Epidemiology of suicide in Israel and under the British Mandate, 1919-2019

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Abstract

Aims: To provide a descriptive epidemiology of suicide in the Hebrew/Jewish population in Palestine under the British Mandate and in Israel, as a society of immigrants.

Method: Information regarding the Israeli population since mid-1948 was collected from records of the Israeli Ministry of Health and the Central Bureau of Statistics. The British Mandate Administration collected and registered statistical data regarding suicide since 1938. Therefore, data for the years 1919-1937 were estimated by the author.

Results: The study discerns a picture of decreasing suicide rates, in particular for suicide rates among women. In addition, analysis of suicide rates by gender reveals an uneven distribution, where more men than women died by suicide.

Conclusions: The noticeable changes in the suicide rates throughout the years were influenced by the countries of birth from which the immigrants came. Thus, compared with immigrants from Europe, those from Middle Eastern and North African Muslim countries have remarkably reduced the overall rates in Israel. The study also indicates a substantial connection of wars with the changing trends of suicide rates.

Suicide rates, Israel, British Mandate for Palestine, Immigration

Introduction

Death of a human being is always a psychological event, definitely so when death is inflicted by one's own hands. But death is also a social event, and not a few states document the level and the characteristics of suicides in their populations. In Israel, the very first epidemiological study has focused on its first decade of existence (Davies & Kaplan-Dinur, 1961), and a latter one on five decades (Oron, 2002). Another epidemiological study in Israel has drawn attention to suicides during wars (Oron, 2012).

The aim of the current paper is to provide a descriptive epidemiology of suicide in the Hebrew/Jewish population in Palestine under the British Mandate and in Israel, as a society of immigrants. At the close of a period of one hundred years, the issue of suicide should be looked at in a broader historical perspective in order to learn its epidemiology. From this point of view, the 100 years under research could be divided into three main historical periods. The first one consists of the years from 1919 (following the end of WWI in November 1918) up to 1948; and the last one from 1949 until 2018 (included). The year 1948, in which the Israeli state was proclaimed on May 14, stands for itself, as an historical milestone and a point of transition for the population from being under the British Mandate rule to self-government.

My discussion of the data will focus on the relation between the suicide rates in the population in Palestine and in Israel, and the rates prevailing in the countries where the immigrants came from, in combination with relevant influential events, wars in particular.

Since the heart of the study is suicide among immigrants, data presented and discussed will relate exclusively to the Hebrew/Jewish population, since the Arabs and the Druze in Palestine under the British Mandate and in Israel are natives. (Therefore, the term *population* in the current paper pertains exclusively to the Hebrew/Jewish population in Palestine and in Israel).

Methods

For the purpose of a meaningful comparison between the different time periods, and for enabling future comparisons with other countries, data does not focus on the number of suicides as such, but on suicide rates (i.e. the annual number of suicides in the population, or sub-population, under study, divided by one-hundred thousand

individuals, aged 15 and above). Hence, the presented rate of each time period is the average of annual rates across the years in the relevant period. (In total, 18,509 individuals have died by suicide during the years 1948-2019).

Information regarding annually suicide data for the population of Israel since mid-1948 onward was collected from records of the Ministry of Health and the Central Bureau of Statistics. Some of the data were processed and summarized by the author for purposes of this study. The British Mandate Administration has collected and published general statistical data of the Palestine population every month since 1936, and suicide figures since 1938 (British Mandate for Palestine, 1938-1948). The last bulletin has summarized figures only for the first couple of months in 1948, and the suicide rate for the whole calendar year was calculated by Israeli statisticians of the newly founded Ministry of Health. In Palestine, suicide data was not collected and registered for the years 1919-1937 by the British Mandate, nor by the Jewish Agency for Palestine. Therefore, population rates for that period of time were estimated by the author, and will be explained and discussed latter on.

The study provides the rate of suicide in the population throughout the hundred years under research (the national rate), and also provides suicide rates by gender in Israel for the years 1949-2018 (included).

The hundred years are grouped into 19 time periods, 16 of which include five years each. The remaining three intervals are: 1924-1932, 1943-1948, 1948-1953. The year 1948 is divided between two time periods. The 70 calendar years of Israel's existence since 1949 are grouped into 14 time periods, which include five years each.

