

THE TREND OF BIRTH RATE AND SOME FACTORS ASSOCIATED WITH HIGH FERTILITY IN WEST AZERBAIJAN, IRAN

A. Nadim MD DrPh¹, Sh. Salarilak PhD²

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Abstract

In order to determine the exact birth rate and also percent of birth orders in all births in the province of west Azerbaijan, all centers of birth registration in the province were asked to fill a questionnaire at the time of issuing identity document for children.

In the questionnaire, parents were asked to mention the place of birth, sex and birth order of the child and also the occupations and education of the mother and the father. This study was carried out in 1996.

During this year the population of the province was 2495343. The number of all registered birth was 43833.

This study showed that the birth rate in the province has declined from 40.8 per thousand in 1986 to 17.6 per thousand in 1996. Male/Female ratio varied from 100 to 111 in different districts, the average was 108.

The birth order of 401 male was higher in Kurds as compared to Azaris. This may be secondary to the effect of education because the study showed that the higher the education of mother or even father, the less is the probability of birth order of more than 3. The main recommendation is more emphasis on the female education to reduce the birth rate to the optimum level.

Introduction

One of the main social problems Iran is facing, is the rate of increase of population. According to census that is carried out once every ten years, Iran's population was 18.5 million in 1965; 28 millions in 1966; 36 millions in

1- Dept. of Epidemiology and Biostatistics, School of Public Health and Institute of Public Health Research, Tehran University of Medical Sciences, P.O.Box 14155-6446, Tehran, Iran.

2- Provincial Health Center, West Azerbaijan, Iran.

1976; 49million in 1986 and 60 millions in 1996, and was estimated to be 63 million in 1999.

In a recent report, the President of I.R. of Iran mentioned population increase as one of the three main problems the country is facing (population increase, reliance on oil as the main source of income of the country and external debts).

The population increase has repercussions on housing, employment, needs for water, food and agriculture and among them, it increases the need for all types of health services, preventive or curative. Although according to recent estimations bases on smapling surveys, the rate of population increase has decreased from alomst 4 percent to less than 1.5 percent (3,4), still, there is a strong need to reduce this to the level of zero because even if the population rate of increase reaches 1 percent per year, the country cannot afford to meet the needs of this population (food, employment, education, housing) especially when the oil resources become scarce after a few decades.

Although, as mentioned before these programs had been very successful (16), still, there is strong need to reduce further the birth rate. In order to do this, we need to identify the high risk groups, namely those parts of the communities with very high birth rates, and to concentrate the efforts to reduce the birth rates in these groups.

The present work was done in 1996 in the province of West Azerbaijan to identify the birth rates in various districts and ethnic groups and to determine the effect of occupation and education of fathers and mothers having babies of the birth order of 4 or more. This is because at the present time, the maximum number of children for a couple recommended by the government is three children. We have to concentrate our efforts, e.g. health education, provision of facilities (free of charge and accesible)... on these so called at risk groups who give birth to children of the birth order of 4 or more.

Materials and methods

All offices of vital statistics in the province were asked to fill a form at the time of issuing identity cards for the newborn babies. Questions in the form were about age, occupation and education of mother, occupation and education of father and birth order and sex of the child.

This was carried out in all 13 districts of the province from 21 March 1996 through 20 March 1997. The information were collected from offices all over the province. At the same time, data were collected on the number of recorded births and the population of the province from 1986 up to 1996.

This study was carried out in the province of West Azerbaijan in north west Iran.

According to the reports of Iranian Center of Statistics, the population of the province was 2495343 in 1996. There are 13 districts in the province. The population belongs mainly to two ethnic groups, Azaris and Kurds.

In some districts the absolute majority are either Azari or Kurd, while in four districts, including the provincial capital, Urumiah the population is a mixture of the two ethnic groups.

There are other ethnic groups, i.e. Assyrians and Armenians in the province but except in some villages, their number is not significant and has no effect on estimation of the birth rate at the district level.

