Raisa Golant (1885-1953), a Jewish neuropsychiatrist in the Soviet Union: following the footsteps of Vladimir Bekhterev

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ABSTRACT

Raisa Golant (1885-1953) was one of the most prestigious figures of Soviet Russian neuropsychiatry in the first half of the 20th century. She was of Jewish descent, and studied medicine in Germany, graduating in 1908. Upon returning to Russia in 1909, she met Vladimir Bekhterev in Saint Petersburg and became one of the neurologist's closest collaborators at the Psychoneurological Institute. After the death of her mentor in 1927, she directed the Institute's psychiatry department for 20 years, until the early 1950s, when she suffered under the repressive Stalinist regime, dying shortly thereafter. Early in her professional career she focused on clinical neurology and physiology of the autonomous nervous system and neuromuscular system. She later focused on research into the organic origin of mental disorders, paying special attention to neurosyphilis, epidemic encephalitis, and diencephalic disease. Golant also showed interest in neuropsychology and in the diagnosis and treatment of schizophrenia and manic-depressive psychosis. Furthermore, she studied social aspects of psychiatry, especially those related to drug and alcohol abuse, and mental disorders arising from situations of war and famine. Her 1935 treatise on memory disorders is a classic textbook in Russian neuropsychiatry, which includes several syndromes bearing her name.

KEYWORDS

Jewish women, neuropsychiatry, Psychoneurological Institute, Raisa Golant, Saint Petersburg/Leningrad, Vladimir Bekhterev

Introduction

From her home in Leningrad, Raisa Golant was one of the most influential personalities of Soviet Russian neuropsychiatry of her time. Her academic education in Germany enabled her to interact with German neuropsychiatry and to publish in scientific journals in Germany and France. This gained her international recognition and respect.

Her professional relationship with Vladimir Bekhterev, with whom she worked as a main collaborator, made her his natural successor in the Leningrad Psychoneurological Research Institute, where she directed the psychiatry department for 20 years. After initially working as a neurologist and physiologist, she subsequently studied the organic origin of mental disorders and a broad spectrum of fields of research in neuropsychiatry.

Time has no mercy, and the presence of Soviet Russian neuroscience outside its area of influence is limited, partly due to limited knowledge of the Russian language in the international sphere, but also for political reasons. This has led to a certain international neglect of the figure of Raisa Golant, who has also not enjoyed great recognition in her own country. Regarding the latter point, certain antisemitic attitudes may have been involved. The aim of this work is to review Golant's life and her professional and scientific career in order to recognise her importance in international psychiatry and neurology.

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Material and methods

Given the limited number of references on Raisa Golant in the international medical literature, which predominantly include the articles she published in the German and French journals of the day, a broad review was conducted of the Russian medical literature, identifying few studies specifically dedicated to the neuropsychologist. Data were gathered from the numerous articles she authored over a period of four decades.

Results

Early life

Raisa Yakovlevna Golant [Раиса Яковлевна Голант] was born in 1885 in the border town of Brest-Litovsk (now known as Brest, located in modern Belarus) in the Pale of Settlement, which was home to most of the Jewish population of the Russian Empire. Golant belonged to a Jewish family of humble status; her father was a manufacturer of soap. Severe financial difficulties forced them to adopt a nomadic lifestyle, frequently moving from place to place. They lived for several years in Babruisk, a town close to Minsk and an important centre of Jewish culture, where her younger brother Yevgeny was born in 1888. Golant obtained secondary education at the Gymnasium in Priluki, a town in central Ukraine where the family later resided.[1-3]

Having completed her secondary studies in 1902, and unable to continue her studies in Russia, Golant travelled abroad and studied natural sciences and medicine at university in Brussels, Berlin, and Freiburg im Breisgau, where she graduated in 1908, specialising in neurology and psychiatry. She later validated her degree at the University of Moscow, where she obtained excellent qualifications.[1,2,4] In Freiburg im Breisgau, she worked at the physiology laboratory of professor Johannes von Kries (1853-1928), who was known for his studies on the human visual system.[5] In Germany, Golant established a close friendship with the physiologist and pacifist Georg Nicolai (1874-1964), with whom she maintained frequent correspondence between 1906 and 1932.[6]

