VILNIUS UNIVERSITY

Aistis Žalnora

DEVELOPMENT OF PUBLIC HEALTH SCIENCE AT THE STEPHEN BATHORY UNIVERSITY AND PUBLIC HEALTH CONDITIONS IN THE VILNIUS PROVINCE IN THE YEARS OF 1919–1939

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VILNIAUS UNIVERSITETAS

Aistis Žalnora

VISUOMENĖS SVEIKATOS MOKSLO RAIDA STEPONO BATORO UNIVERSITETO MEDICINOS FAKULTETE IR VISUOMENĖS SVEIKATOS BŪKLĖ VILNIAUS KRAŠTE 1919–1939 METAIS

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1. INTRODUCTION

1.1. The research question

The period of existence of the Stephen Bathory University is an important part of the history of higher education in our city. The whole generation of scientists matured in Interwar Vilnius. They tied up their identity with this city. The scientists either came from this region or fell in love with Vilnius and decided to stay here. Research on the multicultural history of the Old Vilnius University (16th – 19th) is quite well developed. While in contrast, history of the Stephen Bathory University (1919–1939) is being taken in quite carefully. There are some reasons for that. And yet, the achievements reached at that "neglected" time are worthy of our research in order to understand Lithuanian history of science as an integrated whole. Therefore, among the other clearly defined objectives in this paper we set ourselves a task to see development of public health science and medicine as a process, the continuing presence and becoming, as a paradigm.

A modern conception of Public Health in Europe started developing in the late 18th century. Professor Johan Peter Frank (1745–1821) played undoubtedly an important role in this process. He stated that the significant objectives of health problems in societies should be regarded as a consequence of poverty and neglect. Basing on the concept of Medical Police, he suggested state control over all the fields of the daily life even the most private ones in the name of public health improvement. The most important objectives for Public Health — health prevention and education– were stressed by Rudolf Virchow (1821–1902): „The democratic state [he declared] desires that all the citizens enjoy the state of well–being, for it recognizes that they all have equal rights. Since general equality of rights leads to self–government <…>The state also has the right to hope that everyone will know how through his own labour to achieve and maintain a state of well–being within the limits of the law set up by the people themselves. However, the conditions of well–being are health and education, so that it is the task of the state to provide <…> Thus is not enough for the state to guarantee every citizen

the basic necessities for existence <…> The state must do more, it must assist everyone so far that he would have the conditions necessary for healthy existence." Sadly, such democratic ideas were too innovative for those times.

The clearest conception of public health was created after World War I. In 1920, the Yale University's professor Charles Edward Amory Winslow (1877–1957) proposed the first universally known definition of Public Health. It states that: „Public health is science and art of disease prevention, prolonging life, and promoting health and well–being through organized community effort for the sanitation of the environment, the control of communicable infections, the organization of medical and nursing services for the early diagnosis and prevention of disease, the education of the individual in personal health and the development of the social machinery to assure everyone a standard of living adequate for the maintenance or improvement of health."

In our paper we will follow C. E. A. Winslow's definition that predestined the character of our research: the broad context related to the theoretical objectives for the public health mechanism, the central and municipal health security systems and their activities as well as the influence of the Stephen Bathory University of Vilnius within the mentioned context. In that way we set ourselves the objective to stress the organised community efforts in promoting health as well as an extremely important role of the professional scientist – the public health specialist dealing with public health issues. This definition covered all components important for our research: the community of medical doctors (hygienists), public health institutions and the society. However, in our paper we will also discuss the definition of public hygiene in Interwar Poland; we will compare it to C. E. A. Winslow's definition.

In contrast to our times, medical specialists were not classified into two separate groups: biomedical doctors and public health specialists (hygienists). Because of that, the strategies proposed to overcome public health issues were usually elaborated in theoretical departments as well as hospitals. At that time a lot of different departments solved the health issues that would be attributable as public health issues.

Reviewing the researches already done at the Stephen Bathory University, there is one important methodological problem. The former researches were

based on the models characteristic to development of Lithuanian scientific institutions or a 19th century model of sanitary. Still, considering the fact of the different political dependence of Vilnius in the Interwar period, we should look for a different model. We should base on the concept that was developed in Interwar Poland. We can find some important differences by comparing the conception of public health in Lithuania and other European countries. The urbanisation and other social as well as economic processes, that took place in interwar Europe, made European countries look for completely new preventative medicine strategies. New public health issues such as social prevention, labour hygiene, school hygiene, prevention of the child's and mother's health issues were stressed. In Western Europe, earlier than in Lithuania, the discipline of hygiene was considered as an independent discipline, a subject that helps to fight the epidemics of the contagious diseases as well as social and economic problems, that should be stressed as a primary reason for the biologically defined public health problems.

After the Soviet government took power in the former Vilnius Province the system, which had been working there before, was destroyed and lost its integrity. The heritage of the Stephen Bathory University of Vilnius was scattered. During World War II a lot of scientific papers of the former University were lost. Part of them had been taken away by the Polish scientists already before the war. Another part was stored in Vilnius libraries and was completely forgotten. Because of the changes in the Medical Faculty staff and infrastructure some branches of science that were developed in interwar Vilnius had to go over the same evolution. After World War II once again scientists were to recreate the scientific potential of the Faculty. Sadly, in some cases one department did not succeed, i.e., the department of pharmacology that had been closed before the War, lately totally degraded. Today we should claim the heritage of the Medical Faculty of the Stephen Bathory University to be valuable mostly as a historical monument. However, the development of public health had never been investigated and evaluated before.

1.2. Relevance of the study

The concept of Public health as a complex of social and medical measures in Lithuania is relatively new. Because of political reasons the Western models and social public health strategies were rejected in the Soviet period. The Public health science went over a period of stagnation. However, social strategies are still relevant while fighting current public health issues. A public health specialist has to assemble the society in the name of public health. He should be gifted with high erudition and a deep interdisciplinary view. He may construct new strategies by using the experience that has already been collected. Similarly to the interwar period, current public health issues in Lithuania could be termed 'social diseases'. According to the WHO (World Health Organization), "Alcohol is the third largest risk factor for death and disability in Europe and the leading risk factor among young people. The disease burden from alcohol in the European Region is also twice as high as the world average". According to the WHO, six million people die of cancer annually and 10 million new cases are found every year. The morbidity of cancer is growing in Lithuania, too. In 2012 tuberculosis (TB) was after HIV/AIDS the second greatest killer worldwide caused by a single infectious agent. Over 95% of TB deaths occur in low– and middle–income countries, and it is among the top three causes of death for women aged 15 years to 44 years. In 2007 the WHO assigned Lithuania to be one of Europe's countries most affected by TB.

1.3. The aim and objectives of the study

In our research we set our aim to explore and evaluate the development of public health science of the Medical Faculty of the Stephen Bathory University and public health conditions in the Vilnius Province in 1919–1939.

To achieve this goal we formulated four objectives:

1. To evaluate the development of the public health system in the Vilnius Province in the years of 1919–1939 by analysing its scientific concept and refinement principals compared to the European and Polish public health concepts.
2. To evaluate the institutional development of the Medical Faculty of the Stephen Bathory University in 1919–1939 by highlighting its

scientific importance for public health science and scientific activities of the Faculty in a field of public health;
3. To reveal the input of the Medical Faculty of the Stephen Bathory University input on a refinement of Vilnius' public health system.
4. To evaluate the achievements of the Medical Faculty of the Stephen Bathory University in the development of public health science.

1.4. Theses to be defended in the dissertation:

1. The public health science that had been developed by Medical Faculty of the Stephen Bathory University matched the National health management strategy and supplemented it.
2. Research done by Medical Faculty's scientists covered a complex of measures extremely stressing the importance of social hygiene.
3. The public health issues revealed by Medical Faculty scientists and the suggested strategies were important for the development of Polish public health science.

1.5. Novelty of the study

Former studies done on the scientific activities of the Vilnius University had highlighted certain achievements in the field of public health science (hygiene) of the Faculty of Medicine at the Stephen Bathory University. However, none of the studies had revealed either the evolution of the public health science in interwar Period or the conception of the health management and policy. The earliest analyses that dealt with this particular period of time were deformed due to the influence of political and ideological burdens. The hygienists investigated this period based on the wrong thesis that contagious diseases were called to be a major public health issue. In this research we reconstructed the theoretical model as a base for health management strategies developed in the discussed period. In that way we discovered the most relevant public health issues of that time as well as health policy priorities that had never been discovered before. A new conception of preventive medicine (public hygiene) in Vilnius was created by changing the Tsarist Russian sanitary strategies to Western public health strategies

that were close to the C. E. A. Winslow public health conception. The system of preventive medicine in Vilnius during the interwar period differed much from that of other regions of Lithuania. In our research we discovered the potency of the Medical Faculty and the cooperation between the scientific and practical institutions.

1.6. Practical significance of the study

The study is important form the didactic point of view. The results found will be used for teaching purposes with the aim to humanize the programs of public health and medical studies. Historical data published in this paper can foster the students' interdisciplinary and intersectoral view and later solve public health issues. Moreover, it can also bring young public health specialists closer to the society.

2. METHODS

Concerning the interdisciplinary character of this research we have chosen the method called documentary analysis as well as comparative and analogy methods. The missing statistical data were recovered in our research by using a linear regression model and other statistical methods.

Our research is based on the assumption of a systematic unity. That means we have presumed that all significant changes in the science during the investigated period could be followed by examining scientific and public release as well as laws published at that time. In a case the sources that were discovered in Vilnius were not enough informative for certain issues we were searching for analogical sources that were released in other parts of Poland.

We were also basing our research on the other assumptions, like the scientist may migrate. During Vilnius's interwar period scientific papers were being published in most of Polish Medical Journals. However, not all of the results were published in the scientific or public release. Part of the materials, especially primary data, as well as the copies of the papers, that were published abroad, were left in personal files of a certain scientist. Those files were usually taken by the scientist every time he travelled to another university. Lastly, those files were left in the last institution in which the scientist had been working. After the closure of Stephen Bathory University, in some cases even earlier, the scientists took their files to the other Polish cities where they continued their scientific carrier. In a case then a certain scientist dyed in Vilnius already, his papers were left in Vilnius. During the World War II most of the former Stephen Bathory University's property was claimed to be the property of Lithuanian State. Because of that a bigger part of the papers, which had been published by the Stephen Bathory University's scientists, were discovered by us in the Vilnius University's library and other public libraries. Another part of the papers, which we had used in our research, were found already in various libraries in Poland.

Chronological boundaries of our study cover the so–called interwar period, twenty years between two World Wars (1918–1939). However, in some cases while explaining the longitude processes we diverged from the

chronological boundaries that we had set. All the researches, which characterize this period and which were published after the year 1939, will be ascribed as literature. All the papers/archival data, related to our topic and which were published during the interwar period, will be assigned as primary sources. In this study we will use the historical terms and definitions.

Parts of our paper. Our research is divided into three parts. In the part one we will describe a development of the public health as a science in the interwar period of Europe and Poland. We have revealed the model (concept) of the preventive medicine in Poland. We have also revealed the impact of scientific ideas that were proclaimed in order to improve that model and the health management politics. It was also important to reconstruct the development of the health security mechanism as a practical expression of the public health concept.

In the part two we have overviewed the development of Medical Faculty of the Stephen Bathory University as well as its relations to the self–government institutions. We have revealed the importance and scientific potential of Vilnius scientists. We have revealed the society's and medical doctors' common interest area. In addition, we have drawn out the importance of organised, didactic measures that served for public health in Vilnius Province.

Part three is intended to analyse the health status of Vilnius city and Province inhabitants as well as different public health problems and their reasons. We have revealed the importance of the public health model that had been used in the interwar Vilnius Province: what kind of methods and strategies were being used, if they were adopted in practice, if the ideas of C. E. A. Winslow and other scientists were adopted in practice.

3. RESULTS

3.1. Health security system organization issues in interwar Poland in 1918–1939

3.1.1. The European conception and the theoretic Public Health model in Poland in Early 20th century

The World War I losses drew society's attention to the significance of preventive medicine. During the first years after the war, a lot of European countries set themselves a task to establish specific medical administrative institutions that would ensure the purposeful improvement of public health. The separate Health Ministries (Departments) were established in most of the Western European countries. In that way the two fields: hygiene and health policy, which had been separated before, were connected to each other.

The first independent Poland's challenge was creation of a solid and united health security system. The universities' scientists went ahead with this task. One of the two most influential scientists was Tomasz Janiszewski (1867–1939). Associated professor of the Crakow University T. Janiszewski stressed the importance of the unified state and health security system. He thought that the Public Health Ministry, which had been established in 1918, should have the financial and organizational autonomy in accomplishing the health policy. Mother and child, orphans, war victims and disabled individual's care as well as all the health security and social policy functions should be given to the Public Health Ministry. The Ministry should be given the right to control the quantitative and qualitative composition of a Polish population. All the administrative powers needed for health policy accomplishment should be given to the professional medical doctor.

