

Life expectancy gaps between Jews and Palestinians in Israel: Revealing Racial and Regional Mortality Inequalities

Extended abstract

1. Background

This paper examines recent trends in the life expectancy (LE) gap between Palestinians and Jews in Israel, a sizable gap that has persisted since 1970s and which indicates that Jews have higher LE than Palestinians. Explanations to the Palestinian-Jewish LE gap are derived from two different, yet related, theoretical frameworks of health inequalities. The racial/ethnic framework considers inequalities in health and mortality as resulting from and governed by the racial relations that exist between the Palestinian minority and the Jewish majority. Given a nearly complete spatial and residential segregation between the two populations, the spatial/geographic framework emphasizes the importance of factors and conditions related to this spatial segregation in explaining the observed mortality inequality between Palestinians and Jews.

2. Method

We use age-specific death rates by sex and nationality for the years 1990-95 and 2010-15 and apply the method of contour decomposition. The method enables quantifying the relative importance of the past mortality conditions and the temporal change in mortality rates to the contemporary difference in LE between two populations. In particular, it allows the assessment of the effect of recent age-specific trends (between 1990-95 and 2010-15) on the contemporary, 2010-15 LE gap while controlling for initial (1990-95) age-specific differences.

The first decomposition compares the entire Palestinian population with the entire Jewish population. Because of the extreme level of spatial segregation between the two populations and given that each population is concentrated in different regions, a second analysis is limited to regions shared by both Palestinians and Jews. These shared regions include the entire Palestinian population and Jews who live nearby the Palestinian localities yet in separate localities. Analysis is conducted for males and females separately.

3. Results

All regions

The results of decomposing gaps in LE in 2010-15 between Palestinians and Jews from all regions and shared regions are presented in table 1. For males, the negative values of the initial components indicate that in 1990-95, in all age groups, Palestinians had worse initial mortality conditions compared to Jewish males (except for ages 70 and above where Palestinians had lower mortality rates). Examining the trend component shows variations across the age groups. The positive values for ages 0-9 years indicate favorable trends for Palestinians between 1990-95 and 2010-15 and, as a result, a reduction in the contribution of this age group to the total life expectancy gap. In particular, between 1990-95 and 2010-15, faster child mortality declines among Palestinians reduced the contribution of this group by 0.18 years: from 0.68 year in 1990-95 to 0.51 years in 2010-15. Change in the contribution of the 10-49 age group to the total LE gap is relatively small: an initial Palestinian disadvantage of 0.38 years in 1990-95 increased by 0.32 years and reached, in 2010-15, a level of 0.7 years (see table 1).

The examination of trends in old-age (50 years and above) mortality shows a different pattern: except for the age group 50-59, the contribution of all other age groups to the current (2010-15) total LE gap has increased. In addition to an initial contribution of 1.09 years, the contribution of old-age mortality increased by 1.68 years, and in 2010-15, it contributed a gap of 2.78 years that amounts to 70% of the 3.99 total Palestinian-Jewish life expectancy gap. It is important to say that of the total 2.78 years that ages 50 and above contribute to the current (2010-15) total gap, 61% (or 1.68 years) were due to mortality trends that evolved between 1990-95 and 2010-15 (see table 1).

For Females, trends in infant and child mortality are largely similar to those observed among males; an initial Palestinian disadvantage was responsible for a gap of 0.81 years, yet due to faster mortality declines among Palestinians this contribution declined to 0.50 years in 2010-15. Examining changes among the age group 10-49 years shows a trend of an increasing gap: a small initial disadvantage of 0.06 years has grown to a gap of 0.25 year (see table 1).

However, the results reveal that women have a different course of old-age mortality inequalities than observed among men. Compared to Jewish women, in 1990-95, Palestinian women have a relatively large initial disadvantage of 2.6 years (Palestinian men have an initial disadvantage of 1.1 years). However, contrary to men, we see a reduction in the LE gap among women. From 1990-95 to 2010-15, old-age mortality trends among Palestinian and Jewish women

brought to reduction in mortality inequality between the two groups. Although a relatively small reduction of 0.11 years, this is a significant outcome given that parallel trends among men led to a large increase in the gap, 1.7 years.

Shared regions

Limiting the analysis to regions shared by both Palestinians and Jews yields patterns similar to those observed when analyzing all regions: initial Palestinian mortality disadvantage, trends of narrowing gap among the younger ages (0-9 years), small or insignificant changes among ages 10-49 years and significant dynamics among ages 50 and above—increasing inequality among men but decreasing inequality among women (see table 1).

