

Psychiatric Genocide: Nazi Attempts to Eradicate Schizophrenia

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Although the Nazi genocide of Jews during World War II is well known, the concurrent Nazi genocide of psychiatric patients is much less widely known. An attempt was made to estimate the number of individuals with schizophrenia who were sterilized and murdered by the Nazis and to assess the effect on the subsequent prevalence and incidence of this disease. It is estimated that between 220 000 and 269 500 individuals with schizophrenia were sterilized or killed. This total represents between 73% and 100% of all individuals with schizophrenia living in Germany between 1939 and 1945. Postwar studies of the prevalence of schizophrenia in Germany reported low rates, as expected. However, postwar rates of the incidence of schizophrenia in Germany were unexpectedly high. The Nazi genocide of psychiatric patients was the greatest criminal act in the history of psychiatry. It was also based on what are now known to be erroneous genetic theories and had no apparent long-term effect on the subsequent incidence of schizophrenia.

Key words: schizophrenia/psychosis/genocide

Introduction

The anti-Semitic horror of the German Third Reich has been extensively chronicled. In *The War Against the Jews: 1933–1945*, eg, Dawidowicz¹ detailed the appalling annihilation of 6 million Jews, two-thirds of the entire European Jewry. Much less well known is the German genocide of other groups, including gypsies, homosexuals, and individuals with physical deformities, mental retardation, and serious psychiatric disorders, especially schizophrenia. This article will use published data to summarize what is known about the sterilization and

killing of individuals with schizophrenia. It will then ascertain what effect, if any, these actions had on the subsequent prevalence and incidence of schizophrenia in Germany.

Background

The systematic sterilization and killing of individuals with schizophrenia in Nazi Germany from 1934 to 1945 was influenced by several factors. Perhaps, of greatest importance was a belief that schizophrenia was a simple Mendelian inherited disease, passed down from generation to generation. In Germany, this theory was promoted by Drs Ernst Rüdin and Franz Kallmann, among others. Rüdin, whose research was supported by the Rockefeller Foundation, was the director of the Genealogical-Demographic Department of the German Institute for Psychiatric Research in Munich. He had a special interest in schizophrenia, which he believed was caused by a Mendelian recessive gene, and advocated that “people who are themselves mentally ill ...should not have children.”² Kallmann, a Berlin psychiatrist who had been a student of Rüdin, studied schizophrenia in twins and also believed that the disease was transmitted by a recessive gene. In a 1935 speech, Kallmann advocated the examination of all relatives of individuals with schizophrenia to identify nonaffected carriers, which he believed could be done by noting “minor anomalies,” and then the compulsory sterilization of such individuals.³ A year later, Kallmann emigrated to New York, where he continued his twin research and later became one of the founders of the American Society of Human Genetics.

The theories of Ernst Rüdin and Franz Kallmann coincided with a growing interest in Germany in eugenics and “race hygiene” (*Rassenhygiene*) in the early 1930s. At the time, the eugenics movement was strongest in the United States and Britain. Indiana had passed the first state compulsory sterilization law in 1907, and by 1928, 20 more states had followed, most including “lunatics” among the target population; California was the most active state in this regard. In 1916, New York patrician Madison Grant had published *The Passing of the Great Race*, a jeremiad about the dangers of interracial marriage that *Science* magazine called “a work of solid merit”⁴; it was subsequently translated

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into German and cited by Hitler in *Mein Kampf*. The International Congress of Eugenics was also based in the United States, and in 1932, its presidency passed from Dr C. B. Davenport of Cold Spring Harbor Laboratory to Dr Rüdin.

In 1933, Rüdin was one of the guiding forces behind the passage of Germany's first compulsory sterilization law, called "the law for the prevention of progeny with hereditary defects." Its initial target was individuals with mental retardation, schizophrenia, manic-depressive disorder, epilepsy, Huntington chorea, hereditary blindness and deafness, hereditary alcoholism, and "grave bodily malformation."⁵ Hitler had become chancellor 6 months earlier. The majority of the targeted individuals were in psychiatric hospitals, which had become massively overcrowded, thereby forcing the discharge of some patients to make room for more admissions. Patients with schizophrenia who were scheduled for discharge were deemed to be of high priority for sterilization in order to prevent them from producing offspring.