The case of Raisa Golant is singular as she was a Jewish woman of humble origins, which strongly limited her opportunities for progression in the Russian society of her time. One way to escape this discrimination was to study abroad, with many Jewish girls opting to study medicine in other countries. About a quarter of Jewish women who completed higher education specialised in disciplines related to mental health, a novel field that also enabled them to understand and better manage her own personal problems; this idea derived from the misogynistic and antisemitic world they were living in.[1] There were many Jewish physicians in Russia at that time, but it was not until the Russian Revolution in 1917 that they (both men and women) were able to access the academic and research positions that they had previously been denied.[7]

A magnificent city on the banks of the Baltic Sea. The Psychoneurological Research Institute

When Raisa Golant returned to Russia in 1909, her professional options were very limited. She started working at the Pasteur Institute of Epidemiology and Microbiology in Saint Petersburg, which had been founded a year earlier. This field did not greatly interest her, but she had the good fortune of meeting Vladimir Bekhterev (1857-1927), who helped her to obtain a position in the nervous and mental disorders clinic at the Imperial Military Medical Academy, and she earned a doctorate in 1913. This personal relationship may have represented a significant advantage for Golant, who in these early years focused her professional activity on neurology and experimental physiology.[1,2,8,9] By 1913, she had already published 12 scientific articles, mainly on electrophysiology.[4]

Vladimir Bekhterev became chair of the psychiatry and mental disorders clinic at the Imperial Military Medical Academy in Saint Petersburg in 1983. In 1907, he founded the Psychoneurological Research Institute, implementing a new multidirectional, multidisciplinary scientific approach aiming to obtain a global view of human nature through objective knowledge of the anatomy and physiology of the nervous system, psychology, psychiatry, neurology, sociology, pedagogy, and related disciplines.[10,11] Research work was combined with clinical practice and academic training, which included two years' basic training, after which students were guided towards one of three faculties: pedagogy, law, and medicine. The faculty of medicine started teaching in 1911. In 1913, Bekhterev left the Imperial Military Medical Academy due to political disagreements with the tsarist government, and dedicated all of his efforts to the Institute, where he promoted the development of Russian reflexology. This discipline, which he created at the beginning of the 20th century, was a natural

Figure 1. Vladimir Bekhterev, centre, with his colleagues at the Psychoneurological Research Institute in 1922. Raisa Golant, standing by his side[85]

scientific branch of psychology that objectively studied the bio-psycho-social essence of man and his diseases, laying the foundations for what years later would become evidence-based medicine. Student admissions were flexible, with non-Christians and female students being allowed to study. Within the framework of the institution, the following institutes were created: an institute of pathology and reflexology, the psychiatric and nervous diseases clinic, the neurosurgical institute, and the anti-alcohol institute.[10,12,13] From 1910, the neurosurgical institute was directed by Ludvig Puusepp (1875-1942), who had left the Military Medical Academy to join the institute, staying until he returned to his home country of Estonia in 1920.[14]

The Psychoneurological Research Institute received the status of Petrograd Private University in 1916 and Petrograd Second State University in 1918.[10,13] The institution suffered the consequences of political upheavals, undergoing frequent organisational and designational changes. In 1921, it was designated the State Psychoneurological Research Academy, and the faculty of medicine became the new State Institute of Medical Knowledge (GIMZ, Gosudarstvennyi Institut Meditsinskikh Znanii)[10,12]; in 1930, it received the name Second Medical Institute of Leningrad.[15] In 1925, to commemorate the 40th anniversary of Bekhterev's teaching career, the Psychoneurological Research Academy was named after its founder; however, psychoneurology and his research on reflexology were suspended by the end of 1927, after he died under mysterious circumstances. Between 1926 and 1932, the academy was converted into a clinical hospital for patients with nervous and mental disorders. In 1932, it was renamed the V.M. Bekhterev Neuropsychiatric Research Institute, and only recovered its original designation of Psychoneurological Research Institute in 1962, thanks to the efforts of its director Vladimir Myasishchev (1893-1973). It is currently called the Bekhterev Psychoneurological Research Institute and is directed by Nikolay Neznanov (born 1954).[10,13,14]

During the convulsive period between 1913 and 1921, with the First World War, the October Revolution, and the Russian Civil War in the background, Raisa Golant worked at several institutions including the psychiatric

