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ADULT MORTALITY IN THE ERA OF HIV/AIDS: THE ARAB COUNTRIES OF WESTERN ASIA AND NORTHERN AFRICA *

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Data on mortality conditions for this analysis are drawn from the United Nations (2001) World Population Prospects 2000 Revision and the United Nations (2003) World Population Prospects 2002 Revision. Only for about one-third of the countries in the region, the predominant basis for estimates of life expectancy is information from vital registration systems or official national life tables. But for more than half of the countries considered, the predominant basis for estimates of life expectancy is an estimate of child mortality and the assumption of an age pattern of mortality from a family of model life tables (United Nations, 2001).

C. Levels and Trends in Life Expectancy at Birth

Table 1 depicts the spectacular increases in life expectancy at birth that have occurred in the Arab region in the past 50 years or so. The overall picture is one of sustained increases in survivorship in virtually every country in the Arab region between 1950-1955 and 2001. These substantial declines in mortality have been triggered by the increased use of antibiotics, insecticides, vaccinations, and also by the internationally sponsored disease control and sanitation programmes, (Omran and Roudy, 1993).

Between 1950-1955 and 2001, life expectancy in the Arab region increased from 41.8 to 64.9 years for males and from 43.8 to 68.2 years for females. The greater gains for women widened the gap in life expectancy between men and women from 2.0 to 3.3 years. For both sexes combined, life expectancy in the Arab region increased from 42.8 years in 1950-55 to over 66.4 years in 2001, a gain of 23.6 years, or 55 per cent.

Furthermore, by 2001, the level of the life expectancy in the Arab region was more or less similar to the world's average but it was higher than the level shown for the less developed regions by 2.5 years. The figures in table 1 also indicate that the mortality differentials between the Arab region and the more developed regions narrowed, so that by 2001 the difference in life expectancy between the two groups amounted to 9 years instead of the 23.4 year difference that existed in 1950-1955.

The figures in table 1 indicate that not only has the region's life expectancy increased during the period 1950-2001, but all the countries in the region have also recorded major gains in life expectancy. The most rapid decline in mortality during the period 1950-2001 was exhibited by Oman, with a 98.4 per cent increase in life expectancy, or 35.8 years. It should be noted however that the initial level of life expectancy in Oman was so low– only 36.4 years.

The Gulf States form a distinct pattern of transition; they have made major strides in reducing mortality in recent decades. Revenues from oil have bought the populations of these countries a high standard of living and high-quality medical care, which emphasizes preventive as well as curative medicine. Furthermore the bulk of the population resides in urban areas, facilitating access to medical care.

Life expectancy in the Gulf States increased rapidly and reached higher levels than in the other Arab states in the region. In Saudi Arabia– the most populous Arab country in the Gulf, life expectancy rose during the period 1950-55 and 2001 from 39.1 to 70.7 years for males, and from 40.7 to 73.3 years for females.

It should be noted that the entry of large numbers of foreign workers into the Gulf states after 1973 accounting for between one-fourth and four-fifths of the population in the small Gulf states affected both fertility and mortality rates in several ways. One important consequence was skewed demographic statistics, because most of the foreigners were young males. Thus excluding the foreign

Table 2 reflects in sharper focus the significance of the mortality decline in the region during the second half of the twentieth century. In 1950-1955, Lebanon registered the highest life expectancy at birth at 56 years and only two other countries had an expectation of life at birth above 50 years, while 5 countries had life expectancies at birth below 40 years. By 2001, life expectancy at birth was higher than 70 years in 12 countries/territory, comprising 23 per cent of the region's population, around 68-69 years in three countries, accounting for 46 per cent of the region's population, and between 52 and 60 years in only four countries.

The data in table 2 show that Kuwait leads the region with a life expectancy at birth of 76.3 years in 2001 (74.7 years for males and 78.8 years for females). After Kuwait, in second, third and fourth places, are United Arab Emirates, Bahrain and Lebanon, followed by 8 other countries with a life expectancy at birth higher than 70 years.