An attempt to relieve the overcrowding of psychiatric hospitals, in fact, played a significant role in Germany's decision to institute compulsory sterilization and, later, the killing of psychiatric patients.⁶ In 1880, Germany had had 47 228 patients in public asylums, but by 1913, this number had increased to 239 583, a 5-fold increase during a period when the total population had not quite doubled. Despite the fact that 140 234 asylum patients died during World War I, mostly from infectious disease and hunger, they were rapidly replaced by others. Between 1924 and 1929, the number of psychiatric hospital patients increased from 185 397 to over 300 000, despite the fact that the average length of stay had decreased from 215 to 103 days. In the Erlangen asylum, the percentage of patients diagnosed with schizophrenia increased from 42% to 56%, and two-thirds of all new admissions were given that diagnosis.² A massive increase of psychiatric patients, especially those diagnosed with schizophrenia, was also being observed in England, the United States, and other countries during these same years.⁷

This massive increase in patients in psychiatric hospitals came at a bad time for Germany economically. Following World War I, Germany had been stripped of valuable industrial and coal-producing areas and saddled with onerous reparations. The decade following was marked by strikes, clashes between Communists and nationalists, inflation, bankruptcies, and a severe economic depression. Funding for psychiatric care was sharply reduced even as the number of patients requiring care was rising. In 1931, the German Psychiatric Association organized a prize for the best essay on the topic "How can provision for mental health care be more cheaply reorganized?"²

The idea of killing the patients in psychiatric hospitals first surfaced prominently in 1920 in a publication by

Karl Binding, a lawyer, and Alfred Hoche, a psychiatrist. Entitled *Permission for the Destruction of Life Unworthy of Life*, the tract posed the question: "Is there human life which has so far forfeited the character of something entitled to enjoy the protection of the law, that its prolongation represents a perpetual loss of value, both for its bearer and for society as a whole?" The authors' answer was clearly affirmative and described such individuals as being "mentally dead" and "on an intellectual level which we only encounter way down in the animal kingdom."² The authors emphasized the economic burden of such individuals to Germany. The economic argument was repeated in subsequent discussions of this issue, such as in a 1932 article entitled "The Eradication of the Less Valuable from Society," in which the author, psychiatrist Berthold Kihn, estimated that mentally ill individuals were costing Germany 150 million Reichsmarks per year.²

Hitler was interested in these ideas and is said to have discussed a program to kill chronic mental patients in 1933, shortly after assuming the chancellorship. He said that "it is right that the worthless lives of such creatures should be ended, and that this would result in certain savings in terms of hospitals, doctors and nursing staff." Prophetically, he suggested that such a program would be easier to implement during wartime, when public opposition would be less.²

The idea of killing psychiatric patients continued to be discussed privately by Nazi officials throughout the 1930s. Finally, in July 1939, as he was planning to invade Poland, Hitler asked his private physician and other officials to draft a law that permitted the killing of mental patients. From the beginning, the euphemism "euthanasia" was used to refer to the killings; as Fredric Wertham noted in *A Sign for Cain*, "these were not mercy deaths but merciless murders."⁸

The result was a memorandum on "the destruction of life unworthy of life" and a draft law that included the following provision:

The life of a person, who because of incurable mental illness requires permanent institutionalization and is not able to sustain an independent existence, may be prematurely terminated by medical measures in a painless and covert manner.

