A review of epidemiologic studies on suicide before, during, and after the Holocaust

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ABSTRACT

The available literature on the risk of suicides related to the Holocaust (1939–1945) and its aftermath differs in its time periods, in the countries investigated, and in the robustness of its sources. Reliable information seems to indicate that the risk of suicide for Jews in Nazi Germany and Austria during the pre-war period (1933–1939) was elevated, while information on suicide during the internment in the concentration camps is fraught with problems. The latter derives from the Nazis’ decision to hide the statistics on the inmates’ causes of death, and from the prevailing life conditions that impeded separation between self-inflicted death and murder. Reliable studies conducted in Israel among refugees who entered pre-state Israel, 1939–1945, and post-World War II survivors reaching Israel (1948 on), show a mixed picture: suicide rates among the former were higher than comparison groups, while the latter group shows evidence of resilience.

1. Introduction

Until recent years, completed suicide studies among Jews during the European Holocaust were limited in number in the English literature and were rarely based on reliable data sources compatible with sound epidemiological inquiries. Of late, a set of four recent studies on Holocaust survivors has enriched the scope of the field and has overcome methodological shortcomings. To be exact, some partially reliable data did exist with regard to studies based on the pre-World War II (WWII) period in Germany (cf., Hartig, 2007; Goeschel, 2007; Kwiet, 1984; Lester, 2004). In those years (1933–1939) the persecution of the Jews began or increased in extent and intensity in some European countries (Bauer, 1982), particularly in Germany following the Nazi party rise to power. This was the case in Austria as well, after its annexation to Germany (1938).

During the years 1933–1945, Jews experienced multiple assaults as individuals and as a collective group in countries under direct or indirect rule by Nazi Germany. These assaults were physical, psychological, religious, social, cultural, economic, and others (Levav, 2015). The ultimate results were tragic, including six million dead, hundreds of thousands of refugees, orphaned children and adolescents, bereaved spouses and parents, and traumatized individuals.

The psychiatric literature on the Holocaust and its aftermath is vast and indicates the extent of lingering morbidity among survivors (Sharon et al., 2009), but of their resilience as well (Antonovsky et al., 1971; Barel et al., 2010; Shuval, 1957; Shrra et al., 2010). In contrast, studies on suicide among survivors have been limited, in part as a result of the methodological difficulties in researching this subject in countries such as the USA, Canada, and Australia where many survivors settled. In Israel, however, studies on suicide are feasible due to the availability of databases with death and population records (Goldberger et al., 2014). Surprisingly, they were not conducted.

1.1. Suicide and Jews

European Jews, except for German Jews during the Imperial era and the Weimar Republic, were usually characterized as having relatively low suicide rates in contrast with their non-Jewish co-nationals (Dublin, 1963). (A recent comparison of the ranking of age-standardized suicide rates of Israel with 28 European countries (Goldberger et al., 2014) showed that Israel ranked third lowest among women and fifth lowest among men. It should be noted that national Israeli rates are decreased by the Arab-Israeli population that has lower total rates than Israeli Jews, 3.7 and 7.5, per 100,000 persons respectively, year 2008).

These relatively low rates suggest that when the act of suicide takes place among Jews it has to cross lines clearly drawn by ancient customs and sanctions, originating in the post-Talmudic era (e.g., a person who has committed suicide must be buried beyond the perimeter of the regular cemetery). Dublin has noted: “[For Judaism] suicide is...
unthinkable. Human life is regarded as so holy that a Jew may transgress every religious commandment [obviously forbidden] to save his [her] life.” According to Hartig (2007), Kwiet (1984), and Lester (2004), among others, crossing the line took place more frequently in Austria and Germany at the time of anti-Semitic persecutions post-1933, where suicide was not a rare event, and in the Netherlands, following the Nazi occupation in 1940 (see later).

In recognition of the role socio-environmental factors play in suicide (e.g., Milner et al., 2013), we posited that our results would not be unequivocal due to the contrasting conditions in which Jews lived in Europe during the war years and later on, in Israel. While in European countries the centuries-old discrimination against Jews [note that it was only in the nineteenth century that the Jews achieved civic equality in many Christian European states (Bauer, 1982)] reached genocidal proportions, in Israel, Jews were accorded full citizenship and protection. This was the case for immigrants after 1948, although in the early years of the State Holocaust survivors were not understood by many local Israelis who felt that they should have fought against the Nazi persecution rather than succumbing to incarceration in concentration camps. Accordingly, the hypotheses raised for the current review were that while the European-based rates would be higher during the Nazi years, in Israel the rates would be equal to suitable comparison populations. In other words, in Europe vulnerability would prevail while in Israel resilience would be the outstanding feature.