Figure 2. Staff of the Psychoneurological Research Institute in 1925. Seated, from left to right: L.G. Zabyezhinsky, K.V. Shalabutov, R.Y. Golant, V.M. Bekhterev, V.V. Sreznevsky, Y.A. Ratner. Standing, from left to right: M.K. Yakovleva, S.I. Gendelevich, Y.K. Yakovleva, Z.E. Faktorovich, M.M. Mirskaya, I.E. Odinova, A.Z. Rozenberg, I.S. Matusova, G.G. Petrova, V.E. Dorfman[86]

and nervous diseases clinic, the institute of pathology and reflexology of the Psychoneurological Research Institute, Saint Petersburg City Hospital No. 40, the Central Red Army Hospital, the City Field Infirmary, Petrograd's Central Hospital for Mental Patients, and the Medical Institute.[1,8]

Golant's most fruitful period was at the Psychoneurological Research Institute, where she developed her clinical, research, teaching, and medical activity throughout the centre's different transformations, and directed the Psychiatry Department between 1928 and 1948 (Figures 1 and 2).[9,10] In 1926, she was placed in charge of the first Neuropsychiatric Dispensary of the Leningrad region.[16] From 1938, she simultaneously worked as chair of the Psychiatry Department and deputy director of research.[8]

For several years, Golant was the main assistant and collaborator of Vladimir Bekhterev, so it is unsurprising that she succeeded her mentor as the chair of the Psychiatry Department of the Psychoneurological Institute after his death. In this role, she surrounded herself with a new generation of professionals, among whom she promoted scientific research and modernised the concepts of prevention, diagnosis, and treatment of mental diseases (Figure 3).[2]

Between 1936 and 1941, she also directed the Psychiatry Department of the Institute for Protection of Maternity and Infancy in Leningrad, and paved the way for the study of the psychology and psychopathology in child development. Her work was especially important for paedology and child psychoneurology.[17] Another of her many tasks was monitoring the performance of the psychiatric hospitals of Petrozavodsk (Republic of Karelia), Yekaterinburg (Ural Federal District), and Pskov (south of Leningrad).[8]

Her husband, Yakob Ratner (1892-1944), was chair of the Endocrinology Department at the Bekhterev

Figure 3. Staff of the V.M. Bekhterev Neuropsychiatric Research Institute in 1937. Seated, from left to right: R.Y. Golant, O.S. Fridman, E.N. Ganchevskaya. Standing, from left to right: L.Y. Pines, Maksimov, V.N. Myasishchev, Y.A. Ratner, V.M. Mozhaisky, V.E. Dorfman, I.A. Ossovsky[86]

Neuropsychiatric Research Institute, which focused on endocrinology and autonomous nervous system pathologies. Their only daughter, Maria Ratner (1920-2000) was a distinguished nephrologist.[17] Raisas's younger brother was the paedagogist Yevgeniy Golant (1888-1971), born in Babruisk. He was a close collaborator of Lenin's wife Nadezhda Krupskaya (1869-1939), and a lecturer at the Herzen State Paedagogical Institute in Leningrad, scholar of paedagogical sciences, and a tireless fighter against illiteracy. Her nephew Viktor Golant (1928-2008) was one of the leading nuclear physicists in Russia.[2,3,9]

In the 1920s, the relationship between physicians and the Soviet government was very ambiguous. They were employees of the government, but many, including Golant and her husband, also worked in private practice within the framework of the New Economic Policy.[19] The writer Kornéi Chukovsky (1882-1969) explained that he attended the clinic of the promising young neurologist Yakob Ratner, who after a series of absurd questions and a very bizarre clinical examination, charged him a ridiculously high sum and prescribed no treatment. It was also rumoured that Ratner advised many of his patients from the private clinic to seek a second opinion, and recommended that they consult a colleague who worked in the nearby area. When they arrived at the second clinic, it was located on the same floor of the same building, but was accessed from a different street, and the consulting doctor was his wife, Raisa Golant. These seem to have been common practices among physicians of the day, although there is a political and antisemitic bias in these accusations.[19]

In an article published in German in 1927 on the clinical symptoms of syphilitic psychosis, Raisa Golant is referred to as belonging to the institute of pathology and reflexology of Leningrad, as well as being head of department at the Psychiatry Clinic of the German State Institute of Medical Sciences. No other references

Figure 4. Raisa Golant's lecture at the V.M. Bekhterev Neuropsychiatric Research Institute[86]

have been found to Golant assuming simultaneous professional roles in both countries.[20]

Professional and scientific work

During her time at universities in Germany and her early years in Russia, Raisa Golant mainly focused on neurology and physiology. She frequently published in German medical journals, and also in French journals from the late 1920s. The collaboration between Russia and Germany in the field of medical science was long-standing, and these links strengthened during the Soviet isolation of the 1920s, partly due to the left-wing ideas of many German doctors, which radically changed in the following decade with the beginning of Nazi rule.[18] Golant published 126 scientific works in total, including books and articles.[9]

