

# Population increase, education and birth control

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*In this article, the situation of contraception based on the result of survey carried out in 110 countries in 1983 and 1984 by expert on family planning of WHO has been examined. And also the relationship between contraception and education and effects of over fertility on maternal and child health have been interpreted. [Journal of Turgut Özal Medical Center 1(1):73-78,1994]*

**Key Words:** Health, education ,birth control

## **Nüfus artışı, eğitim ve doğum kontrolü**

*Bu makalede, WHO aile planlama uzmanları tarafından 1983-1984 yıllarında 110 ülkede uygulanan survey sonuçlarına göre kontrasepsiyon durumu incelendi. Kontrasepsiyon ve eğitim arasındaki ilişkiler ve anne-çocuk sağlığı üzerine fertilitenin etkileri de yorumlanmıştır. [Turgut Özal Tıp Merkezi Dergisi 1(1):73-78,1994]*

**Anahtar Kelimeler:** Sağlık, eğitim, doğum kontrolü

### **Introduction**

Population is a very important factor influencing education and health status is every country .Now over 5 billion of people live worldwide .Of the population, 56% are in the developing world ,24% in the developed world and 20 percent in China .If the population increase rate keeps its present level (1.6 %), the world population will be 6.3 billion in early 2000s<sup>1</sup>.

This increase has originated to a great extent from the crude fertility rate. This rate is 1.5 percent in the developed world, 2.9 percent in the developing world and 2.6 worldwide. The rapid increase of population particularly in developing countries cause major problems in their health and the schoolage training systems.

Authorities on the field of health and economics believe that developing countries can not have a major improvement in health and educational services unless they can change this over fertility behavior<sup>4</sup>. The objective of this article is two examine situation of birth control activities based on publications of world health organizations (WHO) and united nation

population crissis committee (UNPCC). And to compare post partum family planning practices in developed and developing countries, consequently the Turkish experience concerned family planning activities was inquired and interpreted the relationship between educational level and fertility behavior.

### **A Worldwide Assesment**

People living in most industrialized countries enjoy easy access to contraception and legal abortion. In contrast, 80 of 95 developing countries, involved in the survey, adequate services to control fertility are not available. These countries contain 58 % of the total population living in the developing world<sup>1,2</sup>.

Worldwide, 372 million, 43 % married couples of reproductive age, are controlling their fertility through the use of modern, effective contraceptives. Of these some 102 million are in the rest of the developing world. In addition to this, abortion remains a major means of fertility control in the world. About 33 million legal abortions are performed each year<sup>1,2</sup>.

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and also complications resulting from unsafe abortion, which are not known the proportion of itself, are the leading cause of maternal mortality and morbidity. At present there are 500 000 maternal deaths per year worldwide and 99 % of them occurs in developing world. Between 110 000 to 204 000 of maternal deaths in the developing countries are resulted from illegally induced abortion<sup>9</sup>.

In spite of the widespread practice of family planning in countries where health services are available, there is still a large unmet need for contraception and legal abortion. Data form the world fertility survey indicate that almost half of the married women of reproductive age in the developing world want no more children whereas only one-quarter are using modern, effective contraceptives<sup>3,5</sup>.

Of the 2.8 billion people in the developing world outside China, about 660 million are women aged 15-49. Around 460 million of women who are sexually active, but the number, is reduce to about 370 million because of women who are infertile or in the process of having another child (approximately 90 million). Only 125 million women use an effective method of modern contraception. The remaining, about 250 million married or unmarried women in developing countries are need of effective contraception to prevent unwanted pregnancies. Because of lack of education and information to use them, these women do not have access to these services<sup>1,2,3,5</sup>.

It cost roughly \$ 20 to provide couples in developing countries with one year of family planning protection. And approximately \$ 1.5 billion is spent each year by developing countries for this purpose, excluding China, which spends about \$ 1 billion on its own. Of this total \$ 500 million is provided by industrialized countries as foreign aid for population programs.