2. Methods

This review primarily summarizes epidemiologic studies conducted on completed suicide among refugees and survivors who settled in Israel during and after WWII (Sicron, 1957). However, from socio-psychiatric and historical considerations, as Lester (2004) did previously, this review covers three periods related to the Holocaust: immediately before, during and after World War II. As far as we know, a parallel study on suicide on Jewish survivors who were exposed to Nazi or Fascist collaborating regimes in North Africa is pending.

This review relies primarily on population-based studies and includes: 1. articles or review articles in peer-reviewed journals; 2. books/year books/book chapters, published from 1950 to 2017; 3. a search in the Leo Baeck Institute (Jerusalem) on German Jewry; with its connection with the Israel National Library (RAMBI) and Yad Vashem (Israel’s official memorial of the Holocaust); 4. a catalog in the Hebrew University of Jerusalem on anti-Semitism entitled “The Vidal Sassoon International Center for the Study of Antisemitism”; and 5. all relevant reference lists. The search included publications in English. The English abstracts of Holocaust-related material in German and Polish were checked when available.

The terms used included Holocaust, Holocaust survivors, concentration camps and suicide. There were a total of 102 records identified; 88 were identified via database searches (Pubmed, psyCINFO), while 14 were found in the Leo Baeck Institute, Yad Vashem Institute for the Memorial of the Holocaust, and Rambi-The Index of Articles on Jewish Studies. 91 records were excluded since they were duplicates, based on selected populations or non-relevant. A total of 11 records constituted the final pool (Table 1).

Following usual research strategies applied by most studies on the psychopathological effects of the Holocaust (e.g., Sharon et al., 2009), the suicide rates of survivors, defined as those who immigrated after the war, were compared with European-born Jews who immigrated to British Mandatory Palestine before WWII erupted. The four recent relevant studies (Bursztein-Lipsicas et al., 2016; Levine et al., 2016; Lurie et al., 2017; Nakash et al., 2013) reviewed here included another relatively small study group, e.g., European-born Jews who succeeded in reaching Israel during the war years, whether as legal or illegal immigrants. As noted by authors, the latter group was not immune to the Holocaust through indirect exposure, via their families, colleagues and friends who remained behind in their countries of origin. Many of those perished at the hands of the German Nazis or their collaborators.

3. Results

3.1. Findings: pre-World War II suicide

Lester (2004) calculated a rate of 317 of suicides per 100,000 persons per year for German Jewry, from 1933, when Hitler became the head of government, until 12 years later, when the war ended. Using a more conservative approach, Lester (2004) finally estimated 158 suicides per 100,000 persons. He concluded: “…[T]he suicide rate was… much higher for Prussian or Bavarian Jews than long before the war.” Conceivably, these higher suicide rates during the early stages of the Nazi persecution in Germany, a country where Jews were mostly secular (and thus religious sanctions had a lesser hold), reflected both fear, despair and deep disappointment due to the growing awareness of their social isolation (Kwiet, 1984). Indeed, almost the entire Nazi German society turned against the Jews after decades of their struggle for inclusion, largely successful in many walks of life, through assimilation, religious conversion or integration into the highly admired German culture (Elon, 2003). Jews mistakenly hoped that their contributions in public services, medicine, science, arts, universities, business, and the military during WWI, “The German-Jewish symbiosis” (Kwiet, 1984), would grant them immunity from discrimination, violence, and ultimately, murder.

According to Kwiet (1984), the number of suicides among German Jews, which had been on the increase during the early years of the twentieth century, escalated further when Hitler was elected chancellor and with every severe episode or expression of persecution, such as the Reichskristallnacht, the Nazi boycott of April 1, 1935, the order to wear the yellow star that publicly identified Jews from others, the forced dissolution of inter-religious marriages, and the violent deportations to concentration camps. For many, “suicide was the ultimate and most radical attempt to elude Nazi terror”. Goeschel (2007) provided two relevant pieces of information. One was made available in Berlin by the newspaper Dutch Press Circular, later banned by the Nazis, and it is dated November 1937; “while in the years 1924–1926 the statistics informed 50.4 suicides per 100, 000 population, during the years 1932–1934 the rate climbed to 70.2 per 100, 000 population”. The second piece is from the Weissensee (Berlin) cemetery: “while in 1941 254 Jews were buried following suicide, the number raised to 811 in 1942”. All available sources reported that the suicide figures were high. Kwiet (1984) estimated that 1% of the 525,000 of Jews originally living in Germany opted to commit suicide during the 12 years of Nazism. Kwiet (1984) further noted that “In the years 1933–1945 the suicide rate of German Jews rose to such height as to take on the character of a mass phenomenon”. These figures were collected from ecclesiastic, police and administrative authorities, and appeared to be further confirmed by personal reports (such as written testimonies by physicians, among them Dr. Herta Nathorff, who apparently provided Veronal to patients that requested it. “To die honorably is better than living here” she wrote), articles in the Jewish press, and information obtained in the three Jewish cemeteries in Berlin.