Results

Data is summarized into two graph plots (Figure 1 and Figure 2), and two tables (Table 1 and Table 2. See Appendix).

Figure 1 is actually a double-aspect graphical summary of the national suicide rates in the population before the establishment of the State of Israel on May 14, 1948, and thereafter. The 19 time periods are presented along the horizontal axis in chronological order. The size of rates is measured along the vertical axis, where the coordinated point-value above each time period marks its specific rate. Thus, Figure 1 portrays the distribution of suicide rates among each of the discrete periods of time (Table 1). The other aspect of Figure 1 is represented by the curve. The curve

connects the 19 coordinated meeting points into a continuous line, thus showing overall trends in rates along the years.

Figure 2: National suicide rates in the Hebrew/Jewish population in Israel and under the British Mandate, 1919-2019

Figure 2 summarizes in a similar way suicide rates by gender since 1949, but depicts double points of value and double curves. Table 2 provides the numerical data which are represented by the figure.

Figure 1: Suicide rates by gender in the Hebrew/Jewish population of Israel, 1949-2019

Discussion

This part is divided into two sections: the first focuses on national suicide rates during the period prior to the establishment of the State of Israel, and the second is directed to gender and national suicide rates throughout the years following its proclamation. The year 1948 will be discussed in the second section.

Suicide up to 1947

1919-1923

During WWI the geographic area termed *Palestine* was conquered in 1917-18 by the *Egyptian Expeditionary Forces*, led by the British General Allenby. In 1920 the San Remo Conference assigned a Mandate for Palestine (including Transjordan) to Britain, and subsequently a civil administration replaced the rule of the British Army (Porat and Shavit, 1982).

In 1922 the British Government of Palestine initiated a census, and its results were released for publication the following year (Barron, 1923). The findings of the census in the population were analyzed by the Jewish Agency for Palestine (Gurevitch, Gertz, & Bachi 1944). It was found that the lion share of the 83,694 inhabitants had immigrated from Poland (the largest Jewish community in the world up to WWII), and from Russia (since 1917, USSR).

Since no suicide data were collected and registered during this period (nor for the next two), my intention was to get the best approximation. For that purpose, I have estimated suicide rates in the population in Palestine by analogy to the rates prevailing in the countries where the immigrants came from. My reasoning here is based on the findings of quite a few studies showing that immigrants are killing themselves at a similar rate as prevailing in their countries of birth rather than that in their host country (Voracek, Loibi, Dervic, Kapusta, Niederkrotenthaler, & Sonneck 2008; Ratkowska & De Leo, 2013). That is further supported by the fact that the relatively small size population in Palestine was still in the early stages of its development. That is to say, the tendency of immigrants to endogamy was still there (Ratkowska & De Leo, 2013), and the substantial timespan needed for a convergence of the different ethnic suicide rates had not yet passed (Kleiewer & Ward, 1988). Hence, I have focused on the suicide rates from the second half of the nineteenth century up to the early twentieth century.

Suicide rates in Russia under the Tsar regime were published in 1910 regarding its European districts (Makinen, 2006), from which the Jewish immigrants in fact came. The calculation of the average suicide rates of these districts results in eight per 100,000 population.

Regarding Poland, the calculation was somewhat complicated. Since the eighteenth century Poland's territory was divided among several countries, and it was reestablished as a state following the peace-treaties signed at the end of WWI.

Austria and Prussia held each 20% of the territory, and Russia, 60%. To arrive at the rates in these particular areas I have consulted the studies of Morselli (1879/1871), Durkheim (1897/1966), and Makinen (2006). In averaging the different suicide rates in each part, the overall rate of Poland proved to be 5.1 per 100,000 population. (Please note that in the calculation of rates in Russia, the Polish territories were eliminated).

By taking into consideration the uneven proportions of immigrants coming from several countries of birth, the calculation of the weighted rate for this period results in 12.1 per 100,000 population.

The rates for other relevant countries of birth have been calculated in a similar way.

