Policy Implications And Future Program Issues

Family Planning And Fertility Reduction

In Jordan

Dr. AHMAD A. HAMMOUDA

Abstract

The objective of this paper is to deduce the main issues and future policies and program directions of family planning and related development (i.e. non-family planning) activities to reduce fertility levels in Jordan. To acheive this objective the paper relies on critically reviewing and investigating the fertility levels and trends, in addition to the differentials and changes of the determining factors of fertility during the period 1976-1985. The study utilizes the available published data provided mainly by the 1976 Jordan fertility survey and the 1983 Fertility and Family Health Survey, and the 1985 Jordan Husbands Survey. Differentials and changes in the "age at marriage" contraceptive use, breastfeeding and postpartum infecundability were discussed, with regard to their correlations with the socio-economic, cultural background characteristics and their impact on fertility levels and trends. Accordingly, the causes of fertility decline during the period 1976-1983 were identified. The main findings of this paper are that delay of age at first marriage, promoting education of all types specially in rural and poor areas and making it available and accessible for all female population, Promotion of family planning as a health issue and its full integration with child and maternal programs, family planning information, education and communication (IEC) and availablity of services to younger cohorts and married couples, integration of family planning activities in rural development projects, improving the role and status of women through education, participation in the labour force and integration into the socio-economic life of their communities, upgrading the management and promotion of professionalism in the family planning movement, and increase of male involvment in family planning, are the most important issues and program areas for future family planning policies and activities in Jordan .

Introduction

The theoretical background of this paper, as I see it, may be derived from two theories or hypothesis; the theory of demographic thransition, and the differential fertility hypotheses. The two hypotheses are not entirely separable from each other; they overlap substantially, though they may be differentiated by the kind of the proposed study and the scope or range of their policy recommendations.

Associate Professor , Department of Population Studies, Faculty of Arts, University of Jordan. (ph.D) University of Ain Shams, Egypt 1974 and Post Doc. University of Pennsylvania U.S.A.

Fertility levels and trends are influnced by socio-economic and cultural factors, known as background variables (e.g. educational attainment, place of residence, work status, occupation ... etc). These factors operate through intermediate factors such as: contraceptive use, age at marriage, breastfeeding and postpartum infecundability ... etc.

The hypothesis of differntial fertility aims at finding explanation of fertility by looking at the attributes of real live people who have had or might have children. The assumption of the hypothesis is that: people's choices are affected by their life experience and circumstances (socio-economic, cultural and environmental background). Once these differences are known, then perhaps policies can be initiated according to socio-economic factors prevailing in society.

Socio-economic policies as well as policies and programs associated with family planning operate on fertility through a set of proximate determinants. When the contribution made by each of these determining factors to levels and trends of fertily is known an illuminated recommendation, sound policies and population, family planning program directions can be established.

Policies (e.g. population, social, economical policies) are means of attaining an improved quality of life and higher standards of living for people of a given region (or country), through affecting the levels and trends of population components and/or socio-economic situation.

Unlike mortality, inducing a change in fertility situation is not an end in itself. For fertility policies to achieve their objectives they must be designed and implemented in a way that brings fertility change (or demographic changes in general) together with the appropriate socio-economic changes, so that a true and lasting progress in the standard and welfare of the people is the final outcome. This fact emphasizes the imrportance of non-family planning programs and integration of family planning services with other development efforts especially health and education activities.

If we agree that social development is a process of guided social change which has as its objective an improvment in the living conditions of less privileged individuals and groups of the population or particular communitites , and if improving the living conditions of such groups and families is a major objective of policies and planning efforts; then differentials and socio-economic correlates of fertility will be a suitable and appropriate tool to identify the target groups or particular populations and communities to whom policies should be oriented. Besides, these differential and correlates will furnish efficient answers (or policy implications) for questions like: what differences do "Education", "Work Status", "Occupation", and "Place of Residence" or any other explanatory (background) variable(s) make ?

It goes without saying in this regard that fertility differentials of population groups and segments reflect their attitudes and practice of contraception , breastfeeding and early marriages and other fertility determinants.

Policy-thinking is and must be causality-thinking (R.Dahl, 1965 P.88 qoated by E. Tufte; 1974 P.2). But sometimes limitations of data makes it imposible to decide or predict how much change is due to each of the explanatory variables. However, the available data for this study from several Jordanian sources are good enough to assist us in the process of seeking to discover sizes, directions and consistencies or relationships between the interrelated variables on the one hand and fertility on the other. Identifying and understanding these relationships is considered very helpful toward developing explanations, and policy recommendations. In addition, the available data are sufficient for conducting an analysis of causes of change in the levels and determinents of fertility. By doing so, this paper will identify the main intermediate variables and measure their contribution to explaining fertility differentials and dicline in Jordan. Consequently, issue, policy decisions, and program directions with regard to family planning and fertility regulation can be identified and drafted.

