aged 25—29, and 30—34 it was 2 deliveries. For older age groups the mode was 4 deliveries.

TABLE X  
Percent Distribution of Deliveries by Age of Teachers  
at the time of the survey.

Age	No. of Deliveries					Total	Average
	None	One	Two	Threc	Four+		
Less than 25	45.1	40.3	11.1	2.2	1.0	100	0.78
25—	25.1	27.3	33.2	11.2	3.2	100	1.40
30—	14.2	17.1	32.1	21.0	15.5	99.9	2.15
35—	11.4	9.4	25.5	26.0	27.7	100	2.68
40—	10.2	9.6	17.4	23.3	39.5	100	3.18
45+	17.2	9.4	12.0	21.3	40.1	100	3.25
Total	19.8	20.1	27.3	17.2	15.6	100	2.03

The average number of deliveries experienced per over married teachers increased as the age of the teacher increased. For those younger than 25 years the average number of deliveries was 0.78. This increased gradually to 1.40, 2.15, 2.68, 3.18 and 3.25 deliveries for those aged 25—29, 30—34, 35—39, 40—44 and 45 and more.

2 (c) 2. *Age of the teacher at marriage and number of deliveries :*

Table XI presents the percent distribution of teachers according to their age at marriage and the number of deliveries they had. A significant inverse relationship was observed between the age of the teacher at marriage and the number of deliveries. So the younger the teacher was at marriage the more likely she will deliver more than those married at older age. Among teachers who married when they were younger than 20, 43.3% had four or more children. This proportion dropped to 17.4%, and 13.3 among those who married when they were in the ages 20—24 and 25—29 respectively while only 5.4% of those married at the age of 30 years or more had this number.

TABLE XI

Percent Distribution of Teachers According to their age  
at marriage and the number of deliveries they had.

Age Group	No. of Deliveries					Total	Average
	None	One	Two	Three	Four+		
Less than 20	9.4	8.7	23.6	15.0	43.3	100.0	3.56
20—	15.7	19.2	29.4	18.3	17.4	100.0	2.16
25—	20.4	22.1	27.3	16.9	13.3	100.0	1.90
30+	34.8	22.1	15.6	15.6	5.4	100.0	1.37
Average	19.8	20.1	27.3	17.2	15.6	100.0	2.03

Teachers married at an age younger than 20 years had on the average 3.56 deliveries and the mode was 4 deliveries. For those married when they were 20—24 years of age, the mean number of deliveries was 2.16 and the mode was 2. The mean number of deliveries for women married 25—29 and 30 years and more 1.90 and 1.37 respectively.

The proportion of teachers who never confined increased with the increase of age at marriage. Only 9.4% of those married younger than 20 years of age had never had a delivery. They increased gradually to 34.8% for those who married at the age of 30 years or more.

2 (c) 3. *Number of deliveries in relation to the duration of marriage :*

All the previous variables examined in relation to the number of deliveries namely the age of the teacher at the time of the interview, and at marriage, produce their effect through their influence on the duration of marriage.

Table XII shows the percent distribution of married teachers by the period of marriage & Number of deliveries. A positive relationship was observed between the number of deliveries and the duration of marriage. Teachers married for less than 5 years had on the average 0.90 deliveries and the mode was one. The average number of deliveries increased gradually. For those married for 5—9 years the mean number of deliveries was 2.29 and the mode was two. Women teachers married for a period of 10—14 and those married for 15—19 had on the average 3.08 and 3.68 deliveries respectively, with

TABLE XII

Percent distribution of married teachers according to their marital period and number of deliveries.