The Warsaw University's scientist Józef Polak (1857–1928) suggested an alternative model. During the World War I years he published a project of Public Health that was designed for the re–established Poland. According to him, the health policy powers should be given to one department of Internal Affairs Ministry, and the other – to Ministries members. He stressed

the importance of the self–government's participation in the health policy. According to J. Polak, much more powers in health policy should be given to self–government institutions as they were thought to be closer to the certain citizen whom they served. J. Polak was critical judging T. Janiszewski's efforts to establish a totally independent Public Health Ministry. He thought that the continuous cooperation between state clerks, engineers and educators should be essential condition to make an effective health policy.

At that time the priority of health policy in Poland was social hygiene. In 1923 T. Janiszewski proclaimed his social hygiene definition: "Social hygiene investigates certain groups and society parts, their lifestyle and living conditions, diet, physical composition (growth), morbidity, fertility, mortality and others. Also it investigates whether there is any connection between health status and socio–economic conditions in which these groups live, work and rise families; economic and social factors and their impact on the health of these groups, if they acts: how and which factors affect individual›s health, how these factors affect human health and its offspring's health, depending on the individual›s age, sex, living place, specialty and belonging to a particular social group.<…> Hygiene is not only health maintenance, but also a gradual raising individual's resistance to disease<…> [Hygiene should be implemented] on the basis of scientific research. It must to comply with the requirements, which would provide the ideal living conditions, recognized to be a norm".

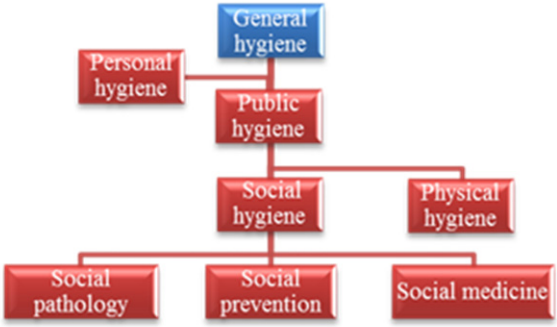


Figure 1. **Tomasz Janiszewski hygiene concept (1931)**

According to T. Janiszewski, the hygiene's scientific area should be divided (Fig 1.) into two main categories — personal hygiene and public hygiene. Personal hygiene is related with a person, while public hygiene is related with a society. Public hygiene should be divided into such sub–categories: social hygiene, physical hygiene. Physical hygiene analyses physical factors and their impact on health. Social hygiene analyses social factors that may have an impact on person's health. Social hygiene should be divided into three more sub–sub–categories: social pathology, social prophylaxis (prevention), and social medicine. The aim of social pathology was to discover the factors that have negative influence on the public health. Social prophylaxis meant the complex measures to defeat the impact of negative social factors and to encourage the positive social factors. Social medicine meant the organised efforts and cooperation between the social and health institutions. In contrast to what we think today, a physical hygiene was only a small part of this model.

Thus, the distinction of social or cultural factors and their role in health and health policy should be regarded as a fundamental shift in the development of the interwar Polish hygiene science compared to the nineteenth century sanitation theory. T. Janiszewski offered a new public hygiene concept that was comparable to the well–known C. E. A Winslow's public health concept. Janiszewski's concept differed much from the old sanitary strategies because it included both physical and social factors and their influence on the ethology of diseases. Janiszewski's concept provided most of the measures mentioned in C.E.A. Winslow's public health concept.

3.1.2. Polish health care system challenges in the years of 1918–1939

The health care system in Poland was developed taking into account the social and economic changes. In the first period (1918–1925), the most important task was to fight against the communicable diseases. During the war, there were councils created and specific health authorities were developed. The Extraordinary High Commissariat Fighting Against the Contagious Diseases prepared the first "Fight against contagious diseases law" and

anti–infectious diseases strategy. The strategy relied on the military measures such as patient's isolation and migration control. After the World War I a wave of contagious diseases flooded Poland, particularly the Eastern part. In these lands soldiers and war prisoners spread tick, (spotted) typhus, venereal diseases as well as tuberculosis.

In the later period, starting from the middle of the third decade, new social medical–care measures were stressed. Poland was still an agricultural land, but in some parts relatively strong industry had developed already. That led to the growing intensity of urbanisation. In Southern Poland, Silesia economically strong industrial districts developed. They had been inherited from the Prussian Empire. Prussian model became an example for public health legislation directed to fight the worker diseases and other cultural problems such as tuberculosis, alcoholism, venereal disease, high maternal and child mortality (because of the social factors), cancer, rheumatism, hypothyroidism, mental disability / illness and other workers' diseases.

In 1918 an autonomous Public Health Ministry and very centralised health care system was created by using T. Janiszewski's model. Subsequently, after the Ministry was divided, in addition to T. Janiszewski's model, the democratic J. Polak's ideas spread. Despite the collapse of the Ministry, T. Janiszewski's hygiene concept was partially implemented in laws and institutional level. A new health care legislation was created by replacing the out–dated tsarist Russian sanitary laws. New health care laws covered sanitation and social hygiene issues such as city's sanitary engineering, fight against contagious diseases as well as maternal and infant care, school hygiene problems, mentally ill and disable persons care, fight against alcoholism and prostitution. etc. However, this process took up to the end of the fourth decade.

Polish Universities had an advisory role in the health care system. In 1926, the Central Council for Health Care Affairs was founded. Council had to analyse and evaluate all Social Care Ministry proposals, projects and legislation. Universities also participated in the Council's activities. Universities had a right to appoint three representatives to the mentioned Council (Fig. 2).

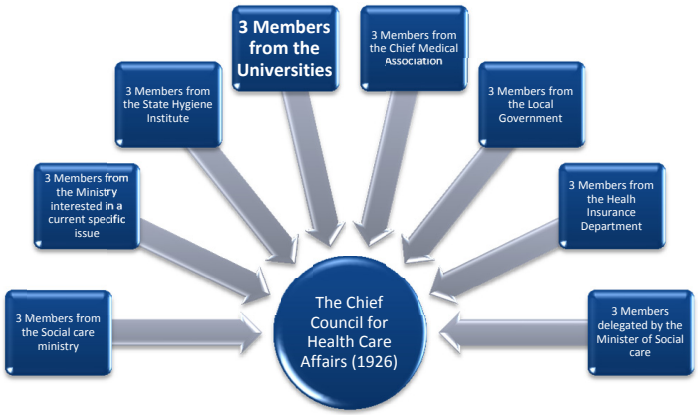


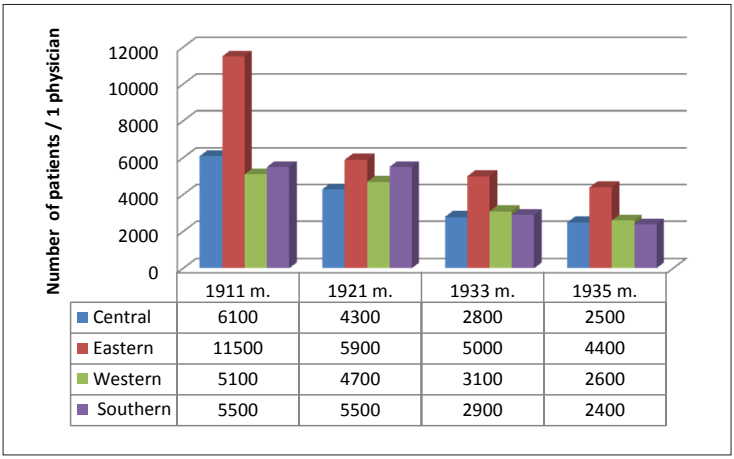
Figure 2. **Polish General Health Affairs Council (1926)**

Co–operation between Universities and government institutions also occurred in the medical doctors training issue. Johns Hopkins School of Public Health (Baltimore, USA) became an example to the National Institute of Hygiene. The Polish Chief School of Hygiene was established (1926). School's duty was to give post–diploma training for sanitary doctors, controllers and hygienists. Later, these and similar courses were held at the universities as well.

However, some of the SB University's scientists directly participated in creating health policy. During the years of 1922–1927 a paediatrician Zemach Shabad (1864–1935) took Polish Parliament senator's office. Vilnius schools chief physician Stefan Walenty Brokowski (1882–1944) was working in Polish Parliament from 1930 to 1935. In the years of 1935–1940 Victor Maleszewski (1883–1941), a Vilnius City's Mayor and Head of Health Section took service in Polish Parliament. Kornel Micheida (1887–1960) and Marian Mienicki (1890–1966) served as a deputy in Supreme Council of Health Affairs. Brunon Nowakowski (1890–1966) was working for Social Care Council in the Ministry of Social Care (1932).

3.1.3. Polish regional differences as public health problem assumptions in the years of 1918–1939

Polish health care system's effectiveness depended much on the economic factors and infrastructure. In this regard Polish Provinces differed much. According to the administrative division, the whole Poland was divided into four major parts: Northern, Southern, Western and Eastern Provinces (Voivodeships). A large part of the Northern and Western Provinces until then belonged to Prussia, and Southern to Austria (Austria–Hungary). Eastern (Vilnius and Naugardukas) Provinces until then belonged to tsarist Russia.



	1911 m.	1921 m.	1933 m.	1935 m.
Central	6100	4300	2800	2500
Eastern	11500	5900	5000	4400
Western	5100	4700	3100	2600
Southern	5500	5500	2900	2400

Figure 3. **Medical doctor per population in the Polish Voivodeships in the years of 1911–1935**

Vilnius and Naugardukas Voivodeships compared to the rest of Poland faced with the most significant handicap for health policy. They were: lack of effective sanitary laws, lack of medical doctors (Fig. 3) and weak backward rural economy. Moreover, there were obvious disparities in the Polish health policy. Urban settlements, which constituted about 1/3 of the total population, took almost 2/3 of all health care funds. Rural areas that inhabited about 2/3 of the population were given only 1/3 of funds. Thus, these discrepancies also affected backward Eastern Vilnius and Naugardukas Voivodeships.

3.1.4. Incorporation of Vilnius region and health care system development works in 1919–1939

During the fights between Lithuanian, Polish and Russian armies, Polish military authorities already began to incorporate the Eastern territory of Lithuania. The new Polish authorities and administration were organised in Vilnius. However, the transformation of the Vilnius region was very slow. Only in the year of 1925 Vilnius Voivodeship, equivalent to other Polish Voivodeships, was created.

The Public Health Department was a major executive in Vilnius Province. It controlled all sanitary supervision in Vilnius Voivodeship. Department controlled local medical institutions, pharmacies, sanitary and moral Police Office as well as Public Obstetrics–Gynaecology School. The county doctor was the chief executive in Counties. He was responsible for the state of public health in the county.

One of the most important elements in J. Polak's health policy vision was the municipal level health prevention. At this level, the most important role was given to Vilnius city magistrate health authorities. During the tsarist Russia period these duties were given to Sanitation Commission. This commission collected information about the health status of the city's population. The Commission also organised fight against diseases, administrated local medical institutions and otherwise improved the public health condition in Vilnius. In 1921, by using basis of the former commission, a Vilnius Magistrate Health Section was created. Compared with the former Sanitation Commission, Health Section competences were significantly expanded. It took control of almost all institutions related with a health and social care in the city. In contrast to the former unit, it was administrated by professional medical doctors.

The so–called Health centres were extremely important health care bodies in the Polish cities. The Health centre concept was relatively new. The first centres of that type were established in the USA at the beginning of twentieth century. Health centres served as public institutions that cared after immigrants. Due to a language barrier immigrants faced many social

and medical problems. Special centres helped in determining a character of the help needed. Then they gave immigrants orientation to the other institutions in accordance with the specifics of the problem. Eventually, health centres spread widely in the USA and around the world. Such centres became a significantly effective tool that helped implementing Western ideas of public health. In a year of 1919 C. E. A. Winslow identified health centres as one of the most prominent indicators of public health progress.

In a year of 1925, such centres began to run in Poland. In a year of 1929, the first Vilnius Health Centre was established in Vilnius County. The activities of Vilnius Health Centre covered two basic fields (Fig. 4). First, its task was the city's sanitation state improvement by giving sanitary instructions. However, its additional tasks were related to the social hygiene goals. Health Centre organised various social actions that served in fighting with social diseases such as tuberculosis, trachoma, alcoholism, high maternal and infant mortality, etc.