Data Used

The 1985 Jordan Husbands Fertility survey (JHFS), the 1983 Jordan Fertility and Family Health Survey (JFFHS) and the 1976 Jordan Fertility survey (JFS) are the major source of data used in this study. The 1976 JFS was carried out by the Jordan Department of Statistics (DOS) in collaboration with the World Fertility Survey (WFS). The other two surveys were conducted by DOS in collaboration with Centers for Disease Control (CDC) in Atlanta, U.S.A.

In addition, this study used other background information related to knowledge , attitude , practice of family planning , and characteristics of family planning programmes and policies from published reports of local agencies (e.g. The Family Planning and Protection Association and Ministries of Planning and Health), and International agencies such as the World Bank, UNFPA and IPPF.

Levels And Trends Of Fertility

Recently, high fertility became the principal component of rapid population growth in most of the developing countries. Jordan is a good example of these countries; it experienced an impressive reduction in its mortality rates, and a noticeable increase in life expectancy at birth, accompanied by persistently high fertility rates during the last three decades. The annual growth rates estimated at 2.8 per cent in 1952, 3.1 per cent in 1961, and 3.5 per cent at present. The crude death rate dropped from 21 in 1952-54 to 18 in 1961, then to 12 per thousand population in 1976, to approximately 9 per thousand at present. The life expectancy at birth rose from 49 years in 1961 to approximately 57 in 1977 to approximately 64 in 1986. While the death rate has been decreasing, the birth rate has remained very high. In

fact, it has shown a slight increase from 47.3 live births per 1000 population in 1961 to its present livel of about 48 per 1000 population (UNFPA; Report No.18, pp.5-6) and (Ministry of Planning, five year plan 1986-1990).

The negative impacts of high fertility, espacially on the health status and welfare of women, and generally on the quality of life and the socio-economic well-being of the household is recognized by many researchers and social scientists. "But still, there is a pressing need for better understanding of the nature and scope of high fertility problems and their ties with social change and development policy" (McNicoll. 1978).

Data provided by the aformentioned Fertility Surveys results indicate a persistently high, but declining fertility level in Jordan. The total fertility rate is estimated at 7.7 births per women for 1976 and 6.6 births for 1983. Age specific fertility rates indicate a downward trend generally concentrated below the age of 35 years in all surveys . (table 1)

Table (1)

Age Specific Fertility Rates and Total Fertility Rates

Age	1976 JFS (1971-75)*	1981 JDS (1979-81)	1982 JMS (1981-82)	1983 JFFHS (1980-93)
15-19	133	87	40	49
20-24	344	252	219	228
25-29	358	340	332	335
30-34	336	316	321	305
35-39	245	239	245	233
40-44	104	134	117	127
45-49	11	49	45	40
TFR	7.7	7.1	6.6	6.6

Note: JFS Jordan Fertility Survey
JDS Jordan Demographic Survey
JMS Jordan Manpower Survey
JFFHS Jordan Fertility and Family Health Survey

* Period covered in estimate
Source: DOS: JFFHS 1983; Op. Cit. P.94

The high fertility levels result from the long periods of exposure to risk of pregnancy, which is evidently influnced by variables such as : age at marriage, duration of breastfeeding and levels of contraceptive use ... etc.

It is comman in Jordan that women get married at a young age . (table 2). Marriage is the only form of entering into sexual unions and it is almost universal in Jordan. In addition, the Jordan fertility surveys indicated a relatively short duration of breast-feeding (i.e,10.9-11.4 months in 1976 and 1983 respectively (1) which usually results in short postpartum amenorrhoea (6.2 Months in 1983 and consequently long period of of exposure i.e. short postpartum infencundability and short birth intervals).

- According to Bongaarts (2) there are four intermediate factors (i.e. proportion married, contraception, induced abortion and postpartum infecundability which is considered the most important determinants of fertility in other words , factors responsible for most of the variation in fertility levels of population.

Needless to say that these intermediate variables are product of serveral demographic, socio-economic and cultural factors (e.g. wife and husband's educational attainment, type and place of residence, religion, work status and occupation ... etc).

The very high fertiltiy level and its declining trend as shown in table (1) (TFR decreased from 7.7 in 1976 to 6.6 in 1983), is the outcome of prevailing socio-economic and cultural situation in Jordan, and an off-set of the changes in the characterstics, behaviour and attitudes of people toward reproduction during the period 1976-1983.

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(1) For details on this subject see : DOS; JFFHS 1983 ; Op. cit. P.209 table (5) .