As a result of her work at the physiology laboratory of Professor von Kries in Freiburg im Breisgau, she published a study on the physiology of vision, using Nernst lamps,[5] and an article on the effect of sinusoidal alternating current on the motor nerve.[21]

Between 1910 and 1911, she made the following presentations at the scientific meetings of the psychiatry and mental disorders clinic of the Military Medical Academy: "On the effects of fluctuations of sinusoidal current on the motor nerve," "The development of a locomotor reflex to test irritations," "Electrocardiography demonstration," with V.V. Sreznevsky (1880-1942), and "Electrocardiography demonstration in case of poisoning with digalen and veratridine."[8]

In 1913, she defended her doctoral thesis at the Military Medical Academy, with Vladimir Bekhterev as her advisor. The title, "On the immobility of the spine," is clearly indicative of the topic, ankylosing spondylitis. She presented nine clinical cases, with some including electrophysiological studies and two (patients who died) with anatomical pathology studies of the spinal cord and column. She emphasised the neurological signs in

the early stages of the disease, especially in patients with sensory disorders affecting the territories innervated by the nerve roots.[22,23]

Among her physiological research studies, we may highlight the previously mentioned articles on the effects of fluctuations of sinusoidal alternating current on the motor nerve,[8,22] motor association reflexes,[8,24] and the vegetative innervation of the muscle.[25-27] She also studied the role of galvanic excitability of the neuromuscular system in the pathogenesis of the Chvostek sign and the ulnar phenomenon of Bekhterev.[28,29] Furthermore, she applied galvanic stimulation techniques to the study of mental disorders,[30] especially the galvanic excitability of the neuromuscular system as an index of vegetative innervation in nervous and mental disorders.[31]

After the death of her mentor, and as head of the Psychiatry Department, Golant adopted a clinical approach to the psychopathological, neurological, anatomical and histological, electrophysiological, biochemical, and radiological studies performed (Figure 4). Thus, she and her team were pioneers in Russia in the introduction of radiological contrast techniques, including brain angiography, radiotherapy for mental disorders, cerebrospinal fluid analysis, and pyrogenic therapy for progressive paralysis. They were also pioneers in the study of the vegetative nervous system in psychiatric research.[8,10,32,33] She particularly focused on active treatment methods for psychiatric patients, with the induction of insulin coma, electroconvulsive therapy, and the use of sulfasalazine, which were the most prevalent of that time. In 1940s, she defended prefrontal leucotomy as a treatment for more severe cases of schizophrenia.[14]

She wrote on the socio-hygienic problems of psychiatry and the organisation of neuropsychiatric dispensaries.[35,36] Golant researched mental disorders, especially psychosis, observed in patients with organic brain injuries of infectious, vascular, traumatic, or neoplastic origin, as well as mental disorders associated with hunger in wartime, and drug and alcohol abuse.[2,4,8]

She particularly focused on the study of infectious diseases of the central nervous system, especially neurosyphilis and epidemic encephalitis. In the 1920s and 1930s, she authored several studies on progressive paralysis, from a general review[37] to a description of the memory alterations observed in association with paralysis.[38-40] In 1927, Golant published a series of 79 cases of cerebral syphilis with psychosis[20] and a study on the effects of malariotherapy in this condition.[41]

She was also interested in epidemic encephalitis and post-encephalitic parkinsonism, as well as their clinical characteristics, and described several associated syndromes.[42-45] The Soviet literature on epidemic encephalitis was comparable with the international literature, but its dissemination was limited due to its scarce visibility in international journals on account of the language barrier.[46]

One of Golant's favourite topics was memory disorders, the subject of her most important work in 1935, a text that has become a classic[47]; she published a further study in 1948.[48] She specifically studied different types of dementia, such as Alzheimer disease, and the clinical and aetiological variants of progressive paralysis and Korsakov syndrome. She classified physiological memory insufficiency as a form of anecphoria, a type of hypomnesia with preserved capacity to reproduce figurative or verbal material with the help of only one cue helping the patient to remember an event.[47,49] Golant became especially interested in the syndrome of fantastic pseudology (pathological lying).[47,50] In 1950, she published a study that described memory disorders associated with focal brain injuries, especially in the diencephalic region.[51]