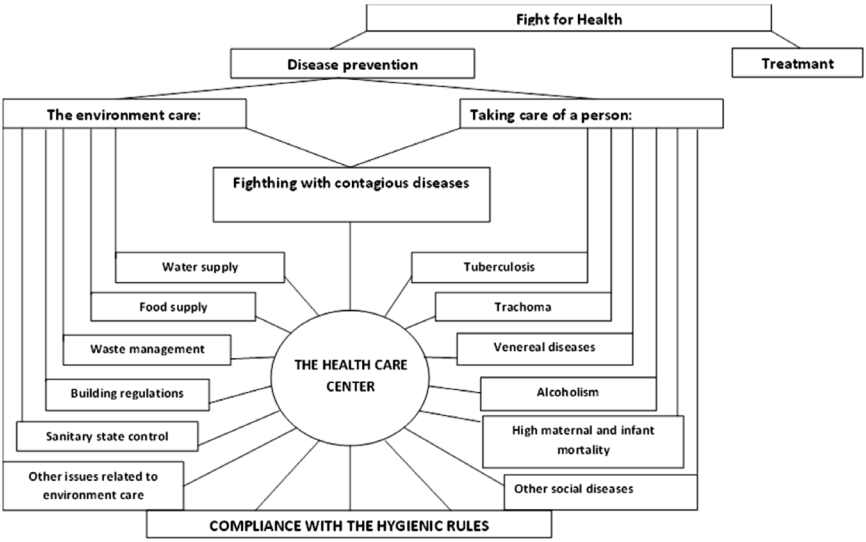


Figure 4. **Vilnius Health Centre functions**

Summing facts up, local health bodies in Vilnius gained significantly more powers then they had under the tsarist rule. Public health office of the city was already headed by professional doctors. An intersectoral cooperation was developed. Unfortunately, due to lack of funds, the efficiency of health security system in Vilnius Voivodeship was limited. The number of sanitary doctors was reduced. Compared by the number of beds per population Vilnius Voivodeship was below the overall Poland's average, yet still it was significantly above other Eastern Voivodeships. Counting bed per population in 1934, Vilnius city (1/141) was ahead of Warsaw (1/162). Unfortunately, the number of beds per person in Vilnius Voivodeship was significantly lower (1/2990). During the period the number of beds in private clinics increased significantly, but the number of beds in the main municipal hospitals decreased. Practically the service that once had been granted by the municipal hospitals was retaken by the private hospitals. Still, private hospital rates were too high for ordinary residents of Vilnius. That means that the poor Vilnius citizens were left without a chance to get free or at least cheap medical services.

3.2. Public health science in Medical Faculty of the Stephen Bathory University in 1919–1939

3.2.1. Stephen Bathory University Medical Faculty: structure, scientific and educational activities

Stephen Bathory University (SBU) was the smallest among the interwar Polish Universities. In 1937/1938 it had 3110 students, while Poznań Univerity had 4749 students, in Lviv University – 5064, in Crakow – 5480, Warsaw – 8388. In a year of 1939, Stephen Bathory University employed 84 professors, 39 associate professors and 245 support staff employees. Medical Faculty in Vilnius was the smallest among the Polish Medical Faculties. However, it employed a considerable part of all University's scientists. In a year of 1937/1938, the Faculty employed 21 professors and 10 associate professors. For comparison, the Medical Faculty of the Vytautas Magnus University (1932–1939) employed 13 (12) professors and 3 private professors, 14 senior assistants, 23 junior assistants.

In 1919–1924, a primary structure of the SBU Medical Faculty (MF) developed. In 1930, the Faculty included 27 units: 13 theoretical departments, 12 clinics and other units. Later, in 4th decade part of clinics and departments were restructured: either closed or merged, or transferred to other faculties. There were some new units opened, too.

One of the most important SBU MF features was scientific innovativeness. We believe that this feature was influenced by scientists' qualification. Innovativeness was also highly influenced by researcher mobility as well as the ability to apply scientific innovations. A large part of the SBU MF scientists were trained in foreign, usually Western universities before coming to Vilnius. SBU MF scientists were also taking part in the Rokefeller's Foundation programs. During the most productive years, Faculty's (1924–1938) departments and clinics released 1577 scientific publications. About 218 (13.26%) of them were the publications of international significance, published abroad, 332 (21.1%) publications were published in Vilnius and 1036 (65.7%) publications published in various Polish cities. According to the number of international publications, Histology and Embryology, General Pathology, Physiology were the leading departments (Fig. 5). Among the clinical departments, the most of international significance publications were published in Otolaryngology, Neurology and Psychiatry clinics.

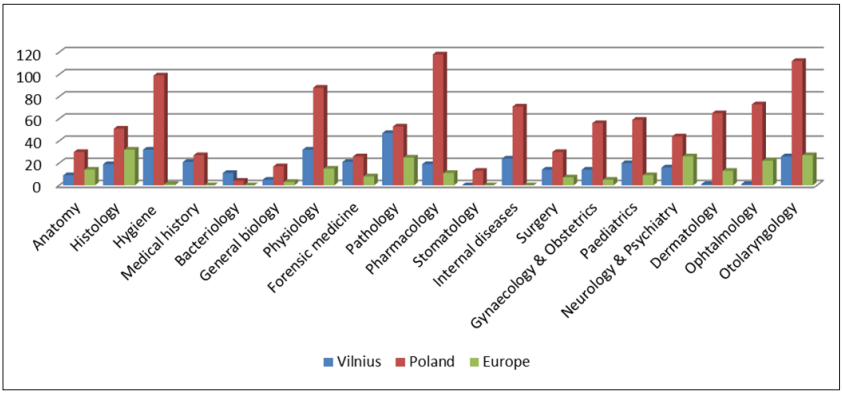


Figure 5. **SBU MF publications according to international significance (1924–1938)**

From the year 1924 to the year 1939, the Faculty had produced 13 original textbooks, 10 of them in different areas: Jerzy Alexandrowicz (1886–1970) — histology; Władysław Marian Jakowicki (1885–1940/42) — obstetrics; Wacław Jasiński (1899–1936) — paediatrics; Theophilus Gryglewicz (1873–1936) — bacteriology and serology; Kazimierz Opoczyński (1877–1963) – histological diagnostics of pathology; Zenon Orłowski (1871–1948) — diagnosis of internal diseases; Kazimierz Karaffa–Korbutt (1878–1935)– hygiene and occupational medicine (3 books); Sergiusz Schilling–Siengalewicz (1886–1951) — toxicology; Jan Szmurło (1867–1952) — ear diseases; Julian Szymański and H. Melanowski — eye pathological anatomy atlas; Tadeusz Wąsowski 1892–1937) — ear diseases and the upper respiratory tract disease diagnosis.

The Faculty's researchers published important papers in both medical and public health fields. Michał Reicher (1888–1973) for merit in anthropology field; Stanislaw Hiller (1891–1965) and Stefan Bagiński (1892–1969) field of histology; Maximilian Rose (1883–1937) field cytoarchitectonics; Janine Hurynowiczówna — neurological electrophysiology; Kazimierz Pelczar (1894–1943), Edward Czarnecki (1892–1970), Marijan Eiger (1873–1939), Kazimierz Opocziński, Jan Szmurło – field oncology; Władisław Jakovicki obstetrics–gynaecology; Julian Szymański – glaucoma research; Alexander Januszkiewicz (1885–1940) – hypertension research; Kazimierz Karaffa–Korbutt and Alexander Safarewicz — field of hygiene and occupational medicine, were considered to be among the pioneers in Poland, and in some cases, in Europe, too.

3.2.2. SBU MF scientific research fields

The Faculty's material basis and staff developed in early 4th decade. The Faculty's scientists were working on various scientific researches. The Faculty's theoretical departments and clinics created social strategies of a preventive nature. In the Polish universities hygiene departments played an important role in contributing to the public health strategy. Changes in the social–economic situation made government to make lookups in the public health protection mechanisms as well as the hygiene science, hygiene departments, their structure and function.

Already in the end of the nineteenth century the doctor's and patient's relationship changed. The old approach "physician–patient" was replaced with a new one — "doctor–society." In the early twentieth century hygiene was seen as an auxiliary discipline of bacteriology. However, such model was criticized in Germany, France and other European countries including Poland. According to the famous Polish microbiologist Ludwick Fleck (1896–1961), it is impossible to understand the social factors that affect human health without analysing them as a separate study object. In 1919, hygiene and bacteriology department circuit was also criticized by the famous Polish physician and medical historian A. Adam Wrzosek (1888–1968). "A hygiene and bacteriology sciences have different tasks, because of that these departments should not be connected. In a case professor of such department is trying to cover both fields the later field of hygiene [due to lack of time] remains unexplored."

Meanwhile, there were some opposition voices, too. An influential Polish hygiene theorist Marcin Kacparzak (1860–1905) was critical on the Polish public health politics. He claimed that hygiene without specific medical knowledge can't be considered as a science. According to Kacparzak, each doctor by his education should be regarded as a hygienist. He also criticized state officers–hygienists for their narrow understanding of hygiene, calling them simply administrators: "These administrators who mistakenly become doctors believe that engage hygiene is easier task than cure. "

Hygiene Department of the Stephen Bathory University was tightly bound with the most advanced Polish Hygiene Department of the Jagiellonian University of Krakow. In 1894, the first Polish Hygiene and Bacteriology department was held in Jagiellonian University by famous bacteriologist, Polish microbiology pioneer and L. Pasteur's pupil Professor Odo Feliks Kazimierz Bujwid (1857–1942). T. Janiszewski was one of the O. Bujvid's students. In 1921, for the first time in Poland, two separate Department of Bacteriology and Hygiene were formed in Cracow. Hygiene Department was taken under professor's K. Karaffa–Korbutt lead. Still, quickly he was given a new proposal. In a year of 1922 he went to Vilnius. Since the year of 1939, the Hygiene Department of Jagiellonian University was led by B. Nowakowski, who had taken the same duties in Vilnius before.

3.2.3. Medical education and hygiene course

Medicine was considered as a prestigious specialty in Stephen Bathory University. Most students applying to Medical Faculty usually failed competitive examinations. The Medical Faculty was small. Moreover, the Faculty was often confronted with financial difficulties. Still, it should be noted that the Faculty had qualified lecturers and the study quality was high. Because of that the Medical Faculty became one of the strongest in Poland. The studies were complex, multidimensional; highly qualified medical doctors were prepared. Professors, who were to lead a department or a clinic, had been selected basing on the recommendation and abstracts, as well as dissertation summaries. In addition to subject–specific requirements, a person who wished to lead the department had to declare his nationality and confession. The Medical Faculty professors were invited from Krakow, Warsaw, Lviv and Vilnius provinces.

During the first academic year, there were 115 students in medical specialty. Subsequently the number of medical students gradually grew. In academic year 1938/1939 there was 756 students studying in the Faculty. From a year 1919 to 1939, the annual average was 579 medical students studying at the same time. The Faculty was accepting approximately 120 new medical students annually. Most students (191) were accepted in the academic year 1927/1928. From the year 1924/1925 the Medical Faculty began to recertify (accept) foreign diplomas. The foreign medical doctors gained possibility to take practice in Vilnius Voivodeship. The majority of Medical Faculty's students were youth from North–Eastern Poland and Eastern Lithuania.

From 1924 to 1938, 1048 (1300) graduates received a medical degree. Until 1939, in 100 doctoral dissertations were defended in the Faculty, 20 of them were habilitation, two habilitation and five doctoral dissertations were defended at the Department of Hygiene. The separation of Hygiene and Bacteriology departments that had been implemented in the Stephen Bathory University was the most important practical condition that encouraged the development of hygiene science in Vilnius.

In 1922, there was no hygiene textbook for universities' students ever published in Poland. It was a difficult task to teach students in such conditions. Therefore, K. Karaffa–Korbutt took a tough task. He decided to create

the first hygiene textbook in Polish. In the spring of 1924, on the basis of data collected in England, Germany and in other Western countries, professor Karaffa–Korbutt wrote the first volume of the "Hygienic notes". In 1925, both volumes were being released. Until the year of 1934, it was the first and the only hygiene textbook for higher education institutions in Poland. By the year of 1934, the professor published a second edition of hygiene textbook for the universities course and some other hygiene textbooks.

The University's hygiene program covered various hygiene problems such as fundamentals of statistics; nutrition; body's heat regulation; housing and environment; sanitary legislation; occupational hygiene; social hygiene; eugenics, etc. One of the most important disadvantages related with a Polish hygiene education was the ignorance of bacteriology perspective in hygiene. Medical students' knowledge in bacteriology field was insufficient. They were introduced with communicable diseases during the internal medical course. For this reason graduates gained real knowledge about the infectious diseases prevention during the practice time, while working in hospitals.

During the interwar period, the Medical Faculty of the Stephen Batory University prepared a significant part of Vilnius Province doctors. Unfortunately, due to financial reasons, it was more convenient for the Faculty's graduates to choose working in the city, private dispensaries, but not in the countryside. Strict requirements for a student practice created preconditions for the Faculty of Medicine graduates migration to the richer Polish Voivodships. Because of that, rural population had fewer opportunities to access professional medical aid.

3.2.4. SBU MF financial situation and reorganization

Since its inception, the common Stephen Bathory University's feature was a lack of financial resources. The first University creator's ambitions were significantly reduced due to financial difficulties. Instead of the planned ten faculties only six were created. In 1929–1933 in Europe and the world, the great economic crisis took place. The year of 1933 was difficult for Polish Universities, too. The economic crisis implemented the long arranged education reform. All Polish universities were forced to close down or merge part of their departments. Stephen Bathory University reorganised

General Biology Department as well as Neurology and Psychiatry Clinical Departments.

Due to lack of funds, conditions in municipal and University hospitals were poor, in some cases even unsanitary. The Faculty's financial situation was severe. Many of the Faculty's clinics were forced to move to old premises. In most cases it was old manors or palaces that weren't suitable for organising studies or patient treatment. Surgery clinics from its foundation until the end suffered a shortage of funds for medical training inventory, medical devices and premises maintenance jobs. Gynaecology and Obstetrics Clinics premises eventually became just too cramped to accommodate all patients. For a long time there was no disinfection room. Because of that the risk of maternal fever increased.