(2) These four main factors explained 96 percent of the variance in the total fertility rate in a sample of 41 Populations that included developed countries as well as historical populations. Davis and Blake (1956) and other model builders constructed variety of models that incorporate larger number of socio-biological proximate determinants of fertility. However, Bongaarts' model is the most recent comprehensive framework for analyzing the effect of the intermediate factors on fertility. For more details on this subject see:
J. Bongaarts; The"fertility-inhibiting effects of the intermediate fertility variables" ; in "population factors in development planning in the Middle East" ; F. Shorter and H. Zurayk (eds.); the Population Council, New York, 1985, P. 152.

Differentials And Changes of Fertility Determining Factors And Their Impacts 1976-1983

1- Age at First Marriage

Date presented in Table (2) show that early marriage is a common practice in Jordan. However, the data also indicate a clear trend toward later marriage and concomitant trend for first marriages to women in younger age groups to spread over a wider age range .

Table (2)

Age-at which 50 per cent of ever married women were first married

	Curent Age					
	20-24	25-29	30-34	35-39	40-44	45-49
Age at which 50 per cent were First Married	19.4	18.4	17.6	17.6	17.3	16.7

Source: DOS; JFS, 1976; Op. Cit. P.3

The age at which 50 per cent of each of the cohorts (age groups) of women were first married has risen from 16.6 years for the age cohort 45-49 to 19.4 years for women 20 to 24.

It was found that among the oldest women (ages 45-49) 31 percent first married before their fifteenth birthday; while among the youngest (ages 15-19) only 5.5 percent did so. (ISI; WFS No. 20 P.3).

However, it should be mentioned that if this phenomenon (early age at marriage) is not accompanied by an increase in the use of contraceptives in younger cohorts of married women, the fertility rates will remain high and family planning programs will have limited impact on fertility, and thus it will have no evident impact on the process of family development and the improvement of the idividual's standard of living.

It is important at this point (before discussing thoroughly later in this paper the facts, impacts and issues of contraception in Jordan) just to stress the significance and relevance of this matter (i.e. contraceptive use in younger cohorts) due to the importance of its policy implication and impact on future program directions. It is sufficient in this regard to note that the 1983 Fertility and Family Health Survey indicates that contraceptive use is most prevalent among women between the ages of 30-44, and it increases with the increase of children a woman had. (DOS;JFFHS 1983; table 8). This Fact implies that despite the relatively high rates of contraception use in Jordan its contribution to fertility reduction was minimal ,

But the changes in age at marriage were responsible for the major part of the fertility decline observed between 1976 and 1983 serveys (1).

Socio-economic, cultural and rural-urban differentials with respect to age at first marriage according to the (JFS 1976) and (JFFHS 1983) data, are evident. Women residing in rural areas appear to marry earlier, the percentage ever married women according to (JFS 1976) is 58 percent in urban areas and 78 percent in rural areas. And there is a clear relationship between education and age at marriage; (table 3) Education has the effect of raising age at first marriage

Table (3) Mean Age at first Marriage of those Who First Married Before Age 20 By Current Age and by Level Of Education (JFS 1976)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Level of Education	20-24	25-29	30-34	35-39	40-44	45 or more	Crude Mean	Stand ardized Mean	Married Before Age 20 %
No Schooling	15.9	15.7	15.4	15.5	15.3	15.2	15.5	15.5	82.7
Elementary	16.2	16.1	16.4	16.8	16.3	15.5	16.2	16.3	77.7
Preparatory	17.1	17.3	17.5	16.7	.	.	17.1	16.9	67.6
Secondary or more	18.0	17.5	17.4	17.8	.	.	17.6	17.5	31.2
Total Mean	16.2	15.9	15.7	15.7	15.4	15.3	15.8	15.8	70.3
Number	505	517	468	418	331	301	504	----	----

Less than 10 cases.

Data presented in table (3) indicates that there is a trend toward an increase in the mean age at first marriage as the educational level gets higher. After standardization, almost 83 percent of the ever married women whose current age 20 or more and have no education were married before age 20. The percentages for those who had elementary, preparatory and secondary school education or more were 77.7 percent, 67.6 percent and 31.2 percent respectively.

(1) The relative Importance and contribution of these factors and other determinants on fertility levels and trends will be discussed later in this paper.

Jordan witnessed during the last decade a pronounced increase in female enrollment in secondary and higher education. A phenomenon that explains the delay in the age at marriage which Jordan is experiencing at persent. Female enrollment ratios for the secondary level increased from 38.4 percent in 1976 to 46.6 percent in 1983. Most of this increase was in rural areas. As for higher education, females constitued 33.4 percent of the total student population enroled in universities and community colleges in 1975-1976 compared to 44.2 in 1984 (National Document; 1985, Pp.33-34).

Table (4) presents data from the JFS 1976 for all ever-married women by mean age at first marriage and who were first married before age 20 by current age and selected background variables. Clear differentials can be seen on the mean age at first marriage with respect to type of place of residence, wife's work status and occupation. Among urban 74.5% married before age 20, whereas 84.4% rural women married before that age. The trend for the age at marriage for the technical and skilled labourers is higher than the farmers and agriculture labourers.