Selected professors of psychiatry and asylum directors who were known to be sympathetic to the plan were asked to comment on the draft. All agreed that such a program was necessary, but some suggested granting exceptions to patients who were doing "economically important work in the institution." Friedrich Mauz, professor of psychiatry at Königsberg University, argued against granting any exceptions for those individuals diagnosed with schizophrenia "as a matter of principle."^{2,3}

Hitler's letter authorizing the program to kill mental patients was dated September 1, 1939, the day German forces invaded Poland. Although the program never officially became law, Hitler guaranteed legal immunity for everyone who took part in it. In October 1939, the directors of all German psychiatric hospitals were asked to fill out forms indicating the diagnosis and capacity for useful work of each patient, although they were not told what the forms were for. These forms were then assessed by a committee of selected psychiatrists who targeted approximately 70 000 patients for death, 1 for every 1000 people in Germany, which was the initial goal of the program.⁹ The program was known as Aktion (action) T-4, after the address of its headquarters in Berlin on Tiergartenstrasse 4.

Killing of Psychiatric Patients

The planning and logistics for such mass murder elicited much discussion. The method finally chosen was the release of carbon monoxide gas into a closed room outfitted to look like a shower room and the subsequent burning of the bodies in crematoria. Gold fillings were removed from the deceased and used to partially pay for the program.⁶ In early January 1940, the first 20 patients were led into a "shower room" at the Brandenburg asylum and killed. This method was judged to be highly successful and was later adapted for the killing of Jews. Five additional asylums, at Bernburg, Grafeneck, Hadamar, Hartheim, and Sonnenstein, were designated as killing centers, and patients marked for death at other hospitals were transported to these regional centers. By August 1941, 70 273 patients had been killed. Careful records were kept, and the 6 centers competed with each other in efficiency. Hadamar, eg, "celebrated the cremation of its ten-thousandth patient in a special ceremony, where everyone in attendance—secretaries, nurses and psychiatrists—received a bottle of beer for the occasion."⁹

Once the initial goal of killing 70 000 patients was achieved, the Aktion T-4 program was halted. Although some resistance to the program had developed, especially among the churches and in communities near the killing centers, the T-4 program personnel were needed for a bigger job. Beginning in April 1941, selected personnel were transferred from the psychiatric hospitals to concentration camps and asked to set up similar killing facilities. According to *Cleansing the Fatherland: Nazi Medicine and Racial Hygiene* of Aly et al,⁶ "the original commandants of Belzec, Sobibor and Treblinka came from T-4 and were on its payroll." The German solution for its problem of chronic mental patients thus morphed into the "final solution" for its problem of Jews, gypsies, and others deemed undesirable.

Although the formal Aktion T-4 program was halted in mid-1941, the killing of mental patients continued

throughout the war. In March 1945, Red Army troops even found a crematorium still under construction at one liberated mental asylum.¹⁰ Some psychiatrists were fully cooperative with the ongoing program, while others opposed it and tried to save patients by falsifying their records. In some cases, the killing was done using carbon monoxide, but in most cases it was done by injection (eg, morphine, phenobarbital, or scopolamine) or starvation. Psychiatric asylums implemented 2 diets: minimum calories for those who could work and a starvation diet of vegetables only for those who could not. These killing programs were highly effective. At the Hadamar asylum, eg, of the 4817 patients transferred there between August 1942 and March 1945, 4422, or 92%, died. At the Obrawalde asylum in German Silesia, of the 3948 admissions in 1944, 3814, or 97%, died. Postwar investigators estimated that 18 232 people had died at Obrawalde alone in the previous 3 years.²

In some parts of the German Reich, the killing of mental patients was done also by army personnel. In East Prussia, 1558 patients from 3 asylums were killed by a Schutzstaffel (SS) unit that loaded the patients into the back of closed trucks and released toxic gas. In Pomerania, another SS unit shot to death over 3000 psychiatric patients because military officials wanted the asylum for use as barracks and a casualty station. Nor were mentally ill children exempt from the psychiatric genocide. In one pediatric unit in Bavaria, 332 children died by starvation or injection between November 1940 and May 1945.² One estimate of the total number of children killed under the hospital program was "at least 5000,"¹⁰ but others have estimated as many as 10 000.¹¹