In 1939, Vilnius was retaken by Lithuania. The University was reorganised and the Polish public health system that was in act until the World War II was destroyed by the Soviet authorities. The Faculty's scientists' fate was dramatic. Some of them were killed during the World War II, while others reached their career heights in Polish and European universities. In 1939–1941 a massive crackdown on the Polish intelligentsia was hosted. In a year of 1939, gynaecologist Władisław Jakowicki (1885–1940) as well as Vilnius Supreme doctor Wiktor Maleszewski (1883–1941) were arrested. Later on they were killed by the Soviets. In 1943 in Paneriai a pathologist Kazimierz Pelczar was shot by the Nazi. A hygienist Kasper Rymaszewski (1892–1940) was killed in Katyn. Histologist Jerzy Alexandrowicz (1886–1970) was taken to the Soviet camps, but was released later.

Most of the rest of the Faculty's scientists moved to Poland or other countries. They had significantly influenced Polish and European higher medical education institutions. In Scotland, Edinburgh, a Medical Faculty of a Polish University was created. Among of its creators was histologist Jan Krusziński (1903–1967) and hygienist B. Novakowski. After returning from Edinburgh, B. Nowakowski became the first rector of the University of Silesia. Jerzy Alexandrowicz worked in Marine biology laboratory in Plymouth, England. Jan Krusziński moved to the University of Liverpool.

A lot of the Faculty's researchers moved to the Medical Univerity of Gdańsk. New departments were created and led by anatomist Michał Reicher, histologist Stanislaw Hiller, dermatologist Tadeusz Pawlas (1891–1953),

biochemist Wlodimierż Mozolowski (1895–1975) and surgeon Kornel Micheida. However, some of the Stephen Bathory University's doctors, like hygienist Felix Kasperowicz, were still working in Vilnius during World War II. Kasperowicz was heading the Sanitary–Epidemiological Station until the end of the Word War II.

3.2.3. SBU MF cooperation with medical and social care organisations and the dissemination of hygiene education in Vilnius in 1922–1939

Polish universities were responsible for education duties only. Universities were accountable to the Ministry of Religion and Education. Neither the Interim Stephen Bathory University statute, nor the subsequent projects, nor other analogical Polish universities' statutes provided any assumption for the universities' and the local government's cooperation in the public health field. Nevertheless, the Stephen Bathory University's researchers contributed to the Vilnius Province health state improvement due to theoretical research and practical activities.

The Medical Faculty cooperated with Vilnius Magistrate Health Section as well as Vilnius Voiovodeships Health Department. The Faculty's doctors were working in a half of the Vilnius health–related institutions. SBU MF staff additionally trained medical doctors and health care officials as well as general practitioners and schools doctors in Vilnius region. Courses organised in the Medical Faculty provided opportunities for general practice doctors and Aid Station's staff to upgrade their qualifications in the preventive medicine field. They gained knowledge to combat the major Eastern Polish Voivodship's health tasks: tuberculosis, trachoma, high child mortality rate. Mass media and popular press were used with a purpose of hygiene knowledge dissemination.

One of the most important SBU MF Hygiene Department merits was directing of the Food Research station. Until the year of 1925, the Food Research Station (laboratory) was not carrying out systematic studies. In a year of 1925, Stephen Bathory University's hygienists took control over the station. The number of products under investigation grew constantly and the spectrum of products under investigation considerably extended. Moreover,

every new Vilnius sanitary doctor had to take practice in the Hygiene Department before taking up his duties.

Another important SBU MF hygienists' merit was practical cooperation with local authorities while forming Magistrates Health Section politics. Most of the Hygiene Department's researches were initiated by practical institutions. This indicates that the Department of Hygiene was considered to be an authoritative guide in the local government and society.

3.2.4. Public health issues in the Medical Faculty's scientific research in 1924–1938

Most of the SBU Medical Faculty's researches 81% (1274) done in the years of 1924–1938 should be called to be experimental, but nearly one–fifth 19% (303) of the publications were directly targeting the public health issues. About one–third of all public health publications (113) were published in the Hygiene Department. The largest remaining public health dedicated publications were published in Paediatrics, Otolaryngology, General Pathology, Physiology, and Pathological Anatomy Departments.

Classified by the nature of public health problems (Fig. 6) the largest part of the Faculty's scientific publications (13%) were dedicated to environmental health problems (water supply, sanitation, buildings hygiene), 12% publications were devoted to oncological diseases issues and their prevention, about 11% of the publications were dedicated to tuberculosis and communicable diseases problems, 10% of publications were dedicated to schools and children's health care problems, the rheumatism research, nutrition and the occupational health problems were discussed in 6% of the publications and 5% of the publications were designed for hygienic propaganda and fight against venereal diseases issues.

The Faculty's scientists examined a wide range of public health problems (Fig. 5), the Hygiene Department's authors were working on the widest range of different public health research. They examined environmental health, health policy, industrial hygiene, school hygiene, nutrition hygiene and other problems. Other SBU MF departments and clinics in their studies typically focused on one particular problem that was usually associated with the department's or clinic's activities.

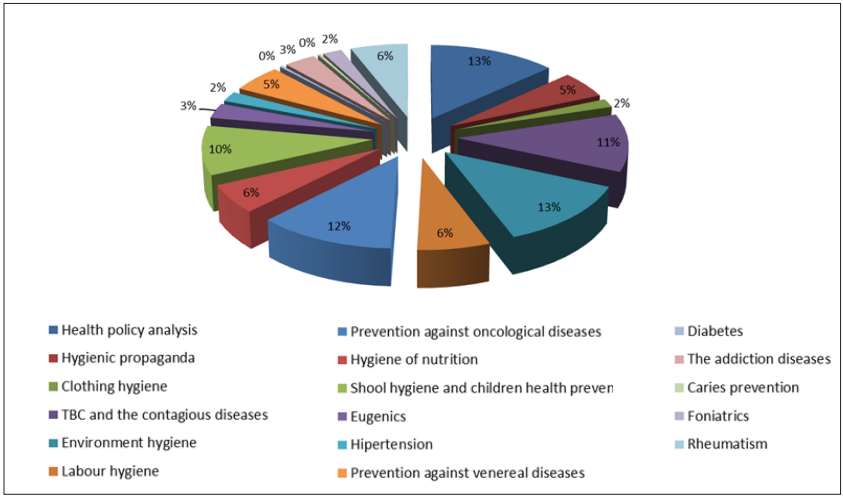


Figure 6. **Public health problems according to its nature in SBU MF papers in 1924–1938**

We observed a direct correlation with the priorities of State health politics. The public health problems that were under SBU MF investigation were relevant on the national scale. A new theoretical model allowed interpreting the etiology of contagious diseases out of the traditional bacteriological theory framework, in a broad social context. Vilnius scientists developed research in occupational, child hygiene, school hygiene, nutrition hygiene, chronic non–infectious diseases issues as well as cancer, alcoholism and other socio–medical problems.

3.2.5. SBU MF Hygiene Department's research directions

The best way to reveal the Hygiene Department's research direction is to follow research priorities by distribution of publications. Undoubtedly one of the most prominent features of Vilnius school was occupational hygiene. Kazimierz Karaffa–Korbutt is considered to be a pioneer of industrial hygiene research in Poland. However, the labour hygiene was not the only one direction that was being carried out in the Department. One of the tendencies perceived in our study was the social Hygiene Department's direction. We have revealed that bacteriology and communicable (infectious) diseases was never

a separate object of SBU MF Department of Hygiene research. Contrary to the Kaunas Vytautas Didysis University Hygiene department, social perspective was dominant in all the researches in Vilnius Hygiene Department.

The allocation of 113 of the most important SBU Hygiene Department's scientific publications according to a certain hygiene field (T. Janiszewski classification, Fig.1) could be divided into four main branches:

1. Physical hygiene (55 studies — 48.7%)
2. Social prophylaxis (30 studies — 26.5%)
3. Social care (7 studies — 6.2%)
4. Social pathology (21 study — 18.6%)

Physical hygiene issues accounted for almost half of the total number. There were 16 studies published that were related to plumber and sewerage problems, as well as nearly 17 articles devoted to the problems of food hygiene. One research was directly dedicated to typhoid problem and 16 studies to other environmental health problems. A dominant feature in almost every Hygiene Department's staff publication was social guidance notes for the local central government. Therefore, we can state that the Department scientists used to think in social categories. However, physical and hygiene issues were not neglected, they were analysed in a broad social context.

Social strategies that were developed by Vilnius hygienists are comparable with the J. Polak's ideas. In his works Alexander Safarewicz emphasized the importance of organised efforts and cooperation between doctors and the society as well as the importance of municipal health commission actions. He believed that municipal health institutions knew health issues of the local people the best, because they were the closest institutions with a local community. Felix Kasperowicz also drew attention to the organised doctors' and local government's efforts. According to Kasperowicz, the most important role as an initiator and coordinator should be taken by a medical doctor (hygienist) himself. Therefore, municipalities must be given more rights to organise health care at the local level.

Though, there were also some original ideas mentioned. Alexander Safarewicz believed that advance in public health should be linked with morality as well. He claimed that the public health promotion must be a deeply understood society's duty, a moral obligation to take care of one's own and his relative's health.

3.3. Public health coping strategies in Stephen Bathory University Medical Faculty's reaserch work in 1922–1939

3.3.1. Vilnius region environment and the physical hygiene issues

Physical hygiene issues are tightly linked with sanitary engineering. In Tomasz Janiszewski's papers, urban planning was perceived as a very important task. In 1916, he formulated the main sanitary engineering, urban planning hygienic requirements for restored Poland. He suggested separating city into residential areas, recreational areas, industrial parts and a service sphere. In each of these spheres different requirements of buildings and overall infrastructure development had to be applied. Thus, an appropriate air mass circulation and the amount of sunlight in a certain territory had to be guaranteed. Not less important tasks were the development of plumber and sewerage systems and a rational exploitation of the living premises in housing. Tomasz Janiszewski declared that every resident must have at least one room with bath and toilet.

Unfortunately, the reality, especially in the extremely neglected Vilnius Province, was far away from the declared ambitions. Plumber and sewerage systems were developed slowly and unevenly in Vilnius (Fig. 7). Even if a person had the possibility to access plumber water, there was another additional hindrance. The tap water price for most of the city's poor residents was simply too high. Because of that in the year of 1934, only 15% of the city dwellers were using tap water. Because of the similar reasons, the sewerage system was also undeveloped.

City residents drew drinking water from unhygienic equipped, shallow wells. A ¾ of the Vilnius city's wells were called to be too shallow. They reached 5 to 10 meters, and about 1/3 of the Vilnius city's wells were extremely shallow, they reached only 5 meters. The garbage and rubbish were not being carried away from the city regularly. Sewage from the local houses flowed directly into Neris (Wilia) river. And the soil, especially in the city's squares and marketplaces, was highly polluted with sewage and horse dung. The urban poor lived in large groups in cramped dwellings, in some cases, even in sticky basements without ventilation nor sunlight.

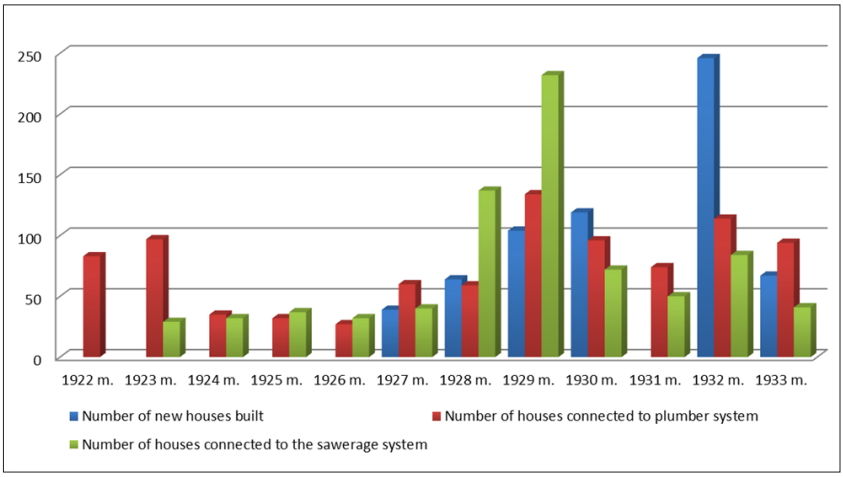


Figure 7. **Proportion between new–built houses and houses connected to plumber and canalization systems in Vilnius (1925–1933)**

Some of the villagers still lived in specific, very archaic chimneyless houses together with their domestic animals. Vilnius doctor Danielius Alseika claimed that the poverty in Vilnius Province was predestined by the local economy's backwardness. The industry in Vilnius Province was weak. The land reform was never done in in this part of Lithuania. Therefore, degenerated landlords still had most of the land under their control. Moreover, the soil in Vilnius Province was never fertile enough for rational agricultural activities. Because of that peasants were pushed to work hard and live in poverty.

The basic aim of Hygiene Department studies was guidelines for the changing sanitary situation in Vilnius city and Vilnius Province. Their propositions covered various sanitary engineering issues. New plumber and sewer system construction plans were one of the first. From a modern perspective the most controversial ideas on the central water supply system (plumber) improvement was proposed by SBU MF hygienist Alexander Safarewicz. Because of the lower price argument and the example of such countries as Germany, the US, and India he proposed to filter Neris river waters and pump it for the needs of the city. This project was never implemented.