Duration of Marriage	No. of deliveries						Total
	Less 5yrs.	5—9	10—14	15—19	20—24	25+	
None	37.2	7.0	6.6	6.5	5.9	12.8	19.8
One	37.7	9.4	5.5	3.9	4.7	2.5	20.1
Two	22.1	43.6	20.8	14.4	8.2	7.7	27.3
Three	2.8	29.1	28.7	24.2	17.6	15.4	17.2
Four	0.1	9.3	24.0	18.9	27.1	7.7	8.7
Five	0.1	1.1	9.8	16.9	15.3	15.4	5.6
Six+	—	0.5	4.6	15.0	21.2	38.5	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	0.9	2.29	3.08	3.68	4.18	4.48	2.02

years on the average had 4.18 deliveries and the mode was 4 deliveries, a mode of three deliveries for both. Teachers married for 20—24 while those married for 25 years or more had on the average 4.48 deliveries and the mode lied in the group having more than 5 deliveries.

As the duration of marriage is also, closely related to the age of the woman, analysis of the number of deliveries by the age of teachers for each period of marriage showed that no relation between the age of teacher and the number of deliveries she had. This denotes that duration of marriage was the important variable that affects the number of deliveries and consequently the number of living children in the family.

2 (c) 4. *The frequency of deliveries in relation to the education of teachers :*

Table XIII gives the frequency of deliveries according to the education of the teacher. As expected the same inverse relationship as that found with the number of living children was observed. The differences between the educational groups are statistically significant (P less than .01)

TABLE XIII

Percent distribution of number of deliveries in relation to the education of the teacher.

Educaional attainment	No. of Deliveries					Total	percent
	None	One	Two	Three	Four+		
Less than socondary	21.9	15.6	20.8	17.7	24.0	100	2.18
Secondary	20.4	20.1	26.4	17.5	15.6	100	2.03
University	15.4	25.1	37.1	14.1	8.5	100	1.8
Total	19.8	20.1	27.3	17.2	13.6	100	2.03

2 (c) 5. *Number of deliveries in relation to the religion of teachers :*

As expected higher percentage of Christians had one or two children (56.6%) as compared to Moslems (46.6%). However, more moslem teachers (33.3%) delivered three times or more than did the

Christians (27.7%). This reflects a higher fertility of Moslems. The differences observed were statistically significant. (P is less than 0.05)

TABLE XIV

Percent distribution of the number of deliveries and religion

Religion	No. of deliveries				Total
	None	One	Two	Three+	
Moslems	20.1	20.3	26.3	33.3	100.0
Christians	15.6	17.9	38.7	27.7	99.9
Total	19.8	20.1	27.3	30.8	100.0

## 2 (D) *Pregnancy State :*

Of the 2626 married teachers 323 (13.0%) mentioned that they were pregnant at the time of the interview.

### 2 (D) 1.

The occurrence of pregnancy at the time of the interview was calculated for the different age groups and is presented in Table XV. An inverse relation was observed between the age of the teacher and the occurrence of pregnancy at the time of the interview.

TABLE XV

Pregnancy rate in married teachers by age.

Age	Pregnancy rate
Under 25	27.8
25—	19.3
30—	10.6
35+	4.5
Total	13.0

Among those younger than 25 years, 27.8% were pregnant. The proportion decreased gradually by age and was lowest among those aged 35 years or more (4.3%). These differences are statistically significant where P is less than .05.

2 (D) 2. *Pregnancy and the number of surviving children :*

Table XVI gives the percent distribution of married teachers in relation to the number of living children and the pregnancy state. As expected, the highest proportion of pregnant teachers (30.0%) was encountered among those having no children. This is expected, for among those quite a proportion will be newly wed and young wives who would like to start a family.

TABLE XVI  
Pregnancy rate in relation to the number  
of living children

No. of Children	Pregnancy rate
None	30.0
One	20.0
Two	5.0
Three	5.0
Four+	2.0
	13.0

One fifth of teachers with only one child were pregnant. The proportion of pregnant teachers dropped dramatically to 5.0% among those with two or three children and was even less (2.0%) in case of teachers who had more than 3 living children. That a minority of teachers with two children or more was found pregnant is expected. Teachers having a large family are more likely to be in the older age groups. Also, we are in fact dealing with a population whose ideal number of children averaged two (Kamel et. al. 1970). Again other studies too, showed the inverse relation between pregnancy and parity among a different population (Kamel et. al. 1968).