Results

Table 1 shows the birth rates by districts and sex. In all districts, the birth rates are less than 20 per thousand. The male female ratio varies from 100 to 111 in various districts with the average of 108. Comparison of the birth rates in rural and urban areas shows that except in one district, in all other districts the reported birth rate is significantly higher in urban areas.

This difference is due to the registration of birth of rural women in urban areas giving their address in the city at the time of delivery instead of place of permanent residence.

Part of this may be the under-registration in rural areas because about 3 per thousand of them do not get identity card for their children soon after birth, and postpone this to one year later or more.

Table 2 shows birth rates and birth orders by ethnic groups. Five district (the last 5 in Table 1) are mainly Kurds, four district are mainly Azaris (the first 4 in Table) and the rest have a mixture of two ethnic groups. Birth rates are significantly different in these 3 groups of districts, being higher in Kurds and lower in districts with mixed ethnic structure.

These differences may be explained by literacy and occupation. The table shows that among Kurds, 31 percent of births had birth order of 4 or more while

it is 21.5 percent in districts with mixed ethnic structure. It is worth to note that more than one quarter of all births in the province are of birth order of 4 or more.

Table 3 shows distribution of birth order by the age group of mothers. There are some important points in this table:

1. Although there are some births before the age of 20 and after the age of 45 in mothers, the percentage is very low i.e. 2 per- thousands of all births in the first group and 7 per-thousand in the second;
2. After the age 30, the majority of births are of the order of 4 more (61.7%);
3. Even in young mothers of age group 20-29, about 14% of birth are of the order of 4 or more.

It is worth to note here that there were birth orders up to 18. Table 4 shows the percent of birth order of 4 or more by occupation of mothers and of fathers. It shows that farmers had the highest percentage and government employees had the lowest.

Table 5 shows the same percentage by the level of education of mothers and fathers. It clearly shows strong effect of education on lowering fertility rates. Both the education of mothers and that of fathers had this association but the table shows that education of mother had more pronounced effect.

Table 6 compares the trend of birth registration reported from West Azerbaijan and that from the whole country. It clearly shows that the trends are almost similar (2).

Discussion

This study based on total population of one province shows that the birth rate has decreased in the province from more than 40 per thousand in 1986, to 17.6 per thousand in 1996.

The first doubt on the validity of these findings may be that some people claim the birth registration is not complete in Iran. We believe that this is not the case.

In recent program of changing the identity cards in Iran, the Office of Vital Registrations reported they had issued 64 millions identity cards for Iranians. If we assume that 4 millions are in foreign countries, the rest is 60 millions. On the other hand, the census of 1996 in Iran showed that the population of the country is around 59.5 millions. This is almost equal to the number of new

identity documents issued by the Office of Vital Registrations taking into account the number of deaths during this period.

There is the possibility that most cases of neonatal mortality are neither registered for their births nor for their deaths. This number has been calculated for the year of study to be 1.6 percent of all births. This will increase the calculated birth rate to 17.8 per thousand.

In any case, the calculated birth rate for the whole province was less than 19 per thousand, but as mentioned before, this was still very high. In the first place to reduce the rate of increase of population, the birth rates should be dramatically decreased. the birth rate in England and Wales in 1985 had been 13 per 1000 (1). Similar situation is seen in other development countries. The birth rate should be reduced almost to the same level of industrialized countries. After the Islamic Revolution of 1979, due to some misunderstandings of religious guidance, birth rate reached 44 per thousand per year or even more.

It took several years till the religious leaders realized that this is a real threat to the prosperity of the country. Then, the government started programs for birth control by methods permissible by Islamic rules (practically all methods of birth control except induced abortion). Most of the facilities are now provided free of charge (5). It should be mentioned here that the decrease in birth rate, in the first place is due to difficult economic conditions, inflation and social condition discouraging people to marry or to have children after marriage. Facilities provided by health authorities had been a great help in changing fertility behavior.