In the field of schizophrenia, she wrote on such clinical topics as the delusion of marriage and motherhood and its nosological meaning[52] and on the disintegration of thought.[53] Unlike other specialists, she defended the distinction between the psychopathology of schizophrenia and the psychology of schizoid personality disorders.[8]

In 1924, Raisa Golant presented a series of 12 cases diagnosed with early-onset dementia with symptoms typical of schizophrenia, with no clinical signs or laboratory findings suggestive of syphilis, who showed a positive reaction to colloidal gold in the cerebrospinal fluid. She postulated that the disorders may be caused by inflammatory changes in the choroid plexuses.[54]

She published articles on obsessive ideas in melancholic states[55] and manic-depressive disorders in Fröhlich syndrome.[56,57] Golant associated endogenous depression with a lesion to the hypothalamic and pituitary gland area that also led to endocrine/vegetative disorders.[58]

Figure 5. Raisa Golant[86]

She also presented neuropsychological studies on a rare case of visual and autotopic agnosia,[59] agnosic and apraxic disorders,[60] and digital agnosia and sensory alterations in patients with psychotic disorders.[61] Furthermore, Golant described a patient with a lesion to the corpus callosum, who, in addition to dyslexia and dysgraphia, presented alien hand syndrome.[51]

In 1927, she published a work on lead encephalopathy.[62]

In 1937, she attended the Second International Congress on Mental Hygiene, held in Paris, where she gave a lecture on the physical prevention of mental disorders.[8]

Three years later, a book published in Leningrad collected neuropsychiatric works from several authors to commemorate 30 years of Golant's scientific work.[63] She also edited a collection of scientific documents: *Experience on the treatment of nervous and mental disorders* (Figure 5).[34]

Golant syndromes

Several syndromes in the Russian medical literature are named for Golant, many of them reported in patients with epidemic encephalitis.

1. Golant weightlessness syndrome

Described in 1940, it consists of a sensation of weightlessness accompanied by olfactory and gustatory alterations, vital longing, and hypothalamic, optic, and vestibular symptoms, as well as somatognosic disorders. It was described in patients with brain lesions of infectious origin with possible localisation in the right temporal lobe due to involvement of the thalamic-temporal connections.[64]

2. Golant syndrome of violent thoughts and acts

Also known as the Gurevich-Golant-Ozeretskovsky syndrome of violence, it was first described by Raisa Golant in 1929. It was observed in patients with post-encephalitic parkinsonism, but also in those with brain tumours and traumatic brain injuries. Symptoms were eye spasms and violent impulses, including attempted assault, swearing, palilalia, paligraphy, echolalia, forced laughing and crying, violent movements and groaning, and akayria (obsessive desire to continuously repeat the same question). Manifestation of the syndrome was not influenced by the severity of parkinsonism but by psychogenic factors; patients were aware of their inappropriate behaviour.[42,43,64] It has been considered a variant of the psychic automatism syndrome described by Kandinsky and Clérambault.[50]

3. Golant-Shmaryan syndrome

Syndrome of alienation of speech perception. The syndrome is characterised by absent or altered speech perception, together with an unpleasant sensation with epigastric oppression ("precordial melancholia"). It may manifest with headache, facial paralysis, sucking reflex or Oppenheim feed reflex (sucking and swallowing movement when the lips are touched), absence of abdominal reflexes, and sensory disorders. It is associated with obesity and disorders of the menstrual cycle, eating, and sleep. The syndrome is associated with organic brain damage to the temporal lobe due to epidemic encephalitis

and tumours. It was described by Raisa Golant in 1939 and Aleksandr Shmaryan (1901-1961) in 1940.[44,45,65]

4. Syndrome of alternating awareness

Raisa Golant also described a syndrome of intermittent amnesia manifesting after recurrent episodes of prolonged sleep; upon awakening, patients could not recall what had happened before the sleep episode.[66]

5. Diencephalopathic psychosis of periodicity

This is a type of psychosis of diencephalic origin, according to Golant. It manifests in young people as episodes of affective and psychomotor disorders with altered levels of consciousness, combined with the autonomic symptoms characteristic of diencephalic disorder.[64,67,68]

Drugs and alcohol

In the 1920s, Raisa Golant led one of the most coherent and systematic efforts in the fight against alcohol and drug abuse. Her 1929 work on addiction to opiates has become a classic on the subject.[7,69,70]