Table (4) Mean Age at First Mariage of those Women who First Married Before Age 20 By Current Age and Some Selected Background Variables, (JFS 1976)

Background Variables	Current Age Groups 20-24	25-29	30-39	49 or more	All Ages	Number of women Married before 20	%
1- Type of place of Residence:							
Urban	16.4	16.1	15.8	15.4	15.9	1741	74.5
Rural	15.7	15.6	15.4	15.0	15.4	798	84.4
2- Work Status Before First Marriage (1)							
Family Unpaid	15.7	15.4	15.4	15.4	15.5	171	NA
Paid for someone		16.6	17.2	17.2	17.1	66	NA
Self-employed	17.9	16.1	16.5	16.9	16.7	77	NA
Did not work	16.1	16.0	15.6	15.3	15.7	2207	NA
3- Wife's occupation before first marriage							
Technical and Clerical	*	*	17.6	*	17.8	32	NA
Skilled	17.6	16.4	16.5	17.0	16.8	83	NA
Farmers and Agricultural	15.7	15.5	15.6	15.3	15.5	209	NA
Did Not Work	16.1	16.0	15.6	15.3	15.7	2205	NA
Total %	16.2	15.9	15.7	15.4	15.8	----	70.
Cases	505	510	886	632	2540	----	---

(1) Family Paid in cash or in kind , and for "someone" in kind are excluded from the table due to the small number of frequencies.
* Less than 10 cases
NA Not available.

The previously mentioned association between age at first marriage and the background variables (i.e. education, residence, work status, husband's and wife's occupation ... etc), are translated into impacts upon fertility levels. Change in age at first marriage during 1976-1983 period due to large increase in female's enrollment in higher education, resulted in a decrease in percentage of women ever married before age twenty, which caused a noticable drop in age specific fertility rate for the age group (15-19) from 133 in 1976 to 49 in 1983 as indicated earlier in table (1). Data presented in table (5) demonstrate significant differentials and trends in total fertility rate by educational attainment and place of residence.

Table (5) Total Fertility Rate By Residence And by Educational Altainment

Residence				
		Urban (towns)	Rural	Total
1976	6.45	7.02	9.07	7.34
1981	----	6.80	8.00	7.10
1983	----	6.10	7.90	6.60

Educational Attainment					
	No Schooling	Primary	Preparatory	Secondary	Total
1976	9.01	6.07	5.02	3.17	7.34

Source: (JFS) 1976; summary of findings, p.8.
(JFFHS) 1983, report of principil findings pp.43.

Educational attainment reduced the total fertility rate sharply and substantially from 9.01 for illiterate women to only 3.17 for women with secondary education.

The rate for women residing in towns is 7.02 and 6.1 births for 1976 and 1983 respectivly , while the rate for women residing in rural areas is 9.07 and 7.9 births. A decreasing trend in total fertility rate for urban and rural areas is evident.

Data presented in table (6) show that the average number of live births gets lesser significantly and persistently as the level of education increases. In general, it was found that education is inversely correlated to number of children everborn . While less than elementary level educated ever married women have an average of 6.3 children , only 3.7, 3.0 and 2.7 are seen for ever married women of elementary, preparatory and secondary or more levels. And if marital duration is controlled, the differentials though less in magnitude still hold true. Furthermore, if "age at first marriage" were introduced in the analysis, we find that within each age at first marriage category, fertility differentials by education keep the same pattern even when controlled further by current age. This simply means that "education" and "age at first marriage" are negatively related to fertility.

Table (6) Mean Number of childern ever born to ever married women by level of education and by type of place of residence.

Level of Education	Type of Place		
	Urban	Rural	Total
No Schooling	6.7	5.7	6.3
Primary	3.9	2.6	3.7
Preparatory	3.1	2.0	3.0
Secondary	2.7	---	2.7
All Levels	5.4	5.2	5.3

Source: JFS , 1976 Principal report P.46.

2- Contraception

According to JFHS 1983, 26 percent of currently married women reported current use of effective methods with IUD and pill being the most common methods. In Comparison the 1976 JFS reported 25.6 percent current use with pill only as the most widely used effective method.

Both the 1983 JFFH survey and the 1985 JHF survey showed that use of contraception is positively associated with the socio-economic status, especially education and place of residence. In 1983 , contraceptive use was found to be strogly related to residence, 37 percent were using in the three largest cities, 22 percent in other urban areas and 12 percent in rural areas. Contraceptive use was most prevalent among women between the ages of 30 and 44. Differences by education were quite wide, ranging from 17 percent among those with no education to 35 percent among those with none; (JFFHS, P.44)

Contraceptive use reported by husbands in 1985 according to their socio-economic demographic characteristics shown in table (7) indicates that contraceptive use was over twice as high in urban Jordan relative to the rural areas (32 vs 14.6 percent), and husbands with relatively high education (secondary or higher) are the most likely to be using contraceptives.