According to Fredric Wertham, the mass sterilization and killing of psychiatric patients in Germany "was organized as well as any modern community psychiatry project, and better than most." At the Grafeneck asylum alone, 594 patients were killed in 133-day period, and "eventually the crematorium of Grafeneck smoked incessantly."⁸

Estimates of Numbers Sterilized and Killed

What is the best estimate of the total number of patients with schizophrenia who were sterilized and/or killed by the Nazis? Regarding sterilization, it has been estimated that "between 1934 and May 1945, about 400 000 people were actually sterilized—about 1% of the population capable of producing children."² Two-thirds of them were living in the community, and they included individuals with a variety of diagnoses. A diagnostic breakdown of sterilizations for 1934, the only year for which such figures are available, indicates that 49% of the sterilized individuals had "congenital feeble-mindedness," 26% schizophrenia, 16% congenital epilepsy, and the remainder other diagnoses.¹⁰ Later diagnostic data from a single

sterilization center noted that two-thirds of those sterilized had schizophrenia.² Based on the limited available data, it seems reasonable to estimate that at least one-third of the 400 000 sterilized, or 132 000 individuals, had a diagnosis of schizophrenia.

Regarding the total number of psychiatric patients killed, estimates have ranged from 200 000 to 275 000. This included the initial 70 273 killed by gas between January 1940 and August 1941, an estimated 100 000 “who starved to death in German mental hospitals after the end of the euthanasia program,”³ and an unknown number killed by lethal injection or shooting. In late 1939, there were 283 000 patients in German psychiatric hospitals, and by May 1945, only about 40 000, or 14%, survived. During those years, some patients were discharged, while others, approximately two-thirds of whom were diagnosed with schizophrenia, were being admitted. According to Wertham,⁸ “many institutions, even big ones ... were closed entirely because all the patients had been liquidated.” Thus, 200 000 would seem to be the minimum number of psychiatric patients killed, and the total may have been as high as Wertham’s estimate of 275 000.⁸

What percentage of these had a diagnosis of schizophrenia? It is clear that individuals with this diagnosis were sterilized and killed disproportionately compared with individuals with other diagnoses. This was because of the strong belief among German psychiatrists that schizophrenia was genetically inherited and also because individuals with schizophrenia were less likely to have been able to work. According to Friedlander, the “overriding criterion” for selection for death in the T-4 program “was the ability to do productive work.”¹⁰ The few patients who were still alive in German psychiatric asylums at the end of the war were those who could work or had useful skills, such as a patient, formerly a dentist, in the Obrawalde asylum “who was temporarily acting as asylum director” after the staff left before the advancing Russian army.² Having schizophrenia put one in the category of those for whom there were no exceptions to sterilization or killing. Benno Müller-Hill, the author of *Murderous Science*, noted that “a German who was diagnosed ‘schizophrenic’ had to be sterilized without exception. Equally, a person who was diagnosed ‘schizophrenic’ and who was hospitalized for at least five years had a *strong* chance to be murdered in the euthanasia murders.”¹² Given the facts that 56% of hospitalized psychiatric patients in 1929 and two-thirds of admissions during the war had schizophrenia, it seems reasonable to estimate that at least half of the 200 000–275 000 patients killed or 100 000–137 500 individuals were so diagnosed.

Thus, in the 12-year period of 1934–1945, an estimated 600 000–675 000 individuals in Germany were sterilized or killed under medical rationalizations, including an estimated 132 000 with schizophrenia who were sterilized

and 100 000–137 500 with schizophrenia who were killed. There would have been some overlap among these groups, but except for Jewish patients, it is not likely that it would have been extensive. The Germans kept careful records; because the goal of this program was to prevent reproduction and thus promote racial purity, killing an individual who had been previously sterilized would have been pointless. The exception to this was Jewish patients with schizophrenia, who appear to have been selectively killed whether or not they had been previously sterilized.^{6,13} It has been estimated that the total number of Jewish patients with schizophrenia who were killed was between 5000 and 7000.