However, the modern sewage system techniques, like the activated sludge method, suggested by Alexander Safarewicz, was one of the most advanced ideas at that time. Sadly, this technique was applied in Vilnius fifty years later. Because of his merits hygienist A. Safarewicz is considered to be one of the Polish sanitary engineering pioneers.

Probably the most professional plumbing system reform recommendation is attributable to another SBU MF hygienist Kasper Rymaszewski. He believed that the artesian water pumps should be the best solution. Unfortunately, current technology and the Vilnius region economy weakness made one's efforts to implement this recommendation impossible.

K. Rymaszewski also recommended solutions for the garbage disposal problems. That was garbage sorting and burning techniques. He believed that Vilnius city's layout should be essentially changed, so that it could comply with minimal sanitation requirement. Though, there were quite radical solutions, too. Rymaszewski proposed demolishing unhygienic city's districts, such as Šnipiskės. He also suggested building a hygienic multi–housing buildings instead.

Unfortunately, despite of Vilnius Hygienists alerts, until the end of the discussed period no considerable sanitary engineering reforms were done and the sanitary situation changed little. Sczepan Kozlowski's research done in 1938 revealed extremely insanitary conditions in Šnipiškės' district.

3.3.2. Social and communicable diseases issue

After World War I the Polish state, especially in its Eastern fringes, was flooded with a wave of contagious diseases. During the war many doctors were killed, unsanitary conditions in the cities were created. In the years 1920–1923 a fight against spotted fever, typhoid fever, dysentery, diphtheria, scarlet fever, and smallpox was set as a priority. After overcoming the typhus epidemic, a new combat against typhoid, salmonella, dysentery and diphtheria began. In 1923–1925, a wave of communicable diseases subsided. Rather militaristic sanitary police measures were replaced with regular preventive health actions.

In Vilnius, as well as in Poland, a significantly higher number of deaths were attributable to the social (chronic non–infectious) diseases then to communicable diseases (Fig. 8). In the years of 1923–1937, the problem of

communicable diseases in Vilnius was overshadowed by a high incidence of the social diseases like tuberculosis, trachoma, and others. Data on citizen mortality in Vilnius population (n=180.000–200.000) is fragmented though a clear trend can be seen. In 1923–1938 in Vilnius an average of 21.8 inhabitants died with typhoid and 15 with diphtheria, about 8 — with dysentery. Meanwhile, tuberculosis alone in 3rd decade (1923–1933) took an average of 303 citizens annually.

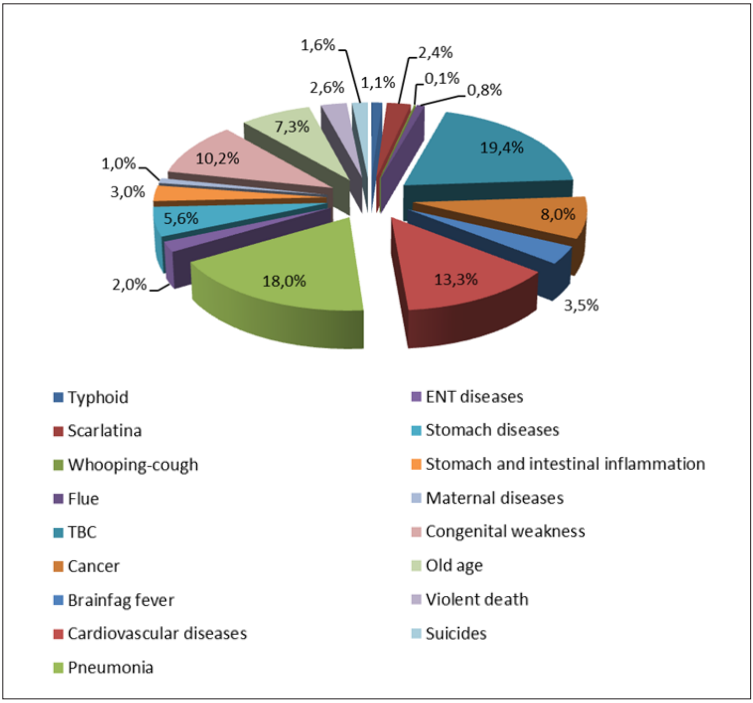


Figure 8. **Vilnius residents' death causes (1926)**

There is very little data on the morbidity of the Vilnius region. Very different statistical collection methods were used at that time. This could be explained with the absence of a unified system. It shows a deeper problem that was related with the whole country's health status monitoring. Urban population's health status was being monitored more regularly than the rural population's. Nevertheless, in Vilnius Province (n=1275.000) a clear trend

of social origin epidemics can be claimed. Communicable diseases couldn't match the social diseases — tuberculosis and trachoma. In 1928–1931, in Vilnius Province the number of typhoid cases ranged at about 462 annually. While at the same period a number of new trachoma cases grew from 1500 to 14,000. And the number of recorded tuberculosis cases in Vilnius Province was an average of 3118 cases per year (1930–1937).

High morbidity in Vilnius city and Province was predestined by various factors. The first group was economic and natural agents. A large part of the whole population lived in poverty, unsanitary conditions, usually in overcrowded buildings. Epidemics spread immediately. Again, the situation was worsened by the overall economic instability, especially in the early 4th decade. 1929–1933 were the years of the Great Economic Crisis. Moreover, in 1930 a poor harvest caused famine in the Vilnius Province.

A significant problem was a lack of hospitalization premises. There were no isolation premises for people sick with communicable diseases in Vilnius until the year of 1929. Despite the sanitary doctors' efforts, any sanitary campaign efficiency was very limited.

However, some of the campaigns organised by SBU MF doctors were effective. Already in 1926, Vilnius' new–borns were vaccinated against tuberculosis. Such measures gave excellent results. Until the year 1934, neonatal mortality from tuberculosis decreased five times, and mortality because of the tuberculosis in all the citizens — more than four times.

3.3.3. Vilnius residents' dietary hygiene issue

World War I and the advance in medicine influenced many spheres, nutrition science as well. Before the war, dietary problems were usually understood relatively simply. Medical challenges were mainly concerned with the sufficient food supply. Dietetics was usually limited with simple schemes. A need to feed masses during the war encouraged a number of experiments. Nutrition science reached a qualitative higher level. There were vitamins and proteins discovered. Nutrition science was based on human physiology science achievements.

From year 1926 to the year of 1936, in the Hygiene Department of Medical Faculty there were 17 studies published on nutrition topics. Majority of

the food hygiene research were carried out by the hygienist Felix Kasperowicz. His doctoral thesis "On Vilnius residents' dietary issue" revealed Vilnius residents' dietary habits and various socio–medical hindrances related to them. Similarly to the already mentioned problems of urban sanitation, the problem of poor food quality was related with the Vilnius economy's backwardness. Because of the poverty, both urban and rural populations lacked animal protein and fat. Compared with the times before the World War I, the consumption of meat and butter in Vilnius decreased by more than 50 %. The daily ration was usually monotonous and unbalanced. Nutritious foods were replaced with low value substitutes.

The decisive local authority's inactivity, poor sanitary organisation and helplessness were the main reasons that worsened the situation. The self–will of small–scale farmers, industrialists and traders was practically unlimited because of lawlessness. Sanitary officers were lacking resources to control the situation. Food wasn't produced nor supplied centrally in Vilnius. During the interwar period there was rather little laws on the food monitoring issues published in Poland. The old tsarist Russian sanitary regulations were not regulating some of the food manufacturing technique issues, e.g., hygienic requirements for squashes (soft drinks) production. Because of that, soft drinks were being produced in small manufactories using the cheapest, sometimes even harmful components. Similarly to this, bread was usually baked in a small–hovel like bakeries. It was practically impossible to put such "factories" under the sanitary control. Because of low mandatory fat rate, milk was adulterated with water, which was usually of poor quality. The food sanitary control actions in the local marketplaces revealed the fact that some of the meat samples were being taken from illegal slaughterhouses.

Most of the Hygiene Department's recommendations were of the social–organisational nature. Hygienists recommended creating an effective food monitoring mechanism. They also stated that the food prices should be regulated by the government. The poor people should be given possibility to buy the most important daily food articles. According to Vilnius hygienists, the bread quality could rise considerably by producing it in the factory. The milk contamination problems could be solved by using pasteurization method as well as raising compulsory fat rate for milk. We assume that such measures

would be sufficient to solve the problems mentioned before. Still, sadly, most of the recommendations were used in practice only after the World War II.

Some important articles were published in other Medical Faculty's Departments. Eugenijusz Iszora (1889 – 1955) published a study on the preschool child nutrition. It was one of the first articles in Poland on a topic of child nutrition. Doctor Iszora stated that a diet for a preschool child should be balanced by applying norms. He suggested setting daily norms of proteins, fat and carbohydrates taking into account the physiological needs of a certain child.

Table 1. **Proportion of low quality food articles (1926–1937)**

	Year											
	1926	**1927**	**1928**	**1929**	**1930**	**1931**	**1932**	**1933**	**1934**	**1935**	**1936**	**1937**
Number of food articles under supervision	249	152	1179	3194	1704	3045	8026	9023	9178	8096	7452	6888
Number of low quality food articles found %	38,5	46	24,4	21	12,3	16,6	10,8	11,7	11,2	11,2	14,4	12,9

The organisational Hygiene Department merits were significant. Department's staff began the systematic food control in Vilnius. From the year 1925 to 1938, a number of poor food samples gradually decreased three times (Table 1).

3.3.4. Occupational hygiene issue

Labourers' health care was one of the most important tasks in Polish social hygiene policy. Interwar Poland workers' rights protection was declared to be a political priority line. Polish Socialist Party included in its program workers' health protection. Unfortunately, workers' living and working conditions during this period were very difficult and labour legislation was still relatively underdeveloped. Until the year of 1924, the important labour laws were published. Child's and woman's labour was partly prohibited; workers had a right for minimal holydays and social guarantees in a case of maternity, trauma, disease, etc. However, a worker, comparing with a civil servant, had significantly fewer rights. Moreover, in the years of Great Economic Crisis most of the labourers' rights were restricted. Due to such social and economic background the industrial hygiene education and law–making had significant impact on the workers' health.

The occupational hygiene issues in SBU MF Hygiene Department were being analysed from the Department's inception. Most of the professor's K. Karaffa–Korbut's researches were dedicated to occupational hygiene issues. Professor suggested defining the working hours in different industry branches taking into account the level of health risk. He believed that female and child labour as well as toxic materials usage in the industry should be totally prohibited. One of the key ideas in his papers was rational work organisation. He believed that labourer's overwork should be considered as harmful for a worker itself, as well as the employer. Professor claimed that rational organisation of certain job would save both — employee's health and employer's money, as well as the whole state's wealth.

Professor K. Karaffa–Korbutt can be considered to be one of the pioneers of the industrial hygiene throughout Poland. K. Karaffa–Korbutt was among the scientists which generated the original idea of Occupational Hygiene Institute. The institute had to be devoted to carrying scientific research in the occupational hygiene scientific field. Professor developed different occupational hygiene methods. He also defined the most important scientific research institutions and their functions for occupational hygiene. The main K. Karafa–Korbutt's merit, without a doubt, was the isolation occupational hygiene as a separate field of general hygiene. Professor was developing industrial hygiene theory. He was one of the first in Poland who investigated the problems of ergonomics.

To sum up, Professor K. Karaffa–Korbutt's researches covered a broad scale of occupational hygiene problems. Some of the issues assigned to the occupational hygiene issues, were partly related to this field. He was investigating the workers' leisure time issues, daily routine (Table 2.) or even career guidance as well as the mental hygiene problems. That shows a really deep professor's interest in the labourers' health and social problems. Professor's recommendations for a teaching organisation, rational physical and mental labour organisation can be perfectly adapted, even in our times.

Table 2. **Daily works and time spent: a statistical labourer in Poland, 3th decade**

	Men	Women
Labour in a factory	8 h. 30 min. (36 %)	8 h. 9 min. (34 %)
Routine works at home	4 h. 30 min. (17 %)	6 h. 46 min. (28 %)
Sleeping time	7 h. 59 min. (33 %)	6 h. 44 min. (28 %)
Laisure time	3 h. 27 min. (14 %)	2 h. 21 min. (10 %)

3.3.5. Children's health problems prevention

Pronatalism was a characteristic feature of Interwar Poland's health system. Children's and youth health was considered to be a guarantee of a healthy society and nation. Vilnius paediatricians' activities could be regarded as a nice example of Józef's Polak's health care model. According to J. Polak, a medical doctor had to base his strategies on the needs of the local population. The strategies should be applied cooperating with local authorities. Vilnius paediatricians organised themselves into a society and began creating large–scale strategies dedicated to children's health improvement. Their recommendations and suggestions were sent to the Central Board of Health Care Affairs and also applied in Vilnius Voivodeship. We could state that it was one of the best developed spheres of health care system in Interwar Vilnius.