On ever-use of contraception by hasbands and their wives in 1985 JHFS, data show that 42 percent of hasbands reported having ever used contraception compared to 46 per cent of their wives. Ever use is much higher in urban than in rural areas. Nearly one-half of the urban husbands had ever used contraception compared to one-fourth in the rural areas. Ever use reported by the husband peaks between ages 35 to 49,then declines. In contrast, for the wives, ever use generally increases over the ages and is highest (68 percent), for those wives whose husbands are 55 + years of age.Ever use does have a curvilinear relationship with years since first marriage for both husbands and wives. Ever use, generally, peaks between 10 to 15 years of marriage (near 50 percent) then declines slightly. For both husbands and wives ever use of contraception is positively associated with socioeconomic status (education and occupation of the husband). Only one-fifth of the hasbands with no education had ever used contraception compared to nearly two-thirds of hasbands with secondary or higher education .Also husbands of generally high social status occupations (professional and technical and administration and managerial) had higher levels of ever use than husbands in all other occupations. The wive's pattern is consistent , generally, with that of the husbands for education and occupation .

Table (7) Percentage of Coupels Currently Using Contraception by Education of Husband and Selected Characteristics

Characteristics	Total	Husband's Education: Illiterate	Can Read & Write	Elem.	Prep.	Second.
Total	26.5	12.6	21.1	24.0	30.5	43.6
Residence						
Urban	32.0	18.2	27.2	28.0	35.0	46.3
Rural	14.6	4.9	9.8	15.5	18.0	33.3
Husband's Age						
18-24	7.9	*	*	*	*	*
25-29	17.5	*	*	18.5	13.3	24.4
30-34	23.7	*	*	15.8	24.5	35.2
35-39	32.0	*	23.8	25.8	31.9	42.1
40-44	33.1	15.1	22.7	23.8	34.7	55.8
45-49	34.4	19.8	30.4	38.3	42.6	52.2
50-54	20.6	12.1	20.0	21.4	*	51.8
55 +	14.7	8.3	14.3	25.0	*	*
No. of Living Children						
0-1	6.5	0.0	*	0.0	*	13.3
2	23.4	*	*	15.4	23.1	38.5
3	33.8	*	37.0	20.4	33.3	44.6
4	37.9	*	23.8	24.2	39.2	61.4
5	27.6	14.6	11.1	27.5	37.5	42.6
6 +	25.6	13.7	22.3	27.0	29.8	44.7

* Less than 25 cases.

Source: JIFS 1985, Princapl Rreport 1987. P.28

Perhaps one of the most important queries related to the facts and figures on contraception, which has direct impact and significance to future program direction and policy, is the question of demand or need for family planning services.

The need for family planning in Jordan has been estimated by combining responses to several questions in (JFFHS 1983). Woman is defined as in need if she is not currently pregnant, does not desire to become pregnant, is not using an effective contraceptive method and is exposed to the risk of pregnancy. By this difinition 19.5 percent of women who were interviewed were in need for family planning. The need for family planning services was found to be among the highest parity women. It is also higher among those with less education, those who are not employed and those who have never used contraception (DOS; JFHS 1983; P.146).

3 - Breast Feeding and Postpartum Infecundability

Breastfeading is nearly universal in Jordan, but is not prolonged. Table (8) shows measurement of duration of postpartum variables for selected categories in 1983. It indicates a mean duration of breastfeeding of 11.4 months , full breastfeeding of 3 months , and amenorrhea of six months. In general breastfeeding and amenorrhea follow a pattern of longer duration among the rural, older and less educated women.

Comparisons with similar estimates for the 1976 JFS, suggest little change over the seven years period between the two surveys. The estimates imply a slight increase in urban areas and no change in rural areas.

Table 8

Measurments of Duration of Postpartum Variables for Selected Categories, 1983 Jordan Fertility and Family Heaslth Survey

	Mean Duration of Postpartum Variables (Months) *			
	Breast Feeding	Full Breast-Feeding	Amenorrhea	Number of Women
Total	11.4	3.2	6.2	1926
Residence				
Urban	10.7	2.9	5.9	1279
Rural	12.7	3.7	6.9	647
Age				
15-19	11.8	5.8	6.2	92
20-24	9.8	3.6	5.8	379
25-29	9.9	2.7	5.4	476
30-34	11.3	3.1	7.2	366
35-39	13.2	3.0	7.0	368
40-49	14.5	2.9	6.0	245
Education				
None	13.1	3.7	7.8	742
1-6 years	10.9	3.0	5.7	525
7 + years	9.9	2.7	5.0	659
Contraceptive Use				
Current User	7.8	1.1	1.5	415
Past User	11.1	3.5	6.9	382
Never User	12.8	3.8	7.7	1129
Birth Order				
1-2	9.3	3.4	5.0	394
3-4	10.7	3.3	6.2	447
5 +	12.4	3.0	6.7	1085
Last child Alive				
All Childern	11.4	3.2	6.2	1926
Alive Only	11.7	3.3	6.3	1882