**Birth Control In Developed Countries**

For developed countries, the world access to birth control briefing report includes an analysis of family planning availability. To assess the availability of effective methods of contraception it is essential to rely on scoring system. For this purpose, services and contraception are categorized<sup>1,2</sup>.

The scoring system contains 15 developed countries, each with at least 15 million people, representing a total of almost 1.1 billion people (or 91 % of total population of the industrialized world). Total scores of 25 and above placed countries in the Excellent category. Countries scoring 19 to 24 ranked Good, 10 to 18 Fair, and 0 to 9 Poor. Scores to measure the availability of birth control information and services for industrialized countries. These birth control

availabilities are 1) legal abortion, 2) intrauterine devices, 3) female sterilization, 4) male sterilization, 5) oral contraceptives 6) other methods, including condoms, diaphragms, spermicides etc., 7) the poor and 8) minors, 9) sex education in schools and 10) contraceptive information and advertising<sup>1,2</sup>.

**Table I. Birth Control Scoring In Developed Countries (\*)**

Country	Scores (0 to 30) Score	Country	Score
<u>Excellent</u>			
United Kingdom	29	Poland	21
Germany	28	Spain	21
Australia, Canada,			
France, Italy	27	Japan	19
United States	25	<u>Fair</u>	
<u>Good</u>			
Czechoslovakia	23	CIS	11
Yugoslavia	23	<u>Poor</u>	
		Romania	3

(\*) Resource : Population Crisis Committee, Briefing Paper. No: 19, October 1987.

The United Kingdom ranked first in the availability of family planning information and services among countries included in this study. Actually, the family planning movement has a long history in the U.K., and has an advantage, not found in many other developed countries, that no laws restricted private birth control clinics when they first began opening in the 1920s. And by 1974 the British government took responsibility for providing free-of-charge family planning services which was the first universally available free birth control service in Western Europe<sup>1,2,5,6</sup>.

Unlike the United Kingdom, France only legalized contraception in 1967. Italy, until 1978, kept the law of 1930 that forbade contraceptive services and advertising, as well as voluntary sterilization and abortion. Germany, France, Italy, Australia, Canada and the United States also ranked in the excellent category, each of these countries was marked down for one or more shortcomings. In the United States, laws in 29 states barred the dissemination of contraceptive information until they were struck down in 1965 by the Supreme Court in Connecticut, which made it legal to dispense birth control pills to married couples. Many states restricted abortion until it was legalized by the Supreme Court in 1973<sup>1,2,5,6</sup>.

## Pehlivan

### Population increase, education and birth control

In some countries, even if no law forbids a particular contraceptive method, doctors may refuse to provide services. This is the case for sterilization in West Germany, where sensitivity remains over the misuse of sterilization during the Nazi Period.

The Eastern European Countries of Yugoslavia, Czechoslovakia and Poland fell in only the good range of contraceptive accessibility. Although most forms of family planning are legal in Eastern Europe pronatalist government policies, supply problems, and severe restriction on the availability of sterilization, particularly for men, limit family planning availability<sup>6</sup>.

Romania is the only developed that falls into the poor category for family planning availability. Its strongly pronatalist government policies severely restrict access to birth control services and information.

The Communities of Independent States (CIS) scoring only Fair category on access to family planning, has problems of poor quality and erratic supply especially in rural areas, hindering the use of modern methods of family planning. Therefore abortion is the leading method of birth control in the Communities of

Independent States in spite of some bureaucratic requirements.

### Birth Control In Developing Countries

The scoring system covers 95 developing countries. 3.7 billion people or 97 % of total population of all developing countries. Unlike developed countries, scores to measure the availability of birth control information and services for developing countries were developed on a 0 to 100 scale. Each country received a score of 0 to 10 point in each of 10 categories<sup>1,2,5</sup>.

The survey found that family planning services were inadequate. They ranked Fair, Poor or very Poor, in 80 of the 95 developing countries. China's one billion people are excluded, men and women in countries with 80 %of the developing world population have inadequate access to birth control.