Before the First World War, physicians treated minor pain with morphine and cocaine, which were readily available in pharmacies. After the war, the use of these substances became a social problem, as they began to be used to alleviate war-derived trauma and frustrations; this situation reached almost epidemic proportions.[18]

One of the achievements of the first Scientific Congress on Drug Addiction, held in Moscow in 1923 within the framework of the New Economic Policy, in which relations between physicians and the Soviet government were fairly flexible, was the implementation by public agencies of strict controls on the production, importation, and distribution of drugs, and the creation of specialised clinics (the first two were opened in Moscow and Leningrad).[18]

The Leningrad clinic was opened in September 1926 in the V.M. Bekhterev clinical hospital for patients with nervous and mental disorders, under the direction of Raisa Golant, who together with Vladimir Bekhterev also joined the board for the fight against alcohol and drug abuse, created in February 1927. The outcomes of the patients admitted were far from favourable, and only half of the male patients were cured. However, recovery rates were higher among women, who adhered better to the rules. This situation changed when the New Economic Policy was replaced in the late 1920s by the five-year plans for the development of the USSR's national economy: drug abuse became politicised, with addicts now considered to be enemies of the revolution. Clinics were replaced by medical-labour centres for occupational therapy, and soon after, in the early 1930s, by prison camps under the auspices of the NKVD (Narodny Komissariat Vnutrennikh Del [People's Commissariat for Internal Affairs]), the political police, who used these patients for cheap labour.[71]

Hunger can lead to madness

Leningrad was besieged by Nazi troops from September 1941 to January 1944, approximately 900 days. The hardest period was the winter of 1941-1942, during which food supplies ran out until the Road of Life was built across Lake Ladoga in April 1942, which alleviated the situation. During that period, there was a great famine, and mean daily rations were reduced to 250 grams of bread for workers and 125 for the rest of the population; this led to nutritional muscular dystrophy and vitamin deficiency that affected most of the population.[72-74]

Raisa Golant stayed in Leningrad for part of the siege, but was later evacuated to Kazan, where she took refuge together with other scientists from Leningrad and Moscow, and worked at the city's psychiatric hospital with such important figures as Grunya Sukhareva (1891-1981) and Aleksandr Luria (1902-1977). Her daughter Maria Ratner, who accompanied her, graduated from the Medical School of Kazan in 1942. Golant later conducted important studies on mental disorders associated with the dietary and vitamin deficiencies affecting the citizens of Leningrad.[16,75,76]

Dietary and pellagra-induced psychosis were characterised by slow, numb thinking and physical and psychic adynamia, with significant apathy and social indifference and depersonalisation-derealisation disorder. However, the most specific symptoms were a morbid concentration on the physical sensation of hunger, and associated hallucinations, i.e. obsession with food. Survivors' testimonies included such statements as "people went mad from hunger" or "hunger drove people mad." Raisa Golant reported examples of patients wandering around the city who experienced visual and auditory hallucinations related to food. This concentration on the feeling of hunger made them

ignore social standards: they did not discriminate in terms of the means of achieving their objectives, and performed antisocial and criminal acts. Treatment of these psychoses represented a significant challenge for clinicians, as while adequate nutrition was an essential prerequisite, it was very difficult to achieve in that situation.[72-75]

In fact, it is a myth that people went mad due to hunger. Psychiatrists at the Bekhterev Psychoneurological Research Institute underscored the lack of true cases of psychosis due to hunger. The cases observed were explained by pellagra or such other vitamin deficiencies as scurvy, which appeared in spring 1942, when the famine was ameliorating.[72,77] These psychoses continued during the post-war period due to the harsh living conditions. Other mental disorders were attributed to pre-existing conditions exacerbated by lack of food, the cold weather, the decline of healthcare provision, and the feeling of permanent terror due to the war and political repression, which lasted several years.[74]

The Second Medical Institute of Leningrad was the only centre in the city that did not suspend its teaching and research activity during the siege, in addition to becoming a field hospital. Located on the front line, its professionals and students experienced nutritional muscular dystrophy and vitamin deficiencies, but never stopped participating in the defence of the city, and organised lectures and working groups to research nutritional muscular dystrophy, vitamin deficiencies, and other war-associated diseases.[14,15,74,75]

The Institute dedicated little time to the study of war trauma after the end of the conflict. Traumatised military officers and civilians did not disappear, but their problems soon ceased to be a priority in the new setting of the Cold War.[73,78] Raisa Golant had previously studied mental sequelae in Russian soldiers who participated in the First World War.[79]