* Prevalence mean based on 24 months

Source: DOS and CDC ; Report of principal findings of the JFFHS 1983; P.161

Causes of Fertility Decline 1976-1983

Table (9) presents the results of an analysis using Bongaarts model (1) , the proximate determinants of fertility. The analysis shows that the decline in fertility level observed between the 1976 JFS and the JFHS 1983 (i.e. TFR droped from 7.7 to 6.6 births per woman) appears to be related to a rising age at marriage.

As we know in Bongaarts model the factors range from 0. to 1.0 and the greater the departure from 1.0 the greater the fertility inhibiting effect of the factor . Consequently table (9) also shows that change in contraceptive use and post-partum infecundity were minor between the two surveys.

Table (9)
Proximate Determinants of Fertility,
1976 Jordan Fertility Survey and
1983 Jordan Fertility and Family Health Survey

		TFR	Cm Index of Marriage	Cc Index of Contraception	Ci Indexed Post-Partum Infecundability	TF Total Fecundity Rate
JFS	1976	7.7	.720	.802	.800	16.7
JFFHS	1983	6.6	.595	.803	.820	16.8

It is evident that status of Jordanian women has improved with respect to their education, employment , health , position with the family and involvment in the development process during the last decade in Jordan (2). These changes influenced the social norms including family size, age at marriage, child-bearing ... etc.

Delay of marriage and decrease in percent of married women in younger cohorts, were some of the changes caused by modernization and over-all development process which the Jordan society has undergone recently. These two factors (i.e. change in age at first marriage and number of married women) during the 1976-1983 period were responsible for most of the fertility decline noted earlier .

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(1) Bongaarts model is discussed in detail including definition and measurment of the indexes in: J. Bongaarts ; Op.Cit; 1985 ; Pp.152-176 .

(2) See: The National Document ; Op. Cit Pp.21-59 .

Policy Implications and Program Issues

Relationships betwen levels and trends of fertility and their socioeconomic determinants , in addition to the differentials and changes of the factors influencing fertility in Jordan , as indicated earlier in this study, provide us with the knowledge and basis to underline and identify policy and program implications and family planning issues.

Generally, it is agreed that progress in social and economic development and associated processes of modernization " which refers to the transformation in economic, social and political organization and in human personality " are highly conductive to lowering lvels of fertility ("R. Easterlin 1973 P.75"). Means and ways (policies) of modernization and economic development furnish a suitable climate to create and enchance motivations of interrupting the child-bearing process (fertility).

Following are some basic and general program issues and policy implications that most likely have negative impact on fertility and family size, and positive effects on the socio-economic wellbeing of the individual, couples, and the total population.

However, it is worth mentioning that, the relationships between various indices of well-being and lowering fertility and family size is likely to be considerably more complicated than simple cause-effect . Needless to say that achieving lower fertility levels and smaller family size is dependent on changing attitudes and increasing levels of contraceptive use .

The main objective of the following issues is to present some evidence of specific changes embraced by moderization and socio-economic developments in the form of program and policy impications of the previously discussed socio-economic differentials corrolates and determinants of fertility in Jordan. It is obvious that some of these issues are direct family planning ones . Others are non-family planning issues but essential to support, enhance and activate family planning programs and policies.

1 - Delay of Marriage or Postponement of the First Child :

Scholars are sceptical of the likelihood of a significant reducation of fertility to be achieved by raising the age at first marriage. Most of the studies done in this area of investigation point out that, the postponement of age at first marriage of female to 18 years will not produce a significant decline either of completed family size or of the birth rate.

But a study by Coale and Tye, on the other hand, suggests that "postponement of marriage can be an important component of population control, even if it is not accompanied by a reduction in completed family size. It may have significant implications in countries with high fertility and early marriage". (Coale and tye; 1961 qoated by K. Balasubramanian ; 1977 ; P.122).

In Jordan, we found that the main contribution to fertility reduction during the period 1976-1983 was due to delay of age at first marriage table (9). However, early marriages are still favoured and popular especially among the poor and in rural areas.

Some of the policies to influence fertility through postponement of age at marriage are: legislation, increasing years of education, promoting participation of women in paid employment and other activities outside the home and introducing changes in the social cultural values and attitudes with respect to the role and status of women ... etc.