Only five countries, (Taiwan, Singapore Korea, China and Hong Kong) ranked in the Excellent category. In the Good and Fair category, were placed 26 countries such as Colombia, Sri Lanka, Cuba, Jamaica, Tunisia, Brazil, Fiji, Lebanon, Venezuela.

Table II. Estimated Use of Effective Birth Control Methods-1986

Methods	Million Of Users		Total	Developed	Total World
	China	World Except China			
Female Sterilization	53	45	98	15	113
Male Sterilization	17	18	35	8	43
Oral Contraceptives	9	28	37	27	64
IUDs	59	13	72	11	83
Condoms	5	12	17	28	45
Other Effective Methods	3	8	11	13	24
Total Number of Users	146	124	270	102	372
Total Numbers Of Couples	200	463	663	197	860
Contraceptive Users as percent of Couples	73	27	41	52	43
Annual Incidence of Abortion	12	16	28	26	54

Resource: 1)Population Crisis Committee, Briefing Paper No: 19, October 1987.

2)Population Crisis Committee, Briefing Paper No:20, October 1988.

33 Countries such as Turkey, Honduras Morocco, Pakistan, Bostwana, Zaire, Zambia, Algeria, Mali, Madagascar ranked in the Poor category. The remaining 32 countries ranked in the very poor category<sup>1,2,5</sup>.

Data on table 2 presented refers to number of couples of reproductive age in union. In most countries an additional 5 to 20 percent of couples in union may use less effective or traditional methods. And a widely variable percentage may also rely on abortion, either alone or as a backup for other methods of birth control. The category "other effective methods" includes injectable contraceptives (worldwide use estimated at 6.5 million), diaphragm, spermicides.

The best family planning services and information in the developing world are available in East Asia. Singapore South Korea, China Hong Kong and Taiwan each have a long history of strong government support for contraceptive programs. In the last 15 years, all five have experienced fertility declines of over 30 percent.

The first effective method applied to is female sterilization as seen on Table 2, (113 million users), 47 percent of these users live in China. The second effective contraceptive method is Intrauterine Devices (IUDs:83 million users). And the others are respectively oral contraceptives (64 million users), condoms (45 million users)and other effective methods (24 million users)<sup>6</sup>.

### **The Turkish Experience On Family Planning Activities**

For many years a pro-natalist policy was followed in Turkey after foundation of Republic of Turkey. But between 1955-1960, the crude birth rate started to increase rapidly and the rate reached to 2.9 per 1000 population. After long debates in parliaments, cosequently the antinatalist policy was adopted the first population planning act (No:557) was into effect in 1965. According to this low, the following became legal in the country: Dissemination of information and education concerning contraception; provision of all kind of contraceptive methods (excluding surgical sterilization) and provision of induced abortion and sterilization only on eugenic and medical factors. In comparison with vital statistics of developed and developing countries and Turkey, may be seen they are not similar to each other. The Turkish data with the relation over fertility generally are high from the average given for developing world, except life expectancy (See Table III).

Turkey ranked in the poor category according to assesments of World Health Organization's experts<sup>1,2</sup>.

Family planning information and services for birth control are inadequate but recently faced with a rising number of illegal abortions resulting from unwanted pregnancies, Turkey decided to launch a major family planning campaign and also easy abortion restrictions. An amendment to easy abortion restrictions. An amendment to the Turkish Constitutions places responsibility on the government for providing family planning and services "to ensure the peace and welfare of the family". Health teams distribute contraceptives free-of-charge and public clinics provide safe, early abortions (as much 10 week pregnancies) at no charge, wherever the resources of equipment, space and trained personnel can be provided to meet the demand, ugers of equipment, space and trained personnel can be provided to meet the demand.

After an amendment on law in 1982, in Turkey the infant mortality rate declined over 30 percent in the last decade. But the crude fertility rate is still high. This number (29.9) is over the worldwide average (26.0). Population increase rate is also high due to over fertility.