The foundations for the organised medical activities in Vilnius Province were laid because of the SBU MF Paediatric clinic activities. Organised medical efforts produced significant results. Using statistical data, the most significant trends in children morbidity were identified. More urban children were able to get medical help free of charge. During the years of 1923–1927, thanks to clinics' initiative, a lot of open child (infant) service stations were opened. It helped reducing infant mortality rate four times. Yet still high infant mortality was one of the most complicated health issues at that time (Fig. 9).

Some of the Medical Faculty's scientists, like paediatrician W. Jasiński, were critical about solely medical measures in the child's health care issues. He reminded that child's health prevention is very tightly related with parents' own efforts, a strong family institution. He believed that any state institution or hospital could ever replace strong family as a primary society's cell. Children born out of the wedlock were seen to be at risk of higher children (infant) mortality. Referring to Jerzy Śniadecki (1768–1838), W. Jasiński claimed that one of the most important criteria for a man or a woman, while choosing the bride or a groom, should be his/her health state, but not a social position or wealth. In case of serious genetic diseases the family wouldn't be happy.

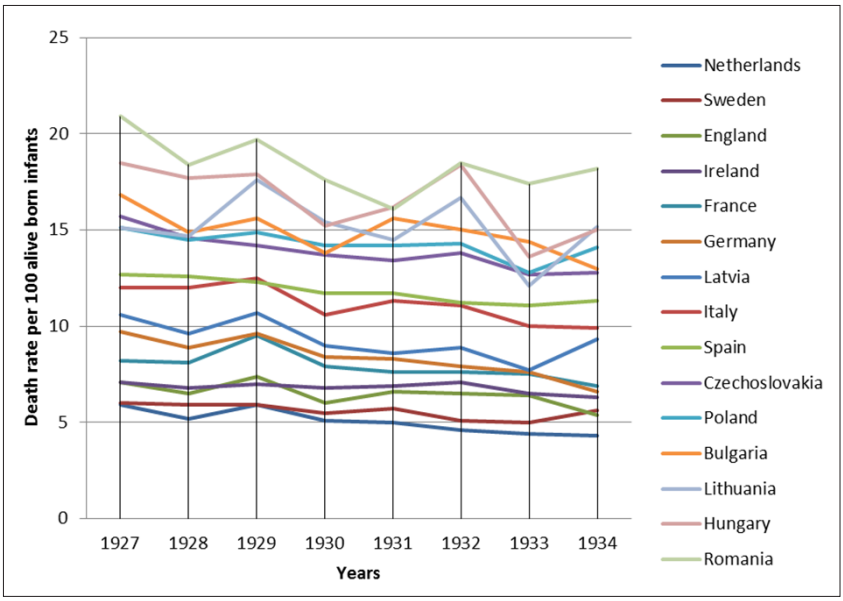


Figure 9. **Infant death rate per 100 alive–born infant in European Countries (1927–1934)**

One of the possible means of solving children's health issues in Vilnius Voivodeship were sanitary campaigns. The so–called "flying squads" were visiting villagers. The local population was being vaccinated and also received hygienic education. However, the effectiveness of such actions was quite limited in rural areas. According to SBU MF clinic's medical doctor Henryk Rudziński (1887–1966), the main factors that predestined the low efficiency of such campaigns were the differences in a doctor's and patient's mentality. Because of the formal hygiene propaganda character, the declared ideas rarely reached a desired goal. Uneducated, quite often even illiterate villagers couldn't understand professional medical doctor, until he went to the same understanding level with a villager. Local residents rarely turned to professional doctors, or did that already too late. And that highly increased infant mortality rate. Because of shame, they were hiding their children's illnesses (syphilis, trachoma).

According to H. Rudziński, such specific socio–medical problems needed social measures. Rudziński encouraged using creative strategies that would raise villager's motivation in taking care after his own and his relatives' health. There was also a need for a closer monitoring of the rural residents. Thus, Vilnius paediatricians proposed some additional measures for social strategies. One of them was the idea of the so–called social nurse. Similar practice was already adopted in the USA and France before.

Social nurses helped in reducing distance between the doctor and the patient. Nurses attended the local villagers, monitored their health condition and their living environment. They were also checking if people complied with the prescribed treatment; if the person was visiting medical doctor. Social nurses had some epidemiologist duties. They were observing the first outbreaks of epidemics in rural districts.

To sum up, organised local paediatrician society's measures greatly helped with the child's health care issues. Unfortunately, it must be noted, that at a practical level the social initiative in the Vilnius region was an insufficient measure due to lack of planning and coordination in their activities.

3.3.6. School hygiene issues

Naturally, school hygiene issues are inseparable from child health issues. In Polish lands school hygiene took shape in the early twentieth century. Stanislaw Kopczyński (1873–1933) is considered to be a founder of Polish school hygiene science. He formulated the first guidelines. The primary goal, raised by him, was a pupil's health care prevention. He suggested improving school buildings, teaching conditions, regulating the number of pupils in schools, revising training plans, also taking care of the moral well–being of pupils. Vilnius Stephen Bathory University's medical doctors were following these guidelines.

In 1924, the SBU MF Hygiene Department proposed organising a special commission in the Vilnius city's magistrate. Commission was being headed by Vilnius Supreme School doctor Stefan Brokowski. SBU MF doctors Jan Szmurło, Kasper Rymaszewski also took part in the commission activities. Commission's purpose was Vilnius school hygiene investigations. There were priority areas set. That was pupils' physical development, tuberculosis, lung diseases, contagious diseases, alcoholism problem as well as other socio–medical and morality issues.

Other important institutions cooperating in the school hygiene issues were school ambulatories. In these ambulatories children were getting necessary medical care free of charge, even without their parents' assistance. Vilnius hygienist identified the most significant pupil's health problems. Usually most of them were related to the social factors: poverty, poor parent's education and lack of cultural cleansing. Analysis of a school ambulatory's statistical data shows that school children morbidity in Vilnius city gradually decreased (Fig. 10).

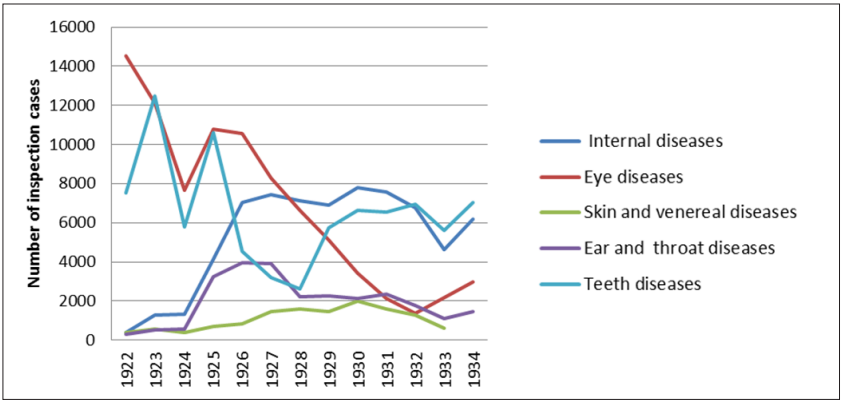


Figure 10. **Vilnius city schools students' visits to school ambulatories by reason (1921–1934)**

One of the most shocking health issues at that time was pupils' alcoholism. Stefan Brokowski revealed alcoholism problem in Vilnius primary schools. Because of the parents' alcoholism and various other factors, a considerable part of Vilnius primary school children were consuming alcohol. About 63% of primary school children (n=10000) tried alcohol at least once, and 2,3% (about 230) were considered to be alcoholics. In some cases school children's alcoholism led to small scale criminal activities. In order to get money for alcohol they were stealing or selling stolen items. In 1925, Stefan Brokowski suggested a fight against alcoholism strategy. It included strict measures: alcohol price regulations as well as punishing salesmen who sold alcohol for children. At the same time, he claimed that raising the general public awareness level and solving pupils' leisure time employment problems could greatly help in alcoholism prevention.

Pupils' health problems also received attention in the Hygiene Department's research papers. A. Safarewicz, J. Botkiewicz Rodzewiczowa, J. Kozlowska published few papers on the school hygiene issues. Their findings revealed that Vilnius schools' environment was very poor. In most cases children were being taught in old, neglected buildings, unsuited for education purposes. Moreover, a bigger part of the so–called schools were being ruled by private owners. A. Safarewicz and J. Kozlowska's research on school textbooks revealed a lot of drawbacks in textbooks hygienic regulation law basis and textbook hygienic quality.

The SBU MF scientists developed various other researches related to the pupils' health issues. Otolaryngologist Benedykt Dylewski (1894–1965) was one of the first in Interwar Poland who published research in a field of phoniatrics. His studies identified the most significant voice and speech hygiene problems in Vilnius Province. He isolated different social, cultural and biological factors that predestined children's speech defects. In the year of 1935, B. Dylewski went to Lublin where he contributed to a separate unit of Otolaryngology in local Paediatric clinics. At that time it was the only unit of such type in Lublin and the whole country.

Organized efforts of Vilnius medical doctors and hygienists were fruitful. Since 1928, the pupils' incidence of respiratory tract infections, ear disease, dental disease and trachoma in Vilnius city declined significantly. Vilnius pupils' visits due to trachoma declined more than five times and approximately twice due to dental diseases. These results can be linked to the organized efforts of doctors. School textbooks, children's speech and voice hygiene researches, developed in Vilnius, were new to the context of the whole Poland.

3.3.7. Social hygiene and eugenics

Because of the changing socio–economic conditions in the twentieth century, a concern of mental illness as a new public health issue rose in Poland. Unemployed people from poor provinces poured into the biggest cities to find job in factories. Living conditions of new–born citizens were very difficult and a burden of labourers' health problems fell on the cities. Therefore, mental hygiene problem in urban areas was selected to be one of main priorities of public health policy. Those and other reasons influenced science and medical practice as well. During the interwar period in Europe

and almost everywhere around the world, new mental hygiene and eugenics sciences flourished.

In this paper we will use two definitions for eugenics: negative and positive eugenics. Such terms are rather conditional, depending on the particular context of the proposed eugenic measures on the individual and public health. We took into account ethical considerations. Unethical actions that were harmful to the individual's interest as well as public will be considered as negative eugenics or anti–eugenics. Pronatalistic actions, promotion of public health, addiction coping, family institution strengthening and other positive actions will be recognised to be positive eugenics.

The most important mental hygiene issue at that time was children's and youth's protection from the biological and social factors that could lead to mental illness/disease. After Poland regained its independence, the Polish Eugenic Society began to play an important role in the Polish public health policies. In 1918, the Public Health Ministry was created. Its architects were Polish eugenic pioneers Witold Chodźko, Tomasz Janiszewski, Leon Wernik. One of the Ministry priorities was public expenditure allocated to the individual medical treatment optimization. Priority was given to the healthy and economically productive individuals' health protection. While the so–called "lower value" or "less productive" individuals were distinguished to be a burden for the society and state. Similarly to other European countries, eugenics suggested getting rid of that "burden" by sterilising or isolating mentally ill people in order to prevent them to have families.

The problem of hospitalizing mentally ill in Vilnius Province was extremely acute. Comparing with the tsarist times, the number of beds for mentally ill (1260) in Vilnius decreased four times (280) and the population was still growing. We could presume that such a situation could be very characteristic of the eugenic ideas to spread among Vilnius scientists and society. Nevertheless, Stephen Bathory University's scientists should be distinguished as an exception to the rule. Negative eugenics ideas had little sympathies in the Vilnius medical doctors' scientific beliefs. One of the most influential Vilnius psychologists Adolf Falkowski (1886–1965) was critical about the eugenic propaganda. In his article on the mentally ill treatment principles he condemned any violence against mentally ill people. He stated that eugenics is nothing but a new fashion that Europe was obsessed with.

Vilnius hygienist Alexander Safarewicz assessed negative eugenics as cynical and narrow–minded. According to him, conscious neglect of rural settlements in order to prevent villagers' migration into the big cities can't be supported as wise politics. Vilnius hygienists and medical doctors supported positive measures for public health improvement such as pronatalism, promotion of public health, addiction coping, family institution strengthening, etc.

Vilnius district in the Interwar European context was also original because of the so– called "Family care" practice. During the Interwar period in Europe such practice was successfully implemented in Belgium, and later on in Vilnius Province. Specific colonies were established in Degsnė and other Vilnius Province villages. In these colonies mentally ill persons were being cared after. They were working in local farms. Usually such persons were of the Jewish origin. Mentally ill were being taken to the colonies from various parts of Poland. In the early period there was practically no medical treatment in such colonies. Still the in 4th decade, the SBU MF psychiatrist Abraham Wirszubski (1871–1943) looked after such colonies. Complying with Vilnius Provincial Health Department orders and A. Wirszubski's recommendations, mandatory regulations for each colony were published. In the regulations hygienic measures and conditions of professional medical care maintenance were defined.

It would be difficult to assess activities in such colonies unambiguously. On the one hand, the conditions in colonies in the early period were unsuitable for the psychiatric patient treatment. On the other hand, after the conditions in colonies changed, such practice played an important role in unloading a part of the financial burden that was arising from the mentally ill treatment. Because of that such practice partly reduced the tensions that could lead to the spread of eugenic ideas in the Vilnius region.