To control for the initial level of life expectancy, which, as noted above varied considerably among the region's countries in 1950-1955, an index of mortality decline employed by the Population Division of the United Nations (United Nations, 2001) was calculated by comparing the increase in life expectancy recorded by a given country between 1950-1955 and 2001 and the maximum gain judged possible. This procedure meant establishing the difference between maximum life expectancy experienced by a country in 2001 (namely, 81.3 years, corresponding to Japan) and the level experienced by the country under consideration in 1950-1955. Therefore, the index represents the portion of the maximum possible increase of life expectancy that has already been achieved. The higher the index, the closer a country came to achieving the maximum potential reduction of mortality (United Nations, 2001).

As table 3 shows, the mortality decline index for the region is 61 percent. Large relative gains amounting to more than 70 per cent of the maximum potential increase in life expectancy were recorded by 11 countries/territories, all of which had achieved life expectancies above 71 years in 2001. There follows 4 countries with gains amounting to between 66 and 69 per cent, which had achieved life expectancies ranging from 68 to 73 years in 2001. Thus almost four-fifths of the countries considered experienced increases in life expectancy amounting to at least 66 per cent of the potential maximum. At the other extreme, three countries (Iraq, Mauritania, and Sudan) which, together with Yemen, had in 2001 the lowest life expectancy levels in the region, only managed to realize between 36 and 43 percent of the maximum potential increase in life expectancy between 1950-1955 and 2001. In the case of Iraq, the low value of the index resulted mainly from a more recent increasing te

(such as accidents, occupational hazards, and environmental pollution)- which are more likely to afflict adults and the growing populations of older people (Horiuchi, 1999; Santow, 1999; United Nations, 2000).

In the Arab countries studied, health and social systems are being challenged to respond to communicable diseases as well as degenerative diseases. The fact that development efforts have spread unevenly within each country in the region has led to a situation in which both old and new disease patterns currently overlap.

D. Sex Differentials in Life Expectancy

As table 1 indicates, the increases in life expectancy at birth have been higher among females than among males in all but one country; consequently, sex differentials in life expectancy have tended to increase over the past 50 years or so, from a regional average of 2.0 years in 1950-1995 to an average of 3.3 years in 2001. The only exception to this pattern is Lebanon, where males have registered a fractionally higher gain in terms of life expectancy than females.

Sex differentials in life expectancy at birth in 2001 are shown in table 4 for 22 Arab countries/territories ranked according to size of the differential. As may be seen, in all Arab countries considered, life expectancy for females exceeds that for males. The average size of the female advantage in life expectancy is 3.3 years, with a range from 2.2 years in Yemen to 4.9 years in Qatar. In 2001, the difference between the two sexes ranges from 2.2 and 3.7 years in 16 countries, and from 4.0 to 4.9 years in the remaining 6 countries, compared with a difference of 4.2 years for the world, and as much as 7.4 years for the more developed regions. This small average gender gap in life expectancy in the Arab region relative to the more developed regions is due at least in part to higher levels of maternal mortality in several Arab countries.

The data in table 4 indicate that various combinations of male and female life expectancies can result in a similar sex differential in life expectancy. In Iraq and Lebanon, for example, the size of the sex differential in life expectancy is about 3.1 years. In Iraq, this difference arises from male life expectancy of 58.6 years and female life expectancy of 61.7 years, while in Lebanon the corresponding values are 71.7 years for males and 74.8 years for females. A similar situation is also observed for Tunisia and the United Arab Emirates, and for Egypt and Kuwait. In general, the figures in table 4 do not show a relationship between the level of life expectancy at birth by sex and the size of the sex differential in life expectancy. In fact, the ranking of the countries by size of the sex differential in life expectancy clearly shows that the widening of the gender gap in life expectancy at birth is not necessarily a concomitant consequence of mortality decline (United Nations, 1988).