As seen in Table IV, in Turkey the fertility surveys show that 77 % of married couples are controlling their fertilities with a contraceptive method, but only 38 % of couples are using modern, effective contraceptives. The remaining of couples are using coitus interruptus, and other ineffective contraceptive methods. The use of effective contraceptives increased significantly in the last decade. For instance, in 1982 9% of couples were using IUDs, but now 17% of couples are using IUDs to prevent unwanted pregnancies<sup>9,10</sup>.

As Akin's opinion<sup>9</sup>, Turkey unfortunately has not carried out a scientific evaluation to demonstrate relevant outcome, but according to many observation in hospitals severe abortion-related complications and even deaths which used to be admitted before legalization of abortion, are not seen no longer, can be seen from hospital statistics. Although family planning activities have been legal since 1965 and induced abortion has been legal 1983 in Turkey, both of two services are still not widely available or accessible in many parts of country. The complications of unwanted pregnancies and induced abortions are still an important public health issues with regard to maternal and child health.

### **Conclusions**

The correlation between declining family size (total fertility rate) and family planning effort is clearly visible in countries with government sponsored

**Table III. Global Comparison of Vital Statistics Of Developing Countries: 1985-1990**

	Population Increase Rate Rate (% 0)	Crude Fertility Rate (%0)	Life Expectancy (year)	Total Fertility Rate	Infant Mortality Rate(%0)
Worldwide	16.3	26.0	61.1	3.0	71.0
Developed Countries	6.1	15.1	74.0	2.0	14.0
Developing World	19.6	19.4	59.1	3.7	79.0
European Countries	1.8	13.5	74.5	1.8	9.9
TURKEY	24.8	29.9	65.6	4.0	65.0

Resource: The Report on Family Planning and Mother and Child Care Work. Ministry of Health Publication, Ankara 1990.

**Table IV. Some Indicators Of Fertility And Abortion In Turkey (1983-1988)**

Indicators	1983	1988
Total abortion per 100 pregnancies	20.1	31.8
Induced abortion per 100 pregnancies	12.1	23.6
Spontaneous abortion per 100 pregnancies	8.1	8.2
Total fertility rate	4.0	3.7
Users of IUDs (%)	8.9	17.1
Users of Oral Contraceptives (%)	9.0	7.6
Users of Condoms	4.9	8.9
Other effective methods (%)	4.4	4.4
Contraceptive users as percent of couples	61.5	77.0

Resource: Turkish Population and Health Survey, H.U. Institute of Population Studies, Ankara: (1983, 1988).

services, especially those providing a variety of birth control options. Government- backed family planning programs exist in most of the 31 developing countries that fall within the Excellent, Good, and Fair range of contraceptive availability. Each of these countries experienced family size declines averaging between 14 and 55 percent over a 15 year period beginning in the early 1970s. In the poor or very poor categories, where government programs and sponsors are weak or nonexistent, the occupancy of fertility decline is much more sporadic. Half of these countries had fertility rate declines of less than 10 percent. On other hand, There is also a way of declining fertility. That is to improve the educational level of women. Primary school education decrease the total fertility by 24%, Junior school and high school education by 50% and higher education by 67%<sup>12,13</sup>. And also according to multiple regression analysis, as variables

which are both interval between two pregnancies and educational level of women have described the most important segment of total fertility<sup>14</sup>.

According to some analysis, there is an inverse correlation between the variables of fertility and education. And the abstracts of these relationship are as follow<sup>12,13,14</sup>.

1) The relationship is not linear between fertility and education. And the interval of correlation may go up to  $r = (-) 82$ .

2) Inverse correlation is more remarkable in rural area than in urban areas.

3) Female education is more effective in decreasing fertility than male education.

As a result, there are two conclusions to be implicated. The first one is to improve the education level of the population, especially of women aged 15-49, and second one is promptly and actively to put

## **Pehlivan**

*Population increase, education and birth control*

family planning programs into effect in developing world.

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