Negative eugenics practice in Nazi Germany and other countries during World War II discredited the idea of social hygiene. In the early post–war years, the social hygiene scientific development in Vilnius was partly suspended. For ideological reasons in the Soviet bloc the disease aetiology could not be associated with social factors. Because of that it was almost exclusively related to biological factors, bacteriology. Comparing with Western public health theories such perspective should be considered to be a "step back". We believe that these and other factors had played an important role, which slowed the modern Western public health scientific developments in Lithuania.

CONCLUSIONS

1. During the interwar period of the Vilnius region, compared with Polish territories, was extremely backward, abandoned and devastated. The main reasons for this were: previous political affiliation to the Tsarist Russia, economic stagnation, weak economy, World War I, differences in urban and rural health policy. In Poland, as in almost all Western European countries, the most important health issues were the so–called social diseases: tuberculosis, high infant mortality (because of the social reasons), pneumonia, heart diseases, cancer, alcoholism, mental illness and communicable diseases.
2. The vision of the Polish health care system was based on C. E. A. Winslow's concept of public health (1920 m.). Basing on C. E. A. Winslow's ideas, T. Janiszewski's and J. Polak's models were created. In the Vilnius region health care system acted as a symbiosis of both mentioned models. However, C. E. A. Winslow's public health ideas were only partly implemented.
3. The influence of the Medical Faculty at the Stephen Bathory University in the Vilnius Province increased in the fourth decade. At the end of the third decade, departments and clinics' structure was finally established and the research work began. The researches were focused on the state public health policy priorities. The Faculty educated more medical and pharmacy students, which were also introduced with the grounds of hygiene science.
4. The Medicine Faculty's researchers' scientific potential was significant. Over 1500 scientific publications were published. About 13.26% of which were published in international scientific journals. There were 100 doctoral theses defended, 20 of which were habilitation. About 20% of the Faculty's research publications were directly attributable to public health problems. In the Hygiene Department 8 doctoral dissertations were defended, 2 of which were habilitation. The Faculty's scientists actively participated in the Polish and European universities scientific research. After Stephen Bathory University's closure, they set up a separate research centres in Poland. The Hygiene Department of the Stephen Bathory was one of the three independent hygiene departments throughout Poland. Vilnius hygienists created one of the most influential social and occupational hygiene schools in Poland.

5. The Medical Faculty's significance in public health was high. Medical doctors, nurses and health care officials were additionally trained in Medical Faculty. About half of the health–related institutions in Vilnius city were employed with the Faculty's researchers. The Medical Faculty's researchers were suggesting strategies directed at improving urban sanitary engineering, food production and sales control, hygienic conditions in schools and private dwellings. The Faculty's scientists were also writing in the public press.
6. Because of the Medical Faculty's efforts, an inter–institutional cooperation in Vilnius Province was developed. Preconditions for the C. E. A. Winslow's and J. Polak's public health ideas' practical implementation were created. In this area there were health centres held and the social nurses were taking care of the province residents. Activities of the education institutions, public enthusiasts and local authorities partly compensated the health care organisation difficulties in the neglect Vilnius Province.
7. The Medical Faculty's scientists addressed the wide–ranging social strategies of local authorities, such as: inter–institutional cooperation in public education, healthy lifestyle promotion, youth employment care, improvement of sanitary conditions in private dwellings, expanding social security benefits, fighting with poverty and neglect, public hygienic and cultural awareness promotion. They also suggested local economy reforms, such as regulation of food article prices, medical and social institutions improvement. The Faculty's scientists were suggesting key means that would help overcoming the primary reasons that cause social and communicable diseases.
8. The Medical Faculty's research model was based on Hygiene and Bacteriology department and research separation. An autonomous Hygiene Department was created in Vilnius. The Hygiene Department researchers' scientific works were dominated with local and state–wide social hygiene strategies. Studies on occupational hygiene, school hygiene, clothing, language, and voice hygiene that were published in Vilnius were some of the first studies in Poland. Kazimierz Karaffa–Korbutt's hygiene textbook "Hygiene essay" was the first and the only one in interwar Poland. "Hygiene archive" was the first periodical magazine dedicated to hygiene science problems in Poland.

5. RECOMMENDATIONS

Scientific activities of the Medical Faculty of Stephen Bathory University is important as a historical monument, however, the collected material is valuable from the comparative perspective and it is worth further studies. We believe that the long–term public health education development processes are a relevant object of interdisciplinary studies. The structures created in previous periods, tangible as well as intangible, may be universal and adaptable in subsequent periods. Due to this, we recommend:

1. To develop the Medical Faculty's research in the Department of Medical History and Ethics of Medical Faculty of Vilnius publishing results in academic journals.
2. To integrate Stephen Bathory University research materials into the Vilnius University public health and medical history courses. Extend current course materials with the facts and interpretations that are reflecting to the newest Western European and world science achievements.
3. We believe that public health, medical history courses should cover a chronologically wider period, including a very of important Interwar periods. New facts on public health in Lithuania should be included, evenly stating them from the ancient times and ending with the Second World War. Therefore, in addition to the Medical Faculty of Vilnius research, it is necessary to develop Kaunas Vytautas University (1922–1939) research. The new materials found should be integrated into the current public health, medical history courses.
4. Basing on previous studies, this doctoral thesis and future research materials, we recommend preparing a solid Lithuanian medical history textbook. The books should cover Lithuanian medical and public health history issues, starting with the ancient times and ending with the World War II.

LIST OF PUBLICATIONS

Publications related to the doctoral thesis

1. Žalnora A., Miežutavičiūtė V. Michalas Reicheris ir anatomija Vilniuje 1919–1939. Medicinos teorija ir praktika. (Vilnius) 2011; 17(1):132–138.
2. Žalnora A., Miežutavičiūtė V. Vilniaus Stepono Batoro universiteto Medicinos fakulteto Medicinos istorijos ir filosofijos skyriaus veikla 1922–1939 metais. Sveikatos mokslai. (Vilnius) 2013; 23(2):151–154.
3. Žalnora A., Miežutavičiūtė V. The Development of Public Health in early 20th Century in Vilnius. Acta Medica Lituanica (Vilnius) 2014; 21(3): 124–128.

Publications in scientific conferences abstracts

1. Žalnora A., Miežutavičiūtė V The development of public health: how the war against bacteria became the war against the weak// The International Conference „Evolutionary medicine: perspectives in understanding health and disease". 2014, May 27 – 30, Vilnius.
2. Žalnora A., Miežutavičiūtė. Occupational Medicine in Vilnius Stephen Bathory Univerity's Medical Faculty in 1922–1939. – XXVI International Baltic Conference of the History of Science: Historiae Scientiarum Baltica. 2014, August 21–22, Helsinki.
3. Žalnora A., Miežutavičiūtė V. The eugenics – the evolution of race, social hygiene from ancient times to the XX century // konferencija: Czystość i brud. Hygiena w starożytności. 2013, rugsėjo 12–13 d. Bydgoszcz, Lenkija.
4. Žalnora A., Miežutavičiūtė. The activities of the Departmant of Hygiene at the Stephen Bathory University in Vilnius, 1919–1939. Historiae Scientiarum Baltica, 2012, October 4–6, Vilnius
5. Žalnora A., Miežutavičiūtė. The activities of the Department of Histology and Ebriology in Medical Faculty Stephen Bathory University// International Conference: Baltic Morphology VI. 2011, September 22–23, Tartu.
6. Žalnora A., Miežutavičiūtė. Anthropology, anatomy and histology studies at the Stephen Bathory University in Vilnius, 1919–1939//XXIV International Baltic Conference of the History of Science: Historiae Scientiarum Baltica. 2010, October 8–9, Tallinn.

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SANTRAUKA

Tyrimo problema

Modernioji visuomenės sveikatos samprata Europoje ėmė formuotis XVIII a. pabaigoje. Neabejotinas vaidmuo šiame procese teko Strasbūro, Heidelbergo ir Vilniaus universiteto profesoriui Johanui Peteriui Frankui (J. P. Frank, 1745–1821), kuris daugelio ligų pirminėmis priežastimis įvardijo skurdą ir tamsumą. Pagal jo suformuluotą „medicinos policijos" koncepciją valstybė turėjo imtis atsakomybės už gyventojų sveikatą ir griežtomis policinėmis priemonėmis, įstatymais reguliuoti net pačias intymiausias visuomenės gyvenimo sritis, kad užkirstų kelią ligoms.

Svarbiausios visuomenės sveikatos prielaidos – valstybės garantuotos sveikos gyvenimo sąlygos ir švietimas – buvo išdėstytos Rudolfo Virchovo (R. Wirchov, 1821–1902) darbuose: „Demokratinė valstybė, siekianti, kad visi piliečiai džiaugtųsi gerove, pripažįsta, kad visi turi vienodas teises. Nes teisių lygybė veda link savivaldos. Valstybė taip pat turi teisę tikėtis, kad kiekvienas žinos, kaip savo darbu pasiekti gerovę pačių žmonių sukurtų įstatymų ribose. Gerovės sąlygos yra sveikata ir išsilavinimas – tai valstybės tikslas <...> Tačiau to nepakanka – nepakanka užtikrinti, kad kiekvienas gautų minimumą savo egzistencijai <...> valstybė turi garantuoti kiekvienam sąlygas sveikai gyventi".

Šiandieniam supratimui artimiausia visuomenės sveikatos samprata ėmė formuotis po Pirmojo pasaulinio karo. 1920 m. Jeilio universiteto visuomenės sveikatos profesorius Čarlzas Edvardas Amoris Vinslou (C. E. A. Winslow, 1877–1957) suformulavo pirmąjį visuotinai žinomą visuomenės sveikatos apibrėžimą: „Visuomenės sveikata – tai mokslas ir menas organizuotomis visuomenės pastangomis išvengti ligų, prailginti gyvenimą bei sustiprinti fizinę ir psichinę sveikatą, rūpinantis aplinkos sauga, kontroliuojant infekcines ligas, mokant individualios higienos, analizuojant medicinos ir slaugos tarnybas, anksti diagnozuojant bei gydant ligas, plečiant, tobulinant socialines tarnybas, garantuojančias, kad kiekvieno individo gyvenimo standartai sudarytų jam galimybes palaikyti sveikatą, taigi, suteiktų teisę į sveikatą ir ilgą gyvenimą".

Atsižvelgdami į to meto mokslo raidą šiame darbe rėmėmės C. E. A. Vinslou pasiūlyta Visuomenės sveikatos koncepcija. Ji apėmė mus dominančius dėmenis – gydytojų bendruomenę, sveikatos priežiūros institucijas ir visuomenę. Drauge savo darbe nagrinėsime tuo metu taikytos visuomenės higienos sampratos variacijas bei visuomenės sveikatos sistemai keliamus tikslus tarpukario Lenkijoje, lyginsime juos su Vinslou samprata. Taigi, Vinslou visuomenės sveikatos koncepcija lėmė ir kompleksinį mūsų tyrimo pobūdį, apimantį mums svarbų platų kontekstą – teorines visuomenės sveikatos apsaugos mechanizmo prielaidas, to meto centrinės, vietos valdžios institucijų raidą kaip organizuotas visuomenės pastangas bei Vilniaus Stepono Batoro universiteto Medicinos fakulteto mokslininkų veiklos analizę minėtame kontekste. Taigi, siekėme atskleisti organizuotas visuomenės pastangas ir mums išskirtinai svarbaus profesionalo – visuomenės sveikatos specialisto – vaidmenį sprendžiant visuomenės sveikatos problemas.

Skirtingai nei šiandien, gydomosios medicinos specialistų ir higienistų darbo laukas nebuvo atskirtas. Todėl visuomenės sveikatos problemų sprendimo paieškų neturėtume ieškoti tik vienos Medicinos fakulteto katedros (instituto) veikloje. Tai, ką šiandien priskirtume visuomenės sveikatos instituto, higienistų darbo barui, tuo metu buvo sprendžiama ir daugelio kitų institucijų veikloje. Visuomenės sveikatos mokslui svarbių nuopelnų galime rasti tiek fundamentalųjį, klinikinį, tiek ir prevencinį medicinos mokslą plėtojusių katedrų, klinikų darbuotojų veikloje.

Vilniaus Stepono Batoro universiteto raida, visuomenės sveikatos mokslo raida tarpukario Vilniuje ankstesniuose tyrimuose dažnai pateikiama pagal Lietuvai būdingus modelius arba pagal XIX a. modelį, pritaikant juos ir Vilniaus kraštui. Tačiau, turint galvoje Vilniaus krašto specifiką, medicinos mokslas ir visa sveikatos priežiūros sistema turėtų būti tiriama atsižvelgiant į to meto visuomenės sveikatos mokslo raidą Lenkijoje. Lygindami higienos sampratą XX a. pradžioje Lietuvoje ir Europoje galime įžvelgti svarbių skirtumų. XX a. pradžioje vykusi sparti urbanizacija, kiti socialiniai ir ekonominiai veiksniai paskatino daugelį didžiųjų Europos valstybių iš esmės peržiūrėti prevencinės medicinos mechanizmus, didesnį dėmesį skirti socialinei prevencijai. Susidomėta iki tol beveik netirtomis sritimis: darbo, mokyklų higiena, moterų ir vaikų sveikatos problemomis.