Combining the estimated 132 000 individuals with schizophrenia who were sterilized and the estimated 100 000–137 500 individuals with schizophrenia who were killed, and allowing for a modest overlap, yields a total of 220 000–269 500 individuals with schizophrenia who were sterilized or killed. What percentage of all Germans with schizophrenia does this represent? As noted above, in late 1939, there were 283 000 patients in German psychiatric hospitals. A survey 10 years previous reported that 56% of the hospitalized patients were diagnosed with schizophrenia, a percentage consistent with data from other countries; if that was true in 1939, there would have been 158 480 patients with schizophrenia so hospitalized.

Immediately preceding the implementation of the sterilization program in 1934, there were also 3 studies of the prevalence of schizophrenia carried out in Germany.^{14–16} They were done between 1929 and 1931 in predominantly rural areas of Thüringen and Bavaria in southeastern Germany by Carl Brugger, associated with the German Psychiatric Research Institute in Munich. Brugger used key informants, hospital records, and interviews of community residents to identify all individuals with psychiatric problems, including those in hospitals. He said that it was especially important to identify individuals with schizophrenia, which he believed was carried by a recessive gene. Citing Rüdin’s work, Brugger¹⁵ said that “only sterilization ensures that the genes do not spread all over the nation.” In the 3 studies, Brugger identified 93 individuals with schizophrenia, including an unspecified number who were hospitalized, among the total population of 46 189 people of all ages, for a point prevalence rate of 2.0 per 1000 population. This rate was consistent with other prevalence studies done in the 1930s, including a rate of 1.8 per 1000 in a study of rural Tennessee, 3.3 per 1000 in Denmark, 4.2 per 1000 in Finland, and 1-year prevalence rates of 2.3 and 2.9 per 1000 in 2 studies in Baltimore.¹⁷

In 1939, the total population of Germany, including the eastern regions that subsequently became part of Poland, was approximately 70 million. If 2 cases of schizophrenia per 1000 population were representative of the entire country at that time, the total number of

Germans with schizophrenia in 1939 would have been 140 000 individuals. However, Brugger's studies were carried out almost exclusively in rural areas, and it is known that urban schizophrenia prevalence rates are significantly higher than those in rural areas. In addition, new cases of schizophrenia continued to be diagnosed between 1940 and 1945. Most incidence studies reported in the postwar years around the world ranged between 10 and 30 new cases of schizophrenia per 100 000 population per year¹⁸; however, as will be noted below, German incidence rates were higher.

Given the estimate of 158 400 individuals with schizophrenia in psychiatric hospitals; the 140 000 individuals with schizophrenia, including some of whom were hospitalized, identified in rural surveys; and new cases of schizophrenia diagnosed during the war years, it seems reasonable to estimate that between 1939 and 1945 there were at least 250 000, and perhaps as many as 300 000, individuals with schizophrenia in Germany. Because we have estimated that between 220 000 and 269 500 of them were sterilized or killed, this means that between 73% and 100% of individuals with schizophrenia in Nazi Germany shared this fate. This estimate is also consistent with the fact that the psychiatric hospital census in Germany in 1945 was only 14% of what it had been in 1939.

Postwar Studies

What effect, if any, did the sterilization and killing of individuals with schizophrenia have on the subsequent prevalence and incidence of this disorder in Germany? First, is this a legitimate question to ask? There is widespread agreement that the results of Nazi experiments carried out on individual prisoners, such as those on hypothermia, should not be published. The sterilization and murder of psychiatric patients was not such an experiment but rather was a policy applied to an entire population. As such, it is similar to other Nazi policies, such as the decision to blockade Holland in late 1944, leading to widespread starvation during the Dutch Hunger Winter of 1944–1945. Studies of the children who were in utero during this period have shown that they had an increased rate of developing schizophrenia.¹⁹ Looking at the effects of psychiatric genocide is similar, and in addition, all the prevalence and incidence studies associated with this question have already been published.