Notably, this psychosocial phenomenon that seemed to have characterized Berlin was answered by a mobilization of community resources to forestall the spread of suicide.

The rise in suicide was noted in Austria as well following the Anschluss (annexation by Germany) in 1938. In addition, localized episodes of increase in suicides occurred in Paris as the deportations started, and in the Netherlands, following the Nazi Germany invasion (May 1940). What appears to be clear (Hartig, 2007) is that the increase in suicides in all of these countries was associated with the increase in persecution, such as the deportations to concentration camps.
To establish suicide rates during this period (when Jews were in hiding, ghettos or camps) is fraught with difficulties, particularly since the Nazis stopped making public all statistics on suicide. For them, hiding, ghettos or camps is fraught with difficulties, particularly since they do not meet our study objectives (Ryn, 1983, 1986).

Lester and Krysinska, (2002) succeeded in building an epidemiological study where others failed. He recorded one example of suicides in a population from the ghetto of Lodz, Poland. Using numerator and denominator figures registered by the ghetto authorities, he estimated that in the years 1941 through 1944 the total suicide rates ranged from 22.4 to 84.6 per 100,000 people, rates which were considerably higher than in earlier years (Lester and Krysinska, 2002). However the effort, the wide range reflects the methodological difficulties alluded earlier.

Indeed, accounts of suicide during this period range from rare to frequent. In Amsterdam, the number of suicides tripled from 72 in 1939 to 248 in 1940. Those figures were recorded by the official Statistical Bureau (Ultee et al., 2001). Another example is the one by Tas (1951) which described how people, overwhelmed by hunger, disease, losses and severe beatings, may have let themselves die passively or more actively by running towards the electrified fences that surrounded the camp, since the conditions were too brutal to be sustained. To reliably establish rates based on how many camp inmates surrendered to death (numerator) was (is) an impossible task in the absence of the statistics hidden and subsequently lost by the Nazis. Therefore, it is not surprising that appraisals vary, from Lester’s (2004), in which he estimated an “enormous” rate to an earlier publication by Bronish (1996) that noted a lower rate. This author has admitted that “there is no way of proving there was a high or low suicide rate in the concentration camps”. Lopez-Munoz and Cuerva-Galindo (2016) concurred with such a conclusion in their recent review.

3.2. Suicide during the war

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3.3. Post WWII data on suicide

Doctors’ personal testimonies based on field observations have stated: “...[T]here was an increase in suicide among those who were liberated at the close of the war, when they realized the full horror of their recent experience” (Dublin, 1963). However, firmer data are scanty.

Psychiatric research on Holocaust survivors focused primarily on physical and psychiatric morbidities, but, as noted above, none on suicide until recently (Levav, 2015). For a contemporary observer, this absence is surprising, since published rates in Israel have indicated that European-born Jews have higher rates of completed suicide than both African-born (except for South Africans that included Jews of European origin) and Asian-born Jews. The extent to which these higher rates among European Jews were/are contributed by Holocaust survivors has been overlook in local suicide studies.

3.4. Review of recent Israel-based studies

Of late, four studies have been published on completed suicide among Holocaust survivors living in Israel. Two of them were based on the general population. Of these, one study was hypotheses-driven (Levine et al., 2016) while the other was an analytical inquiry (Bursztein-Lipsicas et al., 2016). The other two were conducted in selective populations, i.e., older adults diagnosed with cancer (Nakash et al., 2013) and persons admitted to mental institutions. In all four studies, the coding of suicide was made by the Israel Central Bureau of Statistics with information provided by the regional Ministry of Health offices and police records.