The figures also show that countries in which life expectancy is above the regional average for one sex will also have above average life expectancy for the other sex. The converse is also true as shown by the level of life expectancy at birth for Iraq, Mauritania, Sudan and Yemen.

There are no precise explanations of the gender gap in life expectancy, but the gap has been described as ‘a geo-cultural phenomenon’, associated with a complex interplay of biological, social, and behavioural conditions (United Nations, 1988).

It is, however, to be expected that Arab countries will see a widening of the female/male difference in upcoming decades, along the lines of the historical trend in the more developed regions. One factor

E. Gross National Product and Mortality Conditions

1. Income and expectation of life

Life expectancy in the less developed regions is well known to be related to levels of socio-economic development (Caldwell, 1976; Caldwell and Caldwell, 2002; Preston, 1975 and 1985, United Nations, 1982). This section examines the inter-country relationships between socio-economic level, as measured by the gross national income in purchasing power parity per capita (PPPPC) and a number of indicators of mortality level in the Arab region in 2001.

In table 5, countries in the Arab region are ranked according to per capita income (PPPPC). The table also shows the ranking of expectation of life at birth relative to real per capita income (PPPPC) ranking. In group A, with per capita incomes over US$ 15,000, life expectancies in the range of 72-76 years have now been achieved. But it is also seen from table 5 that four of the five countries in the next two highest income level are characterized by life expectancies around 72 years, a level not much greater than those of countries with real per capita incomes down to about US$ 3,000. This suggests that life expectancy of 70 years is within reach for three of the ten countries with a lower life expectancy, namely, Algeria, Egypt and Morocco.

Lebanon and Occupied Palestinian territory are outstanding in their unusually high life expectancy in relation to their real per capita income. While Lebanon ranked only tenth from highest in PPPPC, it ranked fourth in life expectancy. Qatar and the Syrian Arab Republic provide another striking example. Both countries have very close life expectancy at birth, but Syria, which ranked fourteenth from highest in PPPPC, had in 2001 a real per capita income eque9S. Tw 11.3417 72;.3417frolev5002; Pre5001099 Tmp AC, h0di06gsix

for high income countries. The relationship between child mortality and income is stronger than that between adult mortality and income. In both cases, however, the relationship is neither simple nor linear. Further, the relationship between adult female mortality and income is weaker than that between adult male mortality and income.

The relationships described here suggest that with the existence of an adequate public health base, individual economic levels are not nearly so important in determining mortality over most of the income range, particularly above a 2001 real per capita income of US$ 3,000.

F. IMPACT OF AIDS

It is estimated that by the end of 2001, more than 550,000 adults of reproductive age in the Arab region were living with HIV/AIDS, 80,000 of whom were infected in 2001 (UNAIDS, 2002). This gives an estimated adult prevalence rate of less than 0.2 percent. About one-third of adults living with HIV in the region are women. The estimated rate of new HIV infections in 15 to 49 year-old populations varies from one per several thousand in most countries in the region, to more than one per cent in the countries of the region with generalized epidemics (WHO, 2002). This low prevalence rate suggests that the demographic impact of HIV/AIDS on adult mortality in the Arab region at present is negligible.

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TABLE 1. LIFE EXPECTANCY AT BIRTH (LEB), BY SEX, IN ARAB COUNTRIES/TERRITORIES OF WESTERN ASIA AND NORTHERN AFRICA, 1950-55 AND 2001

	Life expectancy at birth (LEB) (years)						*Increase in LEBs between 1950-55 and 2001*
	1950-1955			*2001*			
Country/Territory	*Males*	*Females*	*Both*	*Males*	*Females*	*Both*	*Both*

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TABLE 2. LIFE EXPECTANCY AT BIRTH (LEB) FOR BOTH SEXES BY RANK, ARAB COUNTRIES/TERRITORIES OF WESTERN ASIA AND NORTHERN AFRICA, 1950-1955 AND 2001