Delay of marriage and postponement of the first child should be seen as a health issue and thus integrated with child and maternal health programs. Many studies have made quite clear the relationship between early marriage and childbearing, family planning and maternal morbidity and mortality . If childbearing starts too soon in life the woman concerned is at increased risk. The role of family planning in maternal health especially for women who get married at early age and who live in poor and socially deprived areas should be promoted to be a priority issue in Jordan.

Due to the existence of a large sector of Jordanians who are tenacious to early marriage and other traditional values, the issues and programs of family planning for the young couples should be stressed . Younger cohorts af married women and men show a very low rate of contraceptive use . The majority of family planning accepters in Jordan are of the older age brackets , only 17.5 percent of husbands below 29 years were using contraceptive , and the rate of current use for women (15-19), (20-24) (25-29) in 1983 were (4.0), (16.8) and 25.8 percent respectively .

Reductions in the total fertility rate and infant and maternal mortality are only possible if a pronounced increase in the women age at first marriage is achieved, and if family planning programs could recruit a major portion of its accepters of women of the age age range with concentration of fertility (20-29 year of age). If we are to provide a logical explantion of the contradicion between the prevailing high fertility rates and the relatively high rates of contraceptive use in Jordan, we should think that a large proportion of contraceptive users start at later age and after giving birth to more that five children. This study has shown earlier that the need for services is high among the youngest and low parity women.

2- Education:

The inverse relationship between fertility and education has been observed in many studies. Increasing literacy and school attendance, and rising level of popular education are regarded, among other features of modernization as facilitating , if not causing , a decline in fertility. The educational level of the female, and increasing the average years of her school attendance are of particular relevance for postponement of age at marriage, and for knowledge and use of contraceptives and family planning services. The National Academy of Sciences summarized the role of education as the key to development, which in turn is the key to solving population problems: Health education to improve nutrition , sanitation, and meternal and child care , vocational education to improve agriculture, stimulate industrialization and increase productivity of manpower resources , general education to free women from the traditional roles and to make society more egalitarian , sex and family-life education to teach youth how to accommodate to a rapidly changing society (National Academy of Sience ; 1974 , P.58). Education, specially secondary and higher levels , should be made available and accessable for all people specially females and rural population. In addition, integration of population education in school and university curricula and informal education should be considered among the important population issues and program priorities in Jordan.

3- Integration of Health Care , Nutrition Breastfeeding and Family Planning Services :

Besides its human aspects, nutrition (i.e. the assurances that everyone had a diet meeting minimum nutrition needs) in all likelihood could lower birth rates by decreasing infant and child mortality; as the chances of children survival improve, it is argued that it takes fewer births to safisfy parents'desires of living off-springs. However, evidence exists to indicate that good nutrition may reduce the number of pregnancies and family size. According to Fredrikson (1966), a major decrease in infant and child morality alone may by enough to bring about a decline of fertility largely independent of the process of modernization in other respects. Perhaps it is worth mentioning that nutrition is an economic and social welfare issue.

As we know, high infant and child mortality promotes desire to produce more children. The Jordanian population are not completely covered by national health care (UNFPA ; op.cit.p. 271). As it is everywhere improved public and personal health care is seen as an essential element of modernization and social development in Jordan. Diffusion and upgrading health care services alongside with family planning information and contraceptive services and breastfeeding should be stressed especially in rural areas where high fertility, and infant and child mortality prevail.

4- Urbanization Policy and Rural Development

Inspite of the fact that more than 62 per cent of the population in 1979 live in urban settlements, urbanization(1) in Jordan has not, so far, had the effect of lowering the overall fertility. This may be partly because urbanization has been a result of internal migration caused by other factors excluding industrialization . Also urbanizm(2) has not been established in urban centers on any significant scale.

Nevertheless , there is no particular reason to suspect that geographic location per se influences fertility. Essentially socio-economic and cultural factors that count for the rural-urban differentials of fertility.

However, as indicated earlier in this paper, according to the JFS 1976 results, there is evidence that urban women have exhibited rather lower cumulative fertility than rural women, even after standardizing for age and marital duration. The 1983 JFFHS also indicated a clear fertility variation between urban and rural areas. Urban fertility is considerably less than rural with TFR of 6.1 compared to 7.9 births per woman.

Schools, health care centers, contraceptives, media, better housing and environment, employment opportunities ... etc are more available and easily accessable for urban than rural women in Jordan. Certainly, the diffusion of such means and the spread of these facilities and services from urban centers to rural areas will affect the way of life, attitudes, values, tastes, mortality levels ... etc. which will have considerable negative influence on fertility level in rural areas . In addition , redistribution of the population to new settlement areas and carrying on new agricultural development projects will elevate population pressure on social, health services and housing in urban centers. If redistribution of the population as a part of urbanization policy is considered, provision of health care, family planning, welfare services educational and vocational training institution, and employment opportunities ... etc. for rural population, will motivate the population of these areas to stay on the agricultural land and not to migrate to urban areas.