3.5. The hypotheses-driven suicide study

In this inquiry (Levine et al., 2016), the source population comprised all persons born during 1922–1945 in Nazi-occupied or dominated European nations, who immigrated to Israel by 1965. All, N = 220,665 people, (women: n = 115,905, 52.5%; men: n = 104,760, 47.5%) were identified as meeting that criteria in the Population Register, and the study followed them up until 2014 for suicide. The population was disaggregated to compare a trauma gradient among groups that immigrated before (indirect, n = 20,612, 9%); during (partial direct, n = 17,037, 8%); or after (full direct, n = 183,016, 83%) exposure to the Nazi era. From the records of the Population Register the authors extracted the following information: country of origin, year of birth and immigration, gender, age, year and cause of death, in addition to cause of death according to the International

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<th>Main relevant results</th>
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<td>Suicide studies pre Holocaust, 1933–1939</td>
<td>Increase in suicide</td>
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<td>Suicide studies during the Holocaust 1939–1945</td>
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Classification of Diseases (ICD) 9th and/or the 10th revisions.

The main results indicated that the survivors who had been exposed to the full period of the Nazi occupation in their countries (full direct group) had the lowest suicide rate; next, the group who had arrived before 1933 (indirect group); and, lastly, the group who immigrated during the war years (partial exposed group). It is thus the latter group that was at a statistically significant increased suicide risk. In sensitivity analyses, female refugees who fled Europe while the Holocaust was raging were at an increased suicide risk.

3.6. The analytic Israeli suicide study

This study, as the one above, was based on the total population (Bursztein-Lipsicas et al., 2016). It examined the association between the degree of exposure to the Holocaust and suicide risk among refugees and Holocaust survivors who settled in Israel, accounting for the level of genocide in their respective country of origin. The study population comprised of all persons born in Holocaust-exposed European countries during the years 1922–1945, who immigrated to Israel by 1965 (N = 209,479), and were followed-up for suicide (1950–2014). They were divided into three groups based on the likely period of exposure to the Nazi persecution: those who immigrated before (n = 20,229; 10%), during (n = 17,189; 8%), and after (n = 172,061; 82%) WWII. The degree of exposure to the Holocaust was measured by the percentage of Jews who had died in the European country of origin during WWII, high (>70%) or relatively lower levels (< 50%). Survival analysis showed that the group that arrived during the war years (partial direct exposure, refugees) from countries with a high genocide level had a statistically increased suicide risk compared to the group that arrived before 1933. The group that was exposed to the war years (full direct exposure), however, was not at significant suicide risk compared to the group that arrived before 1933. Suicide associations for groups from countries with relative lower levels of genocide were not statistically significant.

3.7. Selective population studies

Cancer—diagnosed population. This third inquiry examined suicide among elderly Israeli Holocaust survivors diagnosed with cancer (Nakash et al., 2013). The study was based on all Jewish-European persons with cancer, aged 60 years and over, recorded in Israel between the years 1999–2007. Holocaust exposure status was ascertained by place of birth and immigration dates from Europe. Two groups were identified, Holocaust survivors (European-born individuals who immigrated to Israel between the years 1945–1955; men, n = 134,649; women, n = 143,893) and their counterparts, not exposed to the Holocaust (European-born individuals who immigrated to pre-State Israel before 1939; men, n = 43,406; women, n = 50,693).

In total, 30 persons with cancer died by suicide in the reference group -those not directly exposed to the Holocaust (men, n = 19 men; women, n = 11). In the group of Holocaust survivors with cancer, 55 people died by suicide (men, n = 35; women, n = 20). However, the standardized incidence ratios were not significantly different between the cancer sufferers exposed to the Holocaust and non-exposed cancer sufferers (men: 90, 95% CI .60–1.19; women: 95, 95% CI .55–1.37). The findings indicated that past exposure to maximum adversity did not increase the suicide risk among persons with cancer.

Persons admitted to mental institutions. This study has been published most recently (Lurie et al., 2017), and refers to persons at high risk for suicide, as documented previously by Goldberger et al. (2015) in Israel. The study population was identified in the country-wide Psychiatric Case Register and crossed with the national database of causes of death. Suicides took place in the years 1981–2009. The respective suicide risks of the three population groups were compared: 1. Holocaust survivors (n = 16,406), 2. individuals that had been submitted to persecution in the early years of the war and that reached Israel (n = 1212) on time to elude the full ordeal (analogous to those defined as refugees by Bursztein-Lipsicas et al., 2016), and 3. a comparison group of European Jews that arrived before 1933 (n = 4286). The age-adjusted rates were 106.7 (95% CI 93.0–120.5) per 100,000 person-years for the first group, 231.0 (95% CI 157.0–327.9) for the second, and 150.7 (95% CI 113.2–196.6) for the third, respectively.