The differences observed were statistically significant (P is less than 0.05).

2 (D) 3. *Pregnancy state & the No. of male children in the family.*

Further analysis of pregnancy in relation to the number of male siblings in the family showed a more marked inverse relation between the occurrence of pregnancy and the number of boys in the family and was even more marked (Table XVII).

TABLE XVII

Pregnancy rate according to the number of living  
male children

No. of living male children	Pregnancy rate
None	15.0
One	7.5
Two	4.3
Three+	1.6
Total	13.0

2 (D) 4. *Pregnancy state and the age of the youngest child in the family :*

A significant difference is observed between pregnancy condition and the age of the youngest child ( $p$  is less than .01). Table XVIII. Very few women having infants & Those having children in the age 5 years or more stated that they were pregnant. The former will be influenced by the physiological sterility while the latter will be more likely to be in the older age group and had achieved their ideal family size.

TABLE XVIII

Pregnancy rate by the age of the youngest  
child in the family.

Age of youngest in family	Pregnancy rate
None	30.0
Less than 1 year.	4.9
One year	13.9
Two years	12.9
Three years	11.3
Four years	10.3
Five—Nine	4.0
Ten+	1.0
Total	13.0



Nearly the same proportion of pregnant women were observed among those having their youngest children in the ages one, two, three or four years (13.9, 12.9, 11.3 and 10.3% respectively). Although the majority of teachers previously stated an interval of 2 or 3 years as an ideal interpregnancy period. (Kamel et. al. 1970). Yet, the actual behaviour of teachers differed, as could be seen from the wide range of the age of the youngest child reported in relation to pregnancy.

### 3. Desire for being pregnant :

Only 24% of married teachers wanted to be pregnant. This desire was found to be inversely related to the number of surviving children in the family. Table XIX shows that the highest proportion was encountered among childless teachers (70.8%) and to a less extent among those having one child only (49.9%). The proportion was lowest among those with three and four or more children (4.1% and 3.7% respectively.)

These differences were found to be statistically significant where P was less than .05.

TABLE XIX

Percent distribution of teachers by their desire for a pregnancy and number of surviving children.

No. of children	Desire for pregnancy (%)
0	70.8
1	49.9
2	14.7
3	4.1
4+	3.7
Total	24.0

### 4. Fertility data for women teachers above the age of 45 years :

To determine the average probable number of abortions, deliveries, and live births that would occur to each teacher during the child bearing period ; the experience of married teachers who have passed the child bearing period ; namely those above 45 years was studied.

Table XX presents the distribution of abortions, deliveries and number of living children among the 123 teachers who have completed their fertility while they were married.

TABLE XX

Percent distribution of the number of abortions, deliveries and the number os surviving children, among married teachers above the age of 45 year (123)

No.	Abortions	Deliveries	Surviving children
None	56.1	18.7	18.7
One	16.3	8.9	13.0
Two	13.0	14.6	17.9
Three	6.5	16.3	18.7
Four	3.3	16.3	16.3
Five+	4.8	24.2	15.4
Total	100.0	100.0	100.0
Average	1.02	3.1	2.6

Accordingly the teacher is expected to have on the average 1.02 abortions, to deliver 3.1 times and to have 2.6 living children. These data are close to the findings reported by Taba and Samuel, 1962.

This study suggests that in U. A. R. the transition to fertility control is well under way among at least the most educated, following the experience reported in Western countries. The similarity between the fertility pattern of the modern western countries and that of the teachers is obvious.

#### *Knowledge About Family Planning and Practices :*

The study of popular knowledge about family planning is essential. It is important too, to know how far family planning is accepted by teachers, and the extent of their awareness of the available family planning services. Also, it is highly recommended to study the actual behaviour of this selected population of working women with respect to family planning and the proportion of teachers who actually tried family planning methods and what were the methods used.

#### *Practices of Family Planning :*

Excluding all teachers who were pregnant at the time of the survey, it was found that 77.3% stated that they practice family planning. However, all were in favour of family planning. Private Private physicians were consulted by 42.0% of teachers and nearly

the same proportion (43.3%) were practicing without medical advice. Only 14.8% attended a family planning centre.