1924-1932

The second time period consists of the nine years that passed between the first and the second census in 1931 (Mills, 1932). By that time the population had reached 174,660 people. As before, the current data was analyzed by the Jewish Agency. It was found that half of the people had immigrated from Poland and 20% from Russia/USSR (Gurevich, Gertz, & Bachi 1944). The overall rate for this 9-year period dropped by 15%, compared with the previous time period. Analysis of this difference in rates has shown that it was due to a reduction by nearly 50% of the immigration from the USSR during the period in question, whilst the number of immigrants from Poland doubled (Gurevich, Gertz, & Bachi 1944), with its associated lower rate compared with the USSR.

1933-1937

The rate for this period increased by almost 50% compared with the previous period. This increase happened due to a marked immigration from Germany, which was influenced by Hitler's appointment as the chancellor of Germany in January 1933

(Gurevitch, Gertz, & Bachi 1944). Another spur to immigrate was the Nuremberg Laws, which were enacted in September 1935 and excluded Jews from the civil service, stripped them of their citizenship, and eventually completely removed them from German society (Kershaw, 1998). In addition, there were calls for the inclusion of Austria into the German state, which have pushed Austrian Jews to immigrate. The increased stream of immigrants from these two countries gave impetus to an increase in the suicide rate in Palestine since the average suicide rates in Germany during the earlier decades of the twentieth century was 29 per 100,000 population, and in Austria 40 (Goeschel, 2015). Obviously, much higher rates than in Poland and the USSR. During the years 1933-1941, the average immigration from Germany and Austria reached one third of all immigrants, compared with 2.1% formerly (Gurevitch, Gertz, & Bachi 1944).

1938-1942

Suicides in this period continued to increase by 11%. An increase which was the result of mass immigration in the wake of the annexation Austria by Germany in March 1938 and the dissolution of Czechoslovakia a few months later (Gurevitch, Gertz, & Bachi 1944). The immigration from these three countries alone has reached 65% of all the immigrants in 1939 and 56% in the next year.

To complete the analysis it should be added that the suicide rates for this period could have been higher, had it not been for a reduction by more than -24% between the years 1939 and 1940. The cause for that drop was the beginning of WWII in September 1939. As the studies of Morselli (1879/1881) and Durkheim (1897/1966) have shown, the number of suicides decreases during periods of turbulence, like wars, compared to the frequency of suicides in peace time. When wars come to an end post war rate returned to their prewar point of departure. It is presumed that war compels people to join forces to confront an external threat, and even suicidal individuals are preoccupied with their country's fate, hence society is characterized by social integration. For instance, a reduction occurred during the two World Wars (Lester, 1994), and also in Israel since 1948 (Oron, 2012).

Even though the war was conducted far away from Palestine, the occupation of Poland by Germany stirred profound apprehension among the vast majority of the population, who had immigrated from Poland where they left their families and friends. Moreover, before long Palestine was threatened by the Axis powers. The

proximity of the Italians to Palestine enabled them to dispatch aircrafts to bomb strategic targets. In July 1940 they bombed Haifa, to put out of action refineries and the port used by the British military. Dozens of inhabitants were killed in the raid and many others were injured. A month later the Italian air force were bombing Haifa and Tel-Aviv. Almost 200 people were killed and hundreds were wounded. In addition, the occupation of France by Germany put the north of Palestine under the threat of French garrisons loyal to the Vichy Government, since Syria and Lebanon were under French Mandate, as decided by the League of Nations following WWI.

1943-1947

In this period suicide rates dropped significantly. The drop was the result of a reduction by -11% in 1943 compared to the previous year, and one by -33% in 1944. Both reductions were not due to military threats to the population in Palestine but rather to other turbulent events, namely the news about the extermination of the Jews in Europe.

The reduction in 1943 was due to information becoming available since April 1942, that confirmed previous intermittently leaked news, that Germany was carrying out a calculated systematic extermination of European Jewry (Porat, 1986). Now, the extermination was acknowledged as a verified fact and was given extensive coverage in the Jewish and general press during the first months of 1943, also in Palestine. In addition, these grave news were combined with news about the uprising in the Warsaw Ghetto, on April 19, and the destruction of the Ghetto a month later. The largest Jewish community, one of utmost importance for the Jewish world, was wiped off the face of the earth, which in turn aroused powerful apprehension concerning the fate of what was left of European Jewry. Therefore, even though the extermination was executed far away, almost everyone in the population in Palestine, most of whom came from Europe in general and from Poland in particular, mourned the loss of his/her relatives and shared with others the unusual circumstances of loss, which brought all of them closer together. The resulting social integration of the population caused a reduction in the suicide rates during 1943, which extended to the next year (Oron, 2008).