Anksčiau nei Lietuvoje, Vakarų Europoje ir Lenkijoje higiena imta suvokti kaip savarankiška disciplina, kaip mokslas, padedantis kompleksiškai kovoti ne tik su infekcinėmis ligomis, epidemijomis, bet ir su socialinio ekonominio pobūdžio problemomis, kurios daugeliu atvejų yra pirminė visuomenės sveikatos problemų priežastis.

Sovietinei Rusijai okupavus didžiąją dalį buvusios Vilniaus vaivadijos teritorijos, lenkiškojo laikotarpio Medicinos fakulteto mokslinis palikimas ir sveikatos apsaugos sistema buvo išblaškyti, neteko konteksto ir integralumo. Karo metais pražuvo daug tarpukario Medicinos fakulteto mokslo produkcijos, dalį jos išsivežė fakulteto mokslininkai, daug jos taip ir liko dūlėti bibliotekose, ji nebuvo analizuojama. Dėl kadrų kaitos ir kitų priežasčių dalis medicinos mokslo šakų pokario metais iš naujo turėjo išgyventi evoliuciją, kuri jau buvo įvykusi dar tarpukario laikotarpiu. Mokslo potencialą negausiomis pajėgomis teko kurti iš naujo. Tai pavyko ne visais atvejais. Kai kurios tarpukario Vilniuje plėtotos medicinos mokslo šakos, pavyzdžiui, farmakologija, pokario metais visiškai nunyko. Šiandien liekamoji Stepono Batoro universiteto Medicinos fakulteto mokslinės produkcijos vertė laikytina istorine. Visgi visuomenės sveikatos mokslo raida Vilniuje niekada iki šiol nebuvo nuodugniai ištirta ir įvertinta.

Darbo aktualumas

Visuomenės sveikatos iššūkiai modernioje valstybėje reikalauja organizuotų visuomenės pastangų, mokslo ir praktikos institucijų bendradarbiavimo. Visuomenės sveikatos specialistas turi pasižymėti aukšta erudicija ir giliu tarpdisciplininiu mąstymu. Jis turi telkti valstybines institucijas ir visuomenę kovoje už visuomenės sveikatą. Žalingi įpročiai, netinkama mityba, kitos socialinės ir medicininės problemos reikalauja naujų visuomenės sveikatos strategijų. Tokios strategijos turėtų būti kuriamos remiantis naujais mokslo tyrimais ir jau sukaupta patirtimi. Keičiantis socialinėms ekonominėms sąlygoms, visuomenės sveikatos mokslas tarpukario Vilniuje išgyveno evoliuciją, kurią tirti svarbu ir šiandien. Nepaisant ekonomikos ir kultūros virsmų, svarbiausios ano meto visuomenės sveikatos problemos – socialinės ligos – išliko. Pasaulio

sveikatos organizacijos (PSO) duomenimis, alkoholis yra trečias pagal mastą mirties ir neįgalumo rizikos veiksnys Europoje ir svarbiausias rizikos veiksnys tarp jaunų žmonių [8]. PSO duomenimis, kasmet nuo vėžio pasaulyje miršta daugiau kaip 6 mln. žmonių, išaiškinama apie 10 mln. naujų vėžio atvejų. Lietuvoje sergamumas piktybiniais navikais taip pat didėja. 2012 m. PSO duomenimis, pasaulyje tuberkuliozė yra antra mirties priežastis po ŽIV/AIDS, 95 % mirčių nuo tuberkuliozės atvejų pasitaikė vidutines arba mažas pajamas turinčiose šalyse. 2007 m. PSO Europos regioninis biuras Lietuvą priskyrė labiausiai TB pažeistoms Europos šalims.

Tikslas ir uždaviniai

Darbe iškėlėme tikslą – ištirti ir įvertinti visuomenės sveikatos mokslo raidą Stepono Batoro universiteto Medicinos fakultete ir sveikatingumo būklės pokyčius Vilniaus krašte 1919–1939 metais.

Tikslui pasiekti buvo formuojami šie uždaviniai:

1. Įvertinti Vilniaus krašto sveikatos apsaugos sistemos raidą 1919–1939 m., atskleidžiant mokslinį šios sistemos pagrindą ir tobulinimo principus, remiantis visuomenės sveikatos samprata Europoje bei tuometinės Lenkijos sveikatos apsaugos sistema;
2. Ištirti ir įvertinti Vilniaus Stepono Batoro universiteto Medicinos fakulteto institucinę raidą 1919–1939 m., išryškinant fakulteto mokslininkų potencialą visuomenės sveikatos mokslui ir jų veiklą visuomenės sveikatos srityje;
3. Nustatyti Stepono Batoro universiteto Medicinos fakulteto indėlį į Vilniaus miesto sveikatos apsaugos sistemos veiklos gerinimą;
4. Įvertinti Vilniaus Stepono Batoro universiteto Medicinos fakulteto darbuotojų nuopelnus visuomenės sveikatos mokslo raidai.

Ginami teiginiai

1. Vilniaus Stepono Batoro universitete Medicinos fakultete buvo plėtojamas visuomenės higienos mokslas atitiko valstybinę sveikatos apsaugos strategiją ir ją papildė.

2. Medicinos fakulteto mokslininkų darbai apėmė kompleksines visuomenės sveikatos gerinimo priemones, ypač akcentuota socialinės higienos svarba.
3. Vilniaus Stepono Batoro universitete Medicinos fakulteto mokslininkų iškeltos visuomenės sveikatos problemos ir jų sprendimo būdai buvo reikšmingi tuometinės Lenkijos visuomenės sveikatos mokslui.

Tyrimo naujumas

Ankstesniuose mokslo darbuose buvo apžvelgti atskiri to meto mokslininkų nuopelnai medicinos ir visuomenės sveikatos mokslo raidai Vilniaus universiteto Medicinos fakultete. Tačiau nebuvo atskleista tarpukariu vykusi visuomenės sveikatos mokslo evoliucija, sveikatos apsaugos politikos koncepcija. Dauguma ankstesnių šio laikotarpio vertinimų buvo deformuoti politinių veiksnių įtakos. Ankstesni darbai, skirti šio laikotarpio visuomenės sveikatos problemoms, apsiribojo užkrečiamųjų ligų poveikio tyrimais. Kitos svarbios problemos liko neatskleistos. Mūsų tyrime rekonstruotas tuo metu veikęs sveikatos apsaugos sistemos modelis ir mokslinis jo pagrindas, todėl tyrimas atskleidė iki tol neištirtus tarpukario Vilniuje veikusios prevencinės medicinos politikos prioritetus. Prevencinės medicinos koncepcija buvo kuriama carinės Rusijos sanitarines strategijas keičiant vakarietiškomis socialinės higienos strategijomis. Buvo remiamasi C. E. A. Vinslou visuomenės sveikatos samprata. Tarpukario Vilniuje ir jo apylinkėse susiformavo savita sveikatos apsaugos sistema, orientuota į vadinamųjų socialinių ligų įveiką. Vilniaus higienistai buvo vieni iš socialinės higienos pradininkų ne tik Vilniaus krašte, bet ir visoje Lenkijoje. Mūsų tyrime buvo atskleistas Medicinos fakulteto mokslo potencialas, išryškintas mokslo ir praktikos institucijų bendradarbiavimas sveikatos klausimais.

Praktinė reikšmė

Darbas svarbus didaktine prasme. Gauti rezultatai bus pritaikyti studentų mokymo tikslams, siekiant humanizuoti visuomenės sveikatos studijas, istoriniais pavyzdžiais ugdyti studento tarpdisciplininį ir tarpsektorinį požiūrį,

sprendžiant visuomenės sveikatos problemas priartinti būsimą visuomenės sveikatos specialistą prie visuomenės. Šis ir kiti panašaus pobūdžio darbai svarbūs rengiant būsimus gydytojus, formuojant jų tarpdisciplininį požiūrį į visuomenės sveikatos problemų sprendimą. Tarpukario Vilniaus Stepono Batoro universiteto Medicinos fakulteto raidos apžvalga reikšmingai papildys šiuo metu dėstomus Medicinos istorijos, Visuomenės sveikatos istorijos kursus.

Metodai

Atsižvelgiant į darbo tarpdisciplinišKumą pasirinktas metodas – dokumentų analizė, taip pat lyginamasis, analogijos metodai. Trūkstamiems statistiniams duomenims atkurti buvo naudojama tiesinė regresija ir kiti statistikos, daugiausia aprašomosios, metodai.

Tyrime remtasi sisteminio vientisumo prielaida, t. y. viskas, kas vyko visuomeniniame gyvenime bei moksle, turėjo atsispindėti to meto mokslinėje, viešojoje spaudoje, teisės aktuose. Tuo atveju, jei Vilniuje išlikę šaltiniai nebuvo informatyvūs rūpimu klausimu arba jų tiesiog nebuvo, rėmėmės analogijos principu – ieškojome analogiškų šaltinių Lenkijoje. Tarpukariu Vilniuje dirbę mokslininkai savo tyrimus spausdino daugelyje svarbiausių to meto Lenkijoje ėjusių medicinos žurnalų.

Mūsų tyrimo įgyvendinimui svarbi buvo ir kita prielaida – dėl mokslininkų migracijos dalis šaltinių galėjo būti išvežti iš Vilniaus. Ne visų tyrimų rezultatai buvo publikuoti Lenkijos mokslo žurnaluose. Dalis duomenų, ypač pirminės medžiagos, disertaciniai darbai, užsienio žurnaluose leistų straipsnių atspaudai likdavo asmeninėje mokslininko byloje, kurią jis paprastai gabendavo kartu su savimi, galiausiai mokslininko byla likdavo paskutinėje mokslo institucijoje, kurioje jis dirbo. Dalis Medicinos fakulteto mokslininkų savo mokslo darbus, surinktą medžiagą išsivežė į kitus miestus, kur toliau tęsė mokslinę karjerą. Kitu atveju, pavyzdžiui, mokslininkui mirus Vilniuje, jo darbai tiesiog liko Stepono Batoro universiteto archyve, miesto bibliotekose.

Darbo chronologinės ribos apima 1919–1939 m. vadinamąjį tarpukario laikotarpį. Visgi siekdami paaiškinti tam tikrus ilgalaikius procesus išeisime iš už apibrėžtų chronologinių ribų. Šiame darbe šaltinių ir literatūros

skirtimi laikysime chronologines mus dominančio 1919–1939 m. laikotarpio ribas. Visus tyrimus, charakterizuojančius 1919–1939 m. laikotarpį, paskelbtus po 1939 m., laikysime literatūra, o į minėtas chronologines ribas patenkantys darbai bus laikomi šaltiniais. Darbe bus vartojami tiriamuoju laikotarpiu paplitę terminai. Tuberkuliozė, trachoma ir kitos infekcinės ligos bus vadinamos socialinėmis ligomis.

Darbo dalys. Darbą sudaro trys dalys. Pirmoji tyrimo dalis skirta apžvelgti visuomenės sveikatos mokslo raidos pokyčiams tarpukario Europoje, Lenkijoje. Atskleidėme visuomenės prevencinės medicinos modelį (visuomenės higiena), taikytą to meto Lenkijoje, taip pat mokslininkų indėlį formuojant šį modelį ir sveikatos politiką. Svarbu buvo atskleisti ir institucinę visuomenės sveikatos priežiūros mechanizmų raidą, kaip praktinę visuomenės sveikatos idėjų išraišką.

Antroje dalyje apžvelgėme Vilniaus universiteto Medicinos fakulteto raidą bei universiteto vietą savivaldos, valstybės sveikatos apsaugos politikoje, Medicinos fakulteto mokslinį potencialą. Siekėme rasti sritis, kuriose visuomenės ir gydytojų interesas sutapo, išryškinti organizacinio, didaktinio pobūdžio priemones, kurios patarnavo visuomenės sveikatingumui Vilniaus krašte.

Trečioji mūsų tyrimo dalis skirta išanalizuoti bendrai Vilniaus miesto ir apylinkių visuomenės sveikatos būklei bei atskiroms visuomenės sveikatos problemoms, jų priežastims tarpukario Vilniaus mieste, apylinkėse. Taip pat buvo svarbu atskleisti Medicinos fakulteto mokslininkų modelį, taikytą sprendžiant visuomenės sveikatos problemas. Siekėme nustatyti, kokias strategijas visuomenės sveikatos būklei gerinti pasirinko Medicinos fakulteto mokslininkai, ar jos buvo taikomos praktiškai, ar C. E. A. Vinslou ir kitų mokslininkų idėjos buvo įgyvendintos

IŠVADOS

1. Vilniaus kraštas, lyginant su kitomis tuo metu Lenkijai atitekusiomis teritorijomis, buvo itin atsilikęs, apleistas ir nuniokotas. Svarbiausios priežastys buvo: ankstesnė politinė priklausomybė carinei Rusijai, ūkio stagnacija, silpna ekonomika, Pirmasis pasaulinis karas, nevienodas miesto ir kaimo finansavimas ir kiti veiksniai. Vilniaus krašte ir Lenkijoje, kaip ir daugumoje Vakarų Europos valstybių, svarbiausias