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(1) Urbanization: is the process whereby a society is transformed from rural to urban. It refers to the change in proportion of population living in urban places. It can occur as a result of cityward migration, natural increase, international urban migration and reclassification of places from rural to urban or combination of these processes.

(2) Urbanism: people residing in urban areas have fairly distinctive ways of behaving, attitudes , values ... etc. compared to rural dwellers . Urbanism is the city dweller's way of social and economic life.

Meantime, the improvement of the health conditions, education system and the social and economic status of the rural population , family planning programs and contraceptive devices will be accessible to them.

5- Improving the Role and Status of Women :

Socio-economic characteristics of female population in Jordan indicate low rate of participation in the labour force, relatively high rate of illiteracy and minimal involvement in social services and developmental efforts. The 1976 Household Survey reported a crude labour force participation for women of 4.1 percent (approximately 11 percent of the total labour force in Jordan). It was indicated that 40 percent of the Jordanian women are illiterate. Also, as mentioned earlier in this paper, more that 70 percent of women who are 20 years of age and above are married.

Measures to improve the role and status of women in order to increase their share in the advancement of the society are all of great value and importance in the process of socio-economic development and modernization in Jordan.

Women education, postponement of marriage, health care and other previously indicated measures which are associated with fertility reduction, have significant influence on the role and status of women. However, a pronounced increase in women participation in gainful employment, and an increase in women involvement in social services on either obligatory or voluntary bases, and promoting women integration into the socio-econcomic life of their communities should be stressed as an important factor in improving the role and status of women.

This is a priority development issue which has relevance to familly planning programs and population policy implications in Jordan.

6- Leadership and Management of Family Planning :

Findings of recent studies and field experience indicated that the family planning movement suffer from lack of commitment of the policy-makers, planners, and community leaders to family planning . In addition, community participation in family planning activities is minimal.

Family planning, fertility regulation and control of population growth, are not a charity issue or a left-over matter; it is a major factor in national planning and policy-making, to solve many of the social and economic problems facing the country.

Family planning movement in Jordan should seek new approaches and attract professionals and knowledgeable persons to entrust them with the task of introducing convincingly and scientifically the concepts, methods, benefits and importance of family planning to the individual, the family and the nation as a whole.

One of the striking findings of JHFS, 1985 is that "percentage of couples who are exposed to the risk of pregnancy and do not desire to use contraception but do not wish to have any pregnancy is extremely high; and the proportion reported by the husbands is twice as reported for the wives" (JHFS 1985 , Op.cit.P.40).

This contradiction between the desire to stop pregnancy and non-desire to use contraception is an obvious indicator to the failure of the leadership, agencies and programs of family planning to justify themselve and convince the people of its importance and relevance to their well-being. It seems that family planning movement in Jordan is merely responding to the "felt needs" . But the "real needs"* of the people is not well known and should be identified, promoted and appropriately approached by professionals and popular leaders .

It was pointed out earlier in this study, that a real demand for family planning services in Jordan exists. Almost one fifth of the women interviewed in 1983 were in need for family planning services. But it seems that the family planning organizations programs failed to identify and reach them , due to absence of new approaches to reach and convince non-users , and to the lack of knowledgeable , trustful and popular personalities in the family planning movement .

Low levels of desire to use contraception among current non-users indicates the difficulty of family planning services future expansion . Unless real change accurs in the attitudes of couples to family planning issues and contraceptive use, the expansion of services and the increase in the rate of contraceptive use will be marginal in the future.

7 - Male Involvement in Family Planning

One of the most striking findings of JHFS 1985 is that nearly 40 percent of the husbands stated that they "do not believe in using contraception". (JHFS, principal report 1985 p.41). This means that large proportion of Jordanian men is resistant to the idea of family planning , or feel that it is an issue which can be ignored or left to their wives.

Family planning services and programs in Jordan are concentrated on women and have not been tailored to meet the needs of men. Population education likewise is focussed on women rather than couples or families, and therefore, does not serve to develop favourable male attitudes to family planning.

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* The" real needs" are the unfelt family planning needs due to ignorance and lack of information.

Eforts to increase male involvement in family planning could probably be made to improve the existing programs so that they effectively reach both men and women, encourage joint decision-making in family planning and increase male support for women using or wishing to use contraceptives. Only one third of hasbands, in 1985 felt that the decision of contraceptive use should be made jointly by husbands and wives (JHFD 1985, principal report p.43).

There are several relevant policy and program directions and approaches to the issue of male involvement in family planning, such as: improving the process of population and family planning programming to include male involvement , increasing availability of male methode , and introducing education programs to promote male involvement in family planning not as users of contraceptive methods , but as policy-makers and professional leaders who play an important role in identifying and removing legal and policy obstacles and barriers which hinder effective family planning programs.

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