In 1944 two Jewish prisoners escaped from the death camp Auschwitz, where they worked in the registration office, and in April gave first-hand testimony regarding the extermination process and details about the SS personnel. Additional information

came from two other Jewish prisoners, who escaped from Auschwitz at the end of May. The testimonies of the four escaped prisoners were given a coverage in the Hebrew press in Palestine, which shocked the entire population.

The over all situation, then, testified to a high degree of social integration, which in turn caused an impressive reduction in the suicide rate reduction in 1944 (Oron, 2008).

Suicide in Israel

National suicide rates in Israel are included in Figure 1 and Table 1, while Figure 2 and Table 2 present the rates by gender for 70 calendar years of Israel's existence, 1949-2018 (included). It shows a slight difference between the sexes in Israel's early years (Davis & Kaplan-Dinur, 1961), 1.3:1 (males in excess), an imbalance which increased throughout the 1980s and the 1990s. This imbalance stabilized in recent years at a ratio of 3.9 men to one woman.

In the current section only noticeable changes in suicide rates along the curve of the national rates (Figure 1) will be discussed from the year 1949, combined with due attention to the gender trends in suicide rates.

1949-1953

This period was characterized by a rise in the national suicide rate compared with the years 1943-1947. The cause for the rising was the War of Independence. The official date of the outbreak of this war is the day the State was founded (May 14, 1948), when the Arab armies invaded the new-born country to annihilate it. This war was the deadliest in the history of Israel, and claimed the lives of one percent of its population (6000 victims). During 1948 suicide rates reduced in men and women alike. In 1949 armistice agreements were signed and the national suicide rate increased by 26% compared with the previous year. The increase was caused by a sharp rise in the suicide rate among men by nearly 68% which was slowed down during the next few years (Oron, 2008; Oron, 2012).

1954-1958

National suicide rates continued to increase, but during this period only by nearly 6%. The increase was due to a substantial rise in the suicide rates among women. What was the cause? During all the years of Israel existence, male suicides exceeded those of women, except in the year 1955, when 56% of suicides were

done by females as against 44% by males, even though the population distribution had not changed, with women making up 49.2% of the population. This has resulted in the highest annual suicide rate women have ever reached in Israel (17.2), and in the second-highest annual rate (16.9) in 1956 (Oron, 2002).

1959-1968

As data show, there was a continuous and uninterrupted reduction in the national suicide rates as well as in males and females rates during a couple of five-year periods (1959-1963 and 1964-1968). First reduction (by -18%) in the national rate occurred during the years 1959-1963 compared with the previous period. The second reduction (by -16%) occurred in 1964-1968 compared with the years 1959-1963.

This marked cumulative reduction is due to a dramatic demographic change which gradually evolved since July 1949 and came to full expression in the years 1959-1968. While 85% of all immigrants in 1948 came from European countries, their percent decreased to 52% in 1949, and by the end of 1953 European immigrants constituted only 20% of all newcomers. At the same time, the numbers of immigrants from Middle Eastern and North African Muslim countries increased rapidly (Sicron, 1957). Consequently, at the beginning of the 1960s, the numbers of immigrants from Europe and from Muslim countries reached a balance. Since those immigrants from Muslim countries killed themselves six times less than European immigrants, the overall suicide rates decreased (Oron, 2002).

Moreover, there was another demographic factor. During the years 1949-1953 birthrate among immigrants from Muslim countries doubled, and tripled during the next five-year period (Sicron, 1957). Hence, the children of those immigrants, when reaching adulthood, contributed to a gradual decrease in the overall suicide rates, in particular during the following periods.

1969-1973

During this period, the national suicide rate increased due to a 14.3% raise in females rate, compared with the previous five-year period. Analysis indicates that on March 8, 1969, the War of Attrition was launched by Egypt on the Suez Canal front, which ended on August 7, 1970. During these 17 months of fighting, the suicide rates among men and women sank to nearly similar levels. But when the war came to an end, rates of men increased in 1971 by 8%, whereas those among women

rose much more, nearly three times higher than men's. Rates of both genders continued to raise in 1972 but to a moderate degree, women in excess (Oron, 2008; Oron, 2012).