The authorities should concentrate their efforts for pregnancy prevention in those women who give birth to children of birth order of 4 or more. This study identifies these women as those who are illiterate or very little educated (reading and writing only), therefore, family planning education and provision of facilities for pregnancy prevention should be focussed on these groups. Also present efforts to increase literacy in women of rural and nomadic groups should be intensified.

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Table 1- Birth rates in various districts of West Azerbaijan Province (1996)

District	Population	Births			Birth rate per 1000	M/F Ratio
		Male	Female	Total		
Makou	202939	1922	1767	3689	18.2	108
Khoy	323194	3296	2985	6281	19.4	104
Miandoab	209840	1723	1611	3334	15.9	107
Takab	84901	937	895	1832	21.6	105
Urmiah	725008	6067	5648	11715	16.1	107
Nagadeh	107854	700	698	1398	12.9	100
Shahindej	104598	898	863	1761	16.8	104
Salmas	156558	1427	1269	2696	17.2	112
Mahabad	171596	1723	1611	3334	19.2	107
Boukan	175529	1755	1625	3380	19.2	108
Sardast	93168	1047	938	1985	21.3	111
Piranshahr	86721	807	683	1490	17.2	118
Oshnavieh	53437	492	446	938	17.5	110
Total province	2495343	22793	21040	43833	17.6	108

Table 2- Birth rates and birth orders by ethnic groups

Ethnic groups	Population	Births				
		birth rate/1000	% order of births			
			≤ 3	4	5	≥ 6
Districts with Kurd majority	580451	19.2	69	10.2	7.5	13.3
Districts with Azari majority	820876	18.4	70.6	10.6	7.0	11.8
Districts with mixture of Kurds and Azaris	1094018	16.1	78.5	8.3	5.3	7.9
Total province	2495343	17.6	73.4	9.6	6.4	10.6

Table 3- Distribution of birth orders by the age of mother, West Azerbaijan Province (1996)

Age group of mother (year)	No. of birth	Birth order (%)			
		≤ 3	4	5	≥ 6
< 20	92	54.3	36.1	5.4	1.2
20 - 29	31364	85.8	7.5	3.67	3.0
30 - 44	12050	38.3	31.8	16.1	13.8
> 45	327	9.2	9.2	12.8	68.8
All age	43833	72.1	14.3	7.1	6.5

Table 4- Percent of birth order of 4 or more by occupation of mothers and of fathers West Azerbaijan Province (1996)

Occupation		No. of births	% birth order of 4 or more
Mother	Housewife & farming	16617	34.2
	Only housewife	24240	23.0
	Government employee	1450	3.4
	Not Known	1526	27.0
Father	Farmer	15175	36.0
	Worker	11535	27.6
	Shopkeeper	9727	21.0
	Government employee	6505	14.0
	Not known	891	11.3
All		43833	26.7

Table 5- Percent of birth order of 4 or more by education of mother and of father West Azerbaijan Province (1996)

Education		No. of birth	% birth order of 4 or more
Mother	Illiterate	24224	4.13
	Read and write	15070	26.5
	Finished elementary	6821	14.5
	6 - 12 years	10217	6.0
	University level	10735	1.2
Father	Illiterate	15001	47.2
	Read and write	1440	36.7
	Finished elementary	10228	22.4
	6-12 years	14837	11.2
	University level	2333	6.5
All		43833	26.7

Table 6- Changes in birth rates in West Azerbaijan Province from 1986 to 1996 in comparison with the birth rate for the whole country*

Year	No. birth	Birth rate	B.R. of the country *
1986	81738	40.8	42.7
1987	76915	37.5	36.4
1988	79102	37.7	37.9
1989	78605	36.1	34.1
1990	74992	34.1	32.2
1991	68542	30.5	29.0
1992	67673	29.4	25.7
1993	62926	26.8	24.6
1994	59289	24.7	24.6
1995	54598	22.3	20.4
1996	43833	17.6	19.8

* Source : Iranian Statistical Center, report of 1998.

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