*Practices of family planning by education :*

Table XXI gives the percent distribution of teachers who were practicing family planning by the place of getting the service and their education.

The inverse relation which was previously observed between fertility and education reverses, as should be expected to a positive one ; when education is cross clasified by use of contraceptives. The table shows that the proportion of teachers practicing family planning goes up with increasing level of education. The majority of university graduates (85.2%) were practicing family planning at the time of the interview compared to 76.7% and 69.1% of those who had secondary and less than secondary education. More than half the university graduates consulted the specialists compared to 40.3% and 36.2% of those with secondary and less than secondary education.

TABLE XXI

Percent distribution of teachers practicing birth control by the place of getting service, in relation to their education

Place of getting service	Level of Education				%practice
	F.P. centre	Private Dr.	Non med.	Total pract.	
Less than secondary	15.3	36.2	48.5	100	69.1
Secondary	16.3	40.3	43.4	100	76.7
University	4.8	54.0	41.2	100	85.1
Total	14.8	41.9	43.3	100	77.3

So, university graduates seemed more inclined to prefer the service of specialists, as they can afford to meet the expenses involved. They may value more, the relaxing and private attention of the physician. Teachers with less than secondary education were more inclined to consult non-medical sources as friends and relatives or may purchase the method from a pharmacy. (48.5%) compared to 43.4, and 41.2% for those with secondary and university education.

Although the proportion of teachers in the three educational groups who attended a clinic was generally low, yet as expected university graduates were less likely to attend such clinics (4.8%) as compared to those with secondary and less than secondary education (16.3 and 15.3 respectively).

The differences observed between the educational groups were statistically significant where  $P$  is less than .05. Almost the same pattern was observed when the education of the husband was taken into consideration.

*Practices of family planning in relation to the age of the teacher :*

Table XXII is giving the percent distribution of teachers practicing family planning by their age and place of getting the service. Over 80% of teachers in the age groups 30—44 years were practicing birth control. Those aged 45 years or more were the least practicers where only 48.8% of them were using contraceptive methods. This is more likely to be due to the fact that quite a proportion of those women are menopausal. 66.5% of teachers younger than 25 years and 77.6% of those in the age group 25—29 years were practicing. (There are who had not yet achieved their ideal number of family size). Older teachers (40 years and more) practicing family planning were the least to use family planning clinics, and about half of them were practicing without any medical advice. Teachers who were in the young age groups were more likely to consult medical sources (a family clinic, and a private physician) in matters related to family planning. This is a reflection to their inexperience rather than income.

TABLE XXII

The relation between the age of the teacher, the place of getting service.

Age	Place of getting Service				%Practice
	F.P. centre	Private Dr.	Non med.	Total	
Less than 24	16.2	47.6	36.2	100	66.5
25—	19.2	42.3	38.5	100	77.6
30—	17.1	41.9	41.0	100	81.0
35—	15.3	36.4	48.3	100	83.9
40—	7.9	42.9	49.2	100	80.2
45+	5.1	40.5	54.4	100	48.8
Total	14.8	41.9	43.3	100	77.3

*Practice of family planning in relation to the number of surviving children :*

Table XXIII gives the percent distribution of teachers by the number of surviving children and their practice of family planning. Only 17.9% of those with no children were practicing family planning. The proportion of teachers using contraceptives increased with the presence of at least one child, where 78.4% of those with an only child were using one method or another. This proportion reached above 90% for those with two children or more.

The differences observed is statistically significant where P is less than .01.

TABLE XXIII

The relation between the number of surviving children and the practice of birth control

No. of surviving children	% Practicing
None	17.9
One	78.4
Two	94.7
Three	91.6
Four+	89.2
Total	773

*Practices of family planning in relation to the presence of a male sibling in the family :*

Table XXIV presents the percent distribution of teachers by the number of surviving male siblings as well as their practice of family planning. Apart from teachers having no children at all, those having no boys were the least to practice family planning, where only 85.7% of them were using contraceptives compared to 90.5, and 90.2% for those with one or two boys. The differences observed were statistically significant where P is less than .05.