The debate on prefrontal leucotomy

During the second half of 1940s, Raisa Golant and the psychiatrists Mark Goldenberg (1897-1964), from Gorky, and Aleksandr Shmaryan, from Moscow, promoted the use of prefrontal leucotomy for the treatment of more severe cases of schizophrenia. Of the slightly more than 500 interventions performed in the country, 155 were performed at the Bekhterev Psychoneurological Research Institute under the direction of Raisa Golant and the neurosurgeon Isaak Babchin (1895-1989), who developed a less aggressive technique than the one traditionally used. The technique involved making a parasagittal burr hole that only involved the medial surface of the frontal lobes.[14,80,81]

In May 1948, during the Third All-Union Congress of Neurologists and Psychiatrists, they presented data from 120 patients who were followed up for up to two and half years. A variable improvement was observed in 61% of cases, with 21% of patients achieving complete resolution and returning to work.[14,80]

Prefrontal leucotomy became a political weapon in the anticosmopolitan campaign that tormented the country in the late 1940s, reclaiming the national values of Soviet science. Detractors postulated that the technique had been imported from the West and was "antiphysiological and antipavlovian." In a plenary meeting of Soviet psychiatrists held in Moscow in February 1949, Raisa Golant contested this charge, stating that the technique was a Russian invention, performed for the first time by Ludwig Puusepp in Saint Petersburg in 1908, on three patients who underwent sectioning of the association fibres of the frontal lobes to reduce psychomotor agitation. After successive meetings and some controversies, the procedure was banned in December 1950 as it was deemed to have no theoretical justification and to violate the fundamental principles of the physiological theory of Ivan Pavlov (1849-1936). From 1952, the appearance of chlorpromazine and other neuroleptics definitively closed the debate on this subject.[14,81,82]

The never-ending antisemitism: Pavlovskaya

The situation of Russian Jews improved after the 1917 Russian Revolution, but an antisemitic atmosphere persisted in the country, becoming more patent during the purges of the 1930s, which affected many acquaintances and colleagues of Raisa Golant. In 1938, she herself had to face a commission of inquiry due to the disenchantment of public authorities with the work at the Bekhterev Psychoneurological Research Institute. Golant answered bravely and kept her job, but her superior O.S. Fridman, also Jewish, was dismissed.[1,4] In any case, she worked with discipline within the Soviet system, and it was unsurprising that she was awarded the Stalin Prize[8] and the distinction of Honoured Scientist of the RSFSR (Russian Soviet Federative Socialist Republic).[2]

She was also a member of the Soviet of Leningrad between 1939 and 1948[78] and president of the Leningrad Society of Neurologists and Psychiatrists in 1949-1950.[1]

The beginning of the Cold War in the Soviet Union was characterised by nationalism and antisemitism, which was disguised with the euphemism "anticosmopolitanism" to avoid directly pointing the finger at Jews and being accused of racism. The term cosmopolitan referred to the reactionary bourgeoisie who rejected tradition and national sovereignty. In the field of science, Golant sheltered herself behind dialectical materialism and the teachings of Pavlov.[83]

In this environment of politicised science, several official meetings were held to check whether the work of researchers was compatible with the Pavlovian physiological doctrine, especially in the fields of genetics, physiology, psychology, and psychiatry. The main event of this campaign, which was named the Pavlovian Session or Pavlovskaya, was held in Moscow between late June and early July 1950; it consisted of a joint session of the Science and Medical Science Academies, with official transparency. In this session, some of the main physiologists and students of Pavlov, such as Leon Orbeli (1882-1958) and Pyotr Anokhin (1898-1974) were strongly criticised.[2,83]

From 1948, the Bekhterev Psychoneurological Research Institute underwent several inspections by commissions of inquiry that forced the Institute to reduce its staff. The main charge was a lack of research on the scientific heritage of the academician I.P. Pavlov. In December 1950, the Institute held a session to critically review its work in the light of Pavlov's teachings. The main reports presented were authored by Lev Pines (1895-1951), "Critical review of morphology in neuropathology [neurology]," and Raisa Golant, "Critical review of errors in psychiatry in the light of I.P. Palov's teachings," and were intended to adapt their work to the new dogma (Figure 6).[84]