	1950-1955			*2001*	
Country/Territory	*Rank*	*LEB*	*Country deviation from regional*	*Rank*	*LEB*

TABLE 3. MORTALITY REDUCTION INDEX, ARAB COUNTRIES/TERRITORIES OF WESTERN ASIA AND NORTHERN AFRICA, 1950-1955 AND 2001

Country/Territory (Ranked according to life expectancy in 1950-1955)	*Life expectancy at birth*		*Mortality reduction index (per cent)*
	1950-1955	*2001*	
Lebanon	56.0	73.3	68.4
Kuwait	55.8	76.3	80.4
Bahrain	51.0	73.7	74.9
Qatar	48.0	71.8	71.5
United Arab Emirates	48.0	74.4	79.3
Syrian Arab Republic	46.0	71.5	72.2
Tunisia	44.6	72.5	76.0
Iraq	44.0	60.1	43.2
Jordan	43.2	70.6	71.9
Occupied Palestinian territory	43.2	72.1	75.8
Algeria	43.1	69.2	68.3
Libyan Arab Jamahiriya	42.9		

TABLE 4. LIFE EXPECTANCY AT BIRTH AND THE SEX DIFFERENTIAL IN LIFE EXPECTANCY, IN YEARS, ARAB COUNTRIES RANKED BY SIZE OF THE SEX DIFFERENTIAL, 2001

		Life expectancy at birth in 2001			
Country/Territory	*Rank** (1)	*Both sexes* (2)	*Males* (3)	*Females* (4)	*Sex differential ((4)-(3))* (5)
Yemen	1	59.4	58.3	60.5	2.2
Djibouti	2	46.1	44.9	47.3	2.4
Syrian Arab Republic	3	71.5	70.2	72.7	2.5
Saudi Arabia	4	71.9	70.7	73.3	2.6
Comoros	5	60.2	58.8	61.6	2.8
Jordan	6	70.6	69.3	72.1	2.8
Sudan	7	55.4	54.0	56.9	2.9
Algeria	8	69.2	67.7	70.7	3.0
Somalia	9	47.0	45.5	48.5	3.0
Iraq	10	60.1	58.6	61.7	3.1
Lebanon	11	73.3	71.7	74.8	3.1
Mauritania	12	51.9	50.3	53.5	3.2
Occupied Palestinian territory	13	72.1	70.5	73.7	3.2
Oman	14	72.2	70.8	74.1	3.3
Bahrain	15	73.7	72.1	75.7	3.6
Morocco	16	68.1	66.2	69.9	3.7
Tunisia	17	72.5	70.5	74.5	4.0

TABLE 7. POPULATION AND MORTALITY INDICATORS, RANKED BY INCOME GROUP, ARAB COUNTRIES/TERRITORIES OF WESTERN ASIA AND NORTHERN AFRICA, 2001

Income group (number of countries)	*Population*		*PPPPCI* (US$)*	*Life expectancy (both sexes)**	*Probability of dying (per 1000)*				*Mortality reduction index** (per cent)*
					*Under age 5 years***		*Between exact ages 15 and 60 years***		
	Number (thousands)	*Per cent*			*Males*	FEMALES	*Males*	FEMALES	
A (4)	5,852	2.1	19,345	74.7	15	11	137	101	76.5
B (2)	23,650	8.4	11,462	73.0	27	24	187	110	77.3
C (3)	45,806	16.3	5,707	70.3	40	33	177	121	73.7
D (6)	148,311	52.8	3,648	67.5	52	47	203	137	64.7
E (3)	37,867	13.5	2,020	56.6	108	101	378	304	38.2
F (1)	19,114	6.8	790	59.4	109	101	289	234	55.5
Total/ means***	280,600	100.0	4,523	66.4	52	45	207	147	66.7

*Weighted averages.
**Unweighted averages.
*** 19 countries/territories.