Despite the similar mortality patterns in shared and all regions, the estimated racial gaps in the shared regions are smaller, especially gaps contributed by ages 50 and above (see table 1). This observation points to two types of spatial inequalities. First, within the Jewish population, those living in the shared regions have smaller life expectancy than those in the pure Jewish regions. In 2010-15, the LE of Jewish women in the shared regions reached 81.6 years, compared to 84.1 for all Jewish women. Similarly, the LE of Jewish men in the shared regions was 78.1 years, compared to 80.6 years for all Jewish men (see table 2). The second type of inequality is observed within the shared regions between Palestinians and Jews. For example, in 2010-15, the LE of Palestinian men was 74.3 compared to 75.3 for Jewish men, a gap of 1.0 years, and the LE of Palestinian women was 78.0 years compared to 79.3 years among Jewish women, a gap of 1.3 years (see table 2).

4. Discussion

In conclusion, mortality patterns in Israel reveal a racial-regional hierarchy, invoking explanations derived from theories of racial/ethnic and spatial health inequalities. Jews living in "pure" Jewish regions, where only very small numbers of Palestinians resided, enjoy highest levels of life expectancy. Jews living in regions where most the Palestinian population is found, have lower life expectancy than Jews in pure Jewish regions, yet they enjoy higher level of life expectancy than Palestinians. The discussion will address explanations for the revealed racial-regional hierarchy in life expectancy as well as explanations for the disparate courses of old-age Palestinian-Jewish mortality inequalities among men and women, specifically an increasing inequality among men and decreasing inequality among women.

Table 1: The contour decomposition of the Palestinians and Jews 2010-15 period life tables, looking back to the initial 1990-95 period, males (upper panel) and females (lower panel), in all regions and in the shared regions

Age group	All regions			Shared regions		
	Initial component	Trend component	Conventional decomposition in 2010-15	Initial component	Trend component	Conventional decomposition in 2010-15
Men						
0-4	-0.6	0.15	0.45	-0.43	0.05	0.38
5-9	-0.08	0.02	0.06	-0.06	0.01	0.05
10-14	-0.05	-0.01	0.06	-0.04	-0.01	0.05
15-19	-0.03	-0.06	0.1	-0.07	-0.01	0.08
20-24	-0.11	-0.12	0.23	-0.12	-0.04	0.16
30-39	-0.02	-0.12	0.14	0.04	-0.11	0.07
40-49	-0.18	0	0.18	0.04	-0.1	0.07
50-59	-0.58	0.19	0.39	-0.28	0.14	0.14
60-69	-0.57	-0.38	0.96	-0.62	0.06	0.56
70+	0.06	-1.49	1.43	0.47	-0.35	-0.12
<i>Ages 0-9</i>	<i>-0.68</i>	<i>0.18</i>	<i>0.51</i>	<i>-0.48</i>	<i>0.06</i>	<i>0.43</i>
<i>Ages 10-49</i>	<i>-0.38</i>	<i>-0.32</i>	<i>0.7</i>	<i>-0.15</i>	<i>-0.27</i>	<i>0.43</i>
<i>Ages 50+</i>	<i>-1.09</i>	<i>-1.68</i>	<i>2.78</i>	<i>-0.44</i>	<i>-0.15</i>	<i>0.59</i>
Women						
0-4	-0.72	0.26	0.45	-0.45	0.06	0.39
5-9	-0.09	0.04	0.05	-0.03	-0.01	0.05
10-14	-0.06	0.03	0.03	-0.01	-0.01	0.02
15-19	-0.03	0.01	0.02	0	-0.01	0.01
20-24	-0.03	-0.02	0.06	-0.01	-0.02	0.03
30-39	0.03	-0.1	0.07	0.01	-0.05	0.04
40-49	0.03	-0.11	0.08	0.07	-0.08	0.01
50-59	-0.2	0.06	0.14	-0.18	0.18	0
60-69	-0.63	0.14	0.49	-0.53	0.28	0.25
70+	-1.76	-0.09	1.85	-0.27	0.3	-0.02
<i>Ages 0-9</i>	<i>-0.81</i>	<i>0.3</i>	<i>0.5</i>	<i>-0.48</i>	<i>0.04</i>	<i>0.44</i>
<i>Ages 10-49</i>	<i>-0.06</i>	<i>-0.19</i>	<i>0.25</i>	<i>0.06</i>	<i>-0.17</i>	<i>0.11</i>
<i>Ages 50+</i>	<i>-2.59</i>	<i>0.11</i>	<i>2.49</i>	<i>-0.98</i>	<i>0.75</i>	<i>0.23</i>

Table 2: life expectancy at birth for Palestinian and Jews and the gap in life expectancy between Jews and Palestinians, in all regions and shared regions, 2000-05 and 2010-15, males and females

	2000-05			2010-15		
	Pal.	Jews	Gap	Pal.	Jews	Gap
<i>Men</i>						
Shared regions	74.3	75.3	1.0	76.6	78.1	1.4
All regions	74.3	77.6	3.3	76.6	80.6	4.0
<i>Women</i>						
Shared regions	78.0	79.3	1.3	80.8	81.6	0.8
All regions	78.0	81.6	3.7	80.8	84.1	3.2