4. Discussion

While the pre-WWII suicide studies among Jews in Germany and Austria seemed to have indicated higher risk according to available official statistics, Jewish newspaper reports, and reports on community mobilization to prevent suicide, the rates during the war years in Europe are unclear. An elevated risk would seem possible given the inhuman and extended life adversities Jews had to sustain, whether in hiding, ghettos and/or camps. However, reliable documentation remains impossible to achieve. Perverted Nazi policy and the difficulties in ascertaining that suicide was not a cover-up for murder are two factors that contribute to the unreliability (Guthmann Opferman, 1999).

In contrast, the findings of the four Israeli-based studies converge. They have reliably shown that Holocaust survivors have evidenced a remarkable will to live. Past traumatic experiences in Europe and renewed stressors in Israel, such as repeated armed conflicts and terror, have not led them to suicide, except for the group identified as refugees (Bursztein-Lipsicas et al., 2016; Lurie et al., 2017). Interestingly, this group seems to include a substantial number of individuals of German origin, a country in which Jews had relative high suicide rates before and during the Nazi period, as noted above.

The agreement on the findings of the four studies provides further support for Holocaust survivors being a resilient group (Leon et al., 1981; Barel et al., 2010). Their will to live could be understood by self-preservation, a powerful motive that creates the energy to cope with extreme stress (Kahana et al., 1988). Living in a country with no anti-Semitism, with family — built in Europe or reconstituted a new in Israel — and strong support systems available in a Jewish state may have provided meaning to life (Frankl, 2000). A remarkable example of resilience is the fact that exposure to the maximum adversities of the Holocaust did not increase the suicide risk among adults with cancer, a reliably documented vulnerable group (Nakash et al., 2013). Results argue in favor of the inoculation perspective, wherein recurrent exposure to stress contributes to the development of coping strategies over time (Solomon et al., 1987).

Of related interest is that Carmil and Carmel (1986), in a well-conducted health survey in Israel, found no more suicidal ideation among Holocaust survivors than among a suitable comparison group. They reported: “from a carefully conducted meta-analysis with over 12,000 respondents, we learned that “living in Israel rather than elsewhere can serve as a protective factor” as found by a measure of psychological well-being (Carmil and Carmel, 1986).

The reader may wish to consult those four Israeli-based studies for a more detailed discussion of the unexpected findings. The latter no-risk results mimic the survivors’ advantage found in a study on general mortality over a suitable comparison group. Such an unanticipated finding aptly led Sagi-Schwartz et al. (2013) to entitle their research article “Against All Odds”; a similar expression could be applied to the research on completed suicide.

A clear exception to the above is the relative high risk for suicide identified among refugees, individuals who immigrated legally or arrived undocumented to pre-State of Israel during the war years. Recall here that they often had been exposed to persecution in Europe and may have lost relatives and significant others in Europe. Moreover, if undocumented upon arrival, they had to face internment in prison camps, such as those in Cyprus, by the ruling British Mandatory authorities. Additional tentative mechanisms for higher vulnerability to suicide risk of the partial direct exposure group from countries with
higher genocide exposure include protracted guilt feelings for having escaped death and having witnessed atrocities without being able to halt them (Weisz, 2015).

5. Conclusion

The literature available for an epidemiological review noted that suicides seemed to have risen as persecution of the Jews mounted, first, in Germany and Austria, and later in the Netherlands. These suicides have been qualified, for example, as “acts of resistance” (Kwiet, 1984) or “acts deriving from despair and resignation” (Hartig, 2007). In contrast, Holocaust survivors were not found to be at higher risk for suicide in Israel. This may result from the life conditions and the meaning given to life in a Jewish state (Frankl, 2000) and, likely, from selection factors.

The interplay of vulnerability and resilience factors in highly traumatized populations has been noted before, “Holocaust survivors [at least, in Israel] show general resilience intertwined with specific vulnerability when confronted with additional cumulative adversity” (Shirira et al., 2010). Whether this is the case in other genocides (cf., in Rwanda), constitute an issue open to a further and more comprehensive research agenda.

The main limitation of the current review is the difficulty in establishing reliable rates of suicide in the European-based studies of the pre-WWII time and, particularly of the WWII years. We had to rely on the available literature in English for the former and be satisfied with the unanimous findings made by all authors.

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Conflict of interests

The authors report no conflict of interests.

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