The plenary meeting to analyse errors in psychiatry took place on 11 October 1951, and was jointly organised by the Academy of Medical Sciences and the All-Union Society of Neurologists and Psychiatrists. In this meeting, a new generation of psychiatrists trained after the Revolution, who had no contact with foreign science and were led by Andrei Snezhnevsky (1904-1987), criticised and supplanted those who led the specialty from a professional perspective, who were more in line with the European tradition. They particularly criticised Mikhail Gurevich (1878-1953), Raisa Golant, and Aleksandr Shmaryan; the latter two were both Jewish.[83] They were accused of holding old, antipavlovian ideas, causing severe damage to Soviet scientific psychiatry, and disseminating foreign pseudoscience.[8] Pavlov's teachings, together with those of Marx, were proclaimed to be "omnipotent because they were true." The dissemination of Bekhterev's works was forbidden, and Raisa Golant was dismissed from the Neuropsychiatric Research Institute under the pretext of staff reductions. In an act of generosity, she was permitted to work at the Leningrad Academy of Public Health and Epidemiological Medicine.[2]

Figure 6. Raisa Golant in her later years[86]

Raisa Golant died on 13 July 1953 after a severe disease, four months after the death of Stalin. Her ashes rest in a well-kept tomb at the Preobrazhenskoe (Transfiguration)

Jewish cemetery in Saint Petersburg, where her husband and daughter were also buried. For years, the cemetery has been subjected to acts of vandalism due to the antisemitism that still persists in parts of Russian society.[1,2,16]

Other members of the Psychoneurological Research Institute

In addition to Vladimir Bekhterev, Ludwig Puusepp, and Raisa Golant, other significant figures linked to the Institute were the psychiatrists Vladimir Myasishchev, who directed the Institute between 1939 and 1961, Pyotr Ostankov (1867-1949), Aleksandr Lazursky (1874-1917), Efim Averbukh (1900-1985), Aleksandr Rozenberg (1895-1957), Samuel Mnukhin (1902-1972), and Theodor Khvilivitsky (1908-1989); the latter three had close links with Raisa Golant. Among the neurologists at the Institute, we can mention Aleksandr Herver (1873-1939), who was its director between 1937 and 1939; Lev Pines, a neuropathology and cerebrovascular disease expert trained in Switzerland; the neuroendocrinologist Yakob Ratner, husband of Raisa Golant, who was also trained in Switzerland; and Sergei Davidenkov (1880-1961), who directed the Institute's epilepsy clinic in the 1940s. The next generation of workers at the Institute includes the psychiatrists Andrey Lichko (1926-1996), Ruslan Vovin (1926-2003), and Yuri Nuller (1929-2003), as well as the neuropsychologist Iosif Tonkonogy (1925-2017). Viktor Osipov (1871-1947), director of the Department of Psychiatry of the Military Medical Academy, while he never worked at the Institute, was closely linked to Bekhterev and was one of his first students.[2,4,10,13,75,78]

Discussion

A Jewish woman of humble origins, Raisa Golant had everything against her in the Russian society of her time, but thanks to her perseverance she graduated in medicine in Germany. After returning to her country, her medical training and foreign language skills helped her to begin her professional career, with horizons that further expanded after the 1917 Revolution.

In Saint Petersburg, with the guidance of Vladimir Bekhterev, Raisa Golant initially worked in neurology and physiology, and later focused on psychiatry, a specialty she directed at the Psychoneurological Research Institute for twenty years after her mentor's death. However, the antisemitic atmosphere of the Stalinist period defeated her. Raisa successfully weathered the first attack in 1938, but fell during the anticosmopolitan campaign of Stalin's final years, and died several months after the dictator.

She initially researched the physiology of the neuromuscular system and the autonomous nervous system, later showing interest in the organic origin of mental disorders, especially neurosyphillis, epidemic encephalitis, and diencephalic disease. Her treatise on dementias and memory disorders is still a reference in Russia. She was also interested in the organisation and social aspects of psychiatric healthcare, the diagnosis and treatment of schizophrenia (including the thorny question of prefrontal leucotomy), the study of mental disorders in times of war and famine, and the fight against alcohol and drug abuse.

This article aims to contribute to the knowledge of one of the main figures of the Saint Petersburg/Leningrad Neuropsychiatric School and to stimulate continued dissemination of the rich history of Russian and Soviet neuroscience.

Conflicts of interest

The author has no conflicts of interest to declare. This is an original article. This study has not been presented at the SEN's Annual Meeting or at any other meeting or congress, nor has it been submitted to other journals. The author has received no public or private funding for this study.

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