The first schizophrenia prevalence study carried out in Germany following World War II was done in 1971, 26 years after the last individuals with schizophrenia had been sterilized or killed. It covered 424 000 people in 3 counties in Bavaria, including Rosenheim, the site of one of Brugger's studies 40 years earlier. The authors reported a 6-month prevalence of 1.5 per 1000 total population, lower than the point prevalence rate of 2.0 per 1000 that had been reported by Brugger.²⁰ Between 1975 and 1979, this same research group randomly sam-

pled 1536 adults in Traunstein, one of the 3 counties they had studied previously. They reported a 6-month schizophrenia prevalence of 3.9 per 1000 for individuals aged 16 years and above.²¹ They reinterviewed the same individuals between 1980 and 1984 and reported a similar rate of 3.6 per 1000, point prevalence, for individuals aged 15 years and above.²⁰ The authors noted that the schizophrenia prevalence rates in the German studies were lower than rates being reported in other postwar studies in Sweden, Norway, Iceland, and France, where the rates ranged between 6.0 and 10.0 per 1000, but they did not speculate on why that might be the case.²¹

In addition to the Bavarian studies, beginning in 1974, Heinz Häfner and his colleagues carried out additional German schizophrenia prevalence studies in Mannheim, utilizing their case register. Between 1974 and 1980, they reported a 1-year schizophrenia prevalence rate of 2.3 per 1000. They also noted without comment that this rate was lower than the rates being reported in comparable schizophrenia prevalence studies in England (3.4 per 1000), the United States (4.7 and 5.1 per 1000), and Ireland (8.3 per 1000).²² The low German schizophrenia prevalence rates were also observed in a 2005 review by Saha et al²³ of 188 schizophrenia prevalence studies published between 1965 and 2002. All these studies suggest that the prevalence of schizophrenia was relatively low in Germany following World War II, as would be expected due to the genocide.

Regarding the incidence of new cases of schizophrenia, no published studies were apparently carried out in Germany prior to World War II. The first postwar study was done in Mannheim in 1965, 20 years after the last patients had been sterilized or killed. Heinz Häfner and Helga Reimann at the University of Heidelberg identified all new cases of schizophrenia reported during the year among the city's 330 000 inhabitants. They reported an incidence rate of 53.6 per 100 000, which the authors noted was "more than twice as high as the mean of 21.8 per 100 000 calculated in 1965 by Dunham from different studies and two to three times as high as the rates of 23.8 or 15.8 respectively, ... for the U.S.A. and England and Wales in 1969." The German rate, they added, was comparable to the "rate of 52 per 100 000 given by Walsh for Dublin in 1969."²⁴

Häfner and his colleagues subsequently opened a psychiatric case register and recorded the incidence of schizophrenia for each year from 1974 to 1980; it ranged from 48 to 67 per 100 000, averaging 59. In one report, the authors compared the incidence of schizophrenia in Mannheim with 11 studies in the Netherlands, Italy, Denmark, Norway, Iceland, the United Kingdom, the United States, and Australia; the 11 studies averaged 24 per 100 000, less than half the incidence rate for Mannheim, and only one, a 1970 study in Rochester, NY, reported a higher rate than Mannheim.²² In another publication, Häfner compared the Mannheim incidence rate

with that of 8 centers in the World Health Organization Determinants of Outcome Study; only 1 of the 8 centers had an incidence of narrowly defined schizophrenia exceeding that of Mannheim.²⁵

The other area in Germany where schizophrenia incidence studies were carried out was in Bavaria. A 1971 study found 102 cases in a predominantly rural population of 424 000 for a 6-month incidence rate of 24 per 100 000.²⁰ Another study done in the same area in 1974–1975 reported an annual incidence rate of 48 per 100 000, thus being more similar to the rates reported for Mannheim.²² These high German incidence rates were also confirmed by international comparisons.²⁶ For example, a review of 55 schizophrenia incidence studies by McGrath et al¹⁸ found the median schizophrenia incidence to be 15.2 (7.7–43.0) per 100 000; few of the studies achieved the high incidence rates reported in Germany.