TABLE XXIV

The relation between the number of surviving male children and the practice of birth control

No. of surviving male children	% Practicing birth control
No. male children	85.7
No. male child	90.5
Two+male child	90.2
No children at all	17.9
Total	77.3

This means that the mere presence of a child, irrespective of its sex, influences the practice of using B. C.

*The awareness of the married teachers about the location of family planning centers :*

Although just over half of all teachers knew the location of family planning clinics, only 14.8% of them attended it. It was found that teachers with a university degree were less likely to know the location than those with secondary and less than secondary education (30.7% compared to 55.1 and 51.4% respectively Table XXV. This difference was statistically significant where P is less than .01. This reflects the disinterest of the teachers in the utilisation of the centers and explains the low attendance rates for university teachers. The same inverse relation is observed when the husband's education was considered.

*Methods used by teachers :*

The most popular methods used by teachers were the tablets and loops. 59.7% of all those practicing were using one of these two methods. The safe period and coitus interruptus were practiced by tenth of the couples, while the diaphragm and chemicals were only used by a minority (2.5%). Also very few teachers were sterilised contraception such as using lemon juice, Aspiria for vaginal application.

TABLE XXV

Percent distribution of teachers by their level of education and their knowledge and use of family planning centre.

Educ No.	Knowledge and use			
	Dees'nt know place of Con.	Knows place of centre	Total	% whego to centre
Less than secendary	48.6	51.6	100	15.3
Secendary	44.9	55.1	100	16.3
University	69.3	30.7	100	4.8
Total	48.1	51.9	100	14.8

Cross analysis of methods used with various social variables did not reveal any significant differences.

Communication chains and channels of information, and role of *teachers as legitimator for family planning* :

A well planned family planning programme makes extensive use of existing channels of communications namely newspapers, magazines, pamphlets, postures, radio and television. These mass media can act as legitimators. Their job is not simply to spread information but to spread a sense of social rightness and approval about the practicers.

The programme should also utilize personal contacts such as clinic visits, home visits, private discussions, lectures ... etc. This direct method is intended to inform and motivate only a small fraction of the total population who can be regarded as opinion leaders who by their private communtications can spread the message through out the whole community. Teachers can be regarded as opinion leaders. They are interested and can appreciate new ideas. Also they have the opportunity to spread their ideas around and more over they command teachers as a source of family planning legitemators. such respect and confidence that they can stimulate others to adopt these new ideas. Being in a long-term acquaintance with pupils and help in motivetion for birth control.



This part, is concerned with the study of the channels of information and communications that reached the teachers, and secondly to reveal to what extent teachers contribute in propagation of birth control concepts and knowledge ; as well as their recommendations for improvement of the present family planning services.

### III (a) *Sources of information :*

All teachers involved in the study (3893) were asked about their knowledge about family planning and the sources of information on the subject. All teachers claimed their awareness of the subject and gave more than one source as a channel of their information.

However, it seems that the mass media were more powerful means as the majority mentioned multiple media as their source of information. The most popular mass media mentioned were the radio, newspapers and television (88.7%, 86.1% 76.6% respectively). Posters were only mentioned by 62.3% of all teachers while booklets were the least mentioned (24.0%). Less than half the teachers gave as the source of information, medical personnel working in clinics ; which included doctors, nurses, social workers and health visitors. Private physicians were mentioned by 26.0%, and friends were considered as a source of information by 28.9%.

57.9% of all teachers had their information from lectures and seminars. The Arab social union was the least to be mentioned.

Cross analysis of marital status in relation to the source of information showed significant differences (Table XXVI). Single teachers were less likely to be informed by private physician than married, (15.4% compared to 31.2%). Also they were more likely to mention the social union than the married teachers (21.8, 13.8% respectively).