1974-1978

This period is characterized by a remarkable rise in the suicide rates among men, following the Yom-Kippur War (October 6 to November 11, 1973) launched by Egypt and Syria. There is a massive reduction in the rates, in males and females alike, discernable during the war, but in 1974 the rates among men rose sharply by 33%, compared with 1973, while the rates among women increased by almost 8%.

Moreover, the rates among men rose further by more than 17% in 1975.

But this period is also characterized by a -16.3% reduction of rates among women compared with the previous period, which precluded a rise in the national rate (Oron, 2012).

1984-1993

A highly noticeable increase in male rates occurred during this period. The cause was massive immigration from the (former) Soviet Union, that started in the mid-1980s and continued into the 2000s. An immigration that added nearly 25% to the population. The finding that immigrants around the world are performing suicide at a similar rate as the one prevailing in their countries of birth and not in their new country, holds also true with regard to the immigration from the USSR to Israel (Mirsky, Kohn, Dolberg, & Levav 2011). The average suicide rates among males in the USSR during the 1980s was close to 50 per 100,000 (Varnik, 1998), four times higher than the rate among Israeli males. Consequently, this specific immigration contributed 35% to the rates of men. Eventually male rates calmed down by some degree, but the curve levelled off at a higher level than those prevailing prior to that immigration. The suicide rate among women in the USSR during the 1980s was 12 per 100,000, twice more than the rate among women in Israel. Therefore, the overall rates among women increased far less than those among men.

Summary

The study characterizes the demographic data of suicide rates in the Hebrew/Jewish population in Palestine and later in Israel over a time period of one hundred years, from the beginning of the British Mandate for Palestine following WWI, through the

influence of the turbulent period for European Jewry during the 1930s and the 1940s, up to the establishment of the State of Israel and thereafter.

The study points at four main findings. First, the research discerns a picture of decreasing suicide rates, in particular for the rates among women since the late 1950s. In addition, analysis of suicide rates by gender shows an uneven distribution, where more men perform suicide than women. An additional finding is the direct and significant influence of the country of birth on the suicide rates. Thus, compared with immigrants from Europe those from Middle-Eastern and North African Muslim countries remarkably reduced the suicide rates in Israel. The fourth finding of the study is the substantial connection of wars, and other turbulent events, with the changing trends of suicide rates.

In addition, the data presented provides a factual basis for further studies with regard to comparisons among specific time periods in Israel and in Palestine under the Mandate, as well as comparisons with other countries with considerable numbers of immigrants.

While considering the demographic data on which suicide rates are based, we should keep in mind that this data pertains to human beings, each of whom was eager to remove permanently the burden of an unbearable psychache. Hence, for the sake of reducing the rate of suicides in a country, we have to pay attention to each suicidal individual and try to understand his/her innermost world of turmoiled thoughts and emotions.

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Appendix

Table 1

<i>Suicide rates in Israel and under the British Mandate, 1919-2019</i>	
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Period	National
1919-1923	12.1
1924-1932	10.3
1933-1937	15.4
1938-1942	17.1
1943-1948	13.0
1948-1953	15.2
1954-1958	16.1
1959-1963	13.2
1964-1968	11.1
1969-1973	11.9
1974-1978	11.9
1979-1983	9.9
1984-1988	10.2
1989-1993	11.5
1994-1998	9.9
1999-2003	9.3
2004-2008	8.3
2009-2013	8.3
2014-2018	7.1

Table 2

<i>Suicide rates by gender in the Hebrew/Jewish population of Israel, 1949-2019</i> <i>Copyrights © by Israel Oron, 2021</i>		
Period	Males	Females
1949-1953	18.1	12.3
1954-1958	17.9	14.2
1959-1963	14.7	11.6
1964-1968	13.1	9.1
1969-1973	13.4	10.4
1974-1978	15.1	8.7
1979-1983	12.4	6.4
1984-1988	14.2	6.4
1989-1993	17.2	6.4
1994-1998	15.1	4.9
1999-2003	15.2	3.8
2004-2008	13.2	3.7
2009-2013	13.8	3.2
2013-2018	11.6	2.9