Discussion

The sterilization and murder of hundreds of thousands of patients with schizophrenia and other psychiatric disorders in Nazi Germany between 1934 and 1945 was the greatest criminal act in the history of psychiatry. It was perpetrated in an attempt to decrease the incidence of schizophrenia and purify the race, based upon a mistaken belief that schizophrenia was a simple Mendelian inherited disease in which a single gene, or small number of genes, is sufficient to cause the disease. Furthermore, it should have been known even in 1940 that removing cases of schizophrenia from society would have no impact on the incidence of the disease because the vast majority of individuals with schizophrenia do not have a family history of the disease and do not reproduce. Current research suggests that the cause of schizophrenia involves dozens, and perhaps hundreds, of genes and includes common variants such as single nucleotide polymorphisms or less common variants such as copy number variations. Such variants may be carried by large numbers of people, most of whom never develop schizophrenia. It is possible that such genetic variations may cause disease only if they are activated by life experiences such as perinatal hypoxia, nutritional deficiency, infections, or other environmental factors.

Is there any apparent explanation for the relatively high incidence rates of schizophrenia in postwar Germany? One possible explanation is that the areas in which postwar incidence studies were carried out were less affected by the psychiatric genocide. This seems unlikely because many Bavarian psychiatrists enthusiastically supported the eugenics program, and individuals with schizophrenia in the Mannheim region were killed initially in Grafeneck and later in Hadamar asylum.²

Another possible explanation is that postwar incidence studies of schizophrenia in Germany included large

numbers of non-German immigrants. In fact, 13% of Mannheim's population in the 1970s were foreign workers. Studies of the incidence of schizophrenia among these workers, however, reported that “when corrected for age, the rates of treated schizophrenia episodes ... were significantly lower than those of the German population.”²²

A third possibility is that much broader diagnostic criteria were being used to diagnose schizophrenia in Germany after the war compared with before the war. If this had been the case, one would expect to find high rates in prevalence as well as in incidence studies, but this is not the case. It is difficult to determine what diagnostic criteria were being used in prewar studies. Brugger did not define the diagnostic criteria he used in his 1929–1931 studies, but they were probably the classical criteria of Emil Kraepelin, who dominated diagnostic thinking in Munich psychiatry until his death in 1926. Most studies after the war used the diagnostic guidelines of the *International Classification of Diseases, Eighth Revision (ICD-8)*, and *International Classification of Diseases, Ninth Revision (ICD-9)*, introduced in 1965 and 1975, which use somewhat broader criteria for diagnosing schizophrenia. However, most of the other European studies that were being done at the time and that reported much lower incidence rates also used *ICD-8* or *ICD-9* criteria.

A fourth possibility is that social conditions during or after the war produced environmental factors that led to an increase in the incidence of schizophrenia. An example was the increase in schizophrenia in Holland that followed the Dutch Hunger Winter in 1944–1945.¹⁹ The cause of the high schizophrenia incidence rates in postwar Germany is thus not apparent and is an appropriate subject for additional research.

The major limitation of this article is the quality and quantity of the available data. In some cases, the projected numbers are merely informed guesses whose credibility rests upon their reasonableness and their consistency with other related data. It is hoped that this article will elicit additional, previously unpublished, data that can be used to document and memorialize this reprehensible but important chapter in psychiatric history. In addition, perhaps, the most appropriate response the profession of psychiatry can have to the Nazi eugenics and psychiatric genocide program is to focus additional resources on examining more complex forms of genetic and gene-environmental interactions in order to understand the true genetic contribution to schizophrenia. This knowledge should then be used to develop methods for disease prevention and treatment that can be used ethically in all populations.

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