### *The role of the teacher as a legitimator for family planning :*

The majority of the teachers (84.8%) claimed that they disseminate always the message of family planning among their friends and neighbours. Only 13.6% of them occasionally did so. Less than 2.0% of all teachers never practiced this educational activity. Teachers however, were less inclined to disseminate and spread the message among the public at large where only 57.7% claimed that they do so frequently, and 38.6% said that occasionally they spread the word.

TABLE XXVI

Sources of information about family planning as mentioned by Teachers in relation to their marital status.

Sources of information	Marital Status			
	Single	D.	Married	Total
Governmental Employee				
S.W. & H.V.	56.4	48.5	43.7	48.0
Private Doctor	15.4	23.3	31.2	26.0
Friends	33.8	27.2	26.4	28.9
Arab S.C.	21.8	15.5	13.8	16.7
Lectures and	42.9	29.9	34.8	37.9
Radie	91.2	85.4	84.1	86.1
Newspapers	89.2	84.5	84.1	86.1
Television	72.6	73.1	78.5	76.6
Posters	65.7	62.5	60.2	62.3
Beeklets	25.9	24.0	23.0	24.0

Cross analysis by marital status showed no significant statistical differences.

Table XXVII and Table XXVIII show the effect of education of teachers on her role as a legitimator. An inverse relation was observed between the teachers education and the dissemination of knowledge about family planning. Teachers with less than secondary education were more likely to claim that they actively engage themselves in the educational programme of family planning services, where they propagate the message and explain the needs for it among the public and friends than teachers with higher educational attainments. This might be due to the findings that the former (teachers of less than secondary education) teach mostly in primary schools where they have more opportunity to meet and talk with parents accompanying their young children. These parents usually have their younger children and infants with them which gives a suitable occasion for health education. These results show that teachers are promising leaders in family planning. Their readiness for contribution in health education for family planning could be encouraged and strengthened by putting more interest and providing more information through organized

training programmes, mass media, and through the repeated discussions of the school medical officers and health visitors during their periodic visits to schools.

TABLE XXVII

The role of the teacher in disseminating the message of family planning among friend and neighbours & its relation to the level of education

Levll of Education	Disseminate the message			Total
	always	occasionally	Does' nt	
Less than secondary	90.5	8.8	0.7	100.0
Secondary	84.7	13.7	1.6	100.0
University	84.3	14.9	0.8	100.0
Total	84.8	13.6	1.6	100.0

TABLE XXVIII

The role of the teacher in disseminating the message of family planning among the public & its relation to the level of education

	Dissiminate the message			Total
	always	occasionally	Does't	
Less than secondary	77.0	20.0	3.0	100.0
Secondary	58.1	38.3	3.6	100.0
University	47.6	47.3	5.1	100.0
Total	57.7	38.6	3.7	100.0

*Recommendation of teachers for the improvement of existing family planning services in U. A. R.*

Only 693 of all teachers wrote their recommendations for the improvement of the existing family planning services. More than half

of these teachers (54.3%) felt a need for a more intensive and effective educational programme, and a further 4.4% pointed out the importance of motivation and incentives. Administrative improvements were mentioned too. 9.7% felt that there is a need for more clinics and 5.8% felt there is a need to remove the economic burdens attached to the use of the different contraceptive methods, and went as far as recommending the distribution of all methods freely. 3.9% thought that there are still a need to improve the different available methods used for contraceptives

TABLE XXIX.

Recommendations given by 693 teachers for the improvement of family planning services in U.A.R.

	No.	%
More health education programmes	376	54.3
Motivations and incentives	31	4.4
Increasing the number of centres	67	9.7
Free available methods	40	5.8
Improving of methods	23	3.3
Participation of men	27	3.9
Raising the age of marriage	43	6.2
Legislation	86	12.4

Legislation was mentioned by 18.9% of teachers, who recommended the improvement of family planning service, namely compulsory limitation of family size (12.4%) and raising the age of marriage of spouses (6.2%). Only 3.3% felt that men should participate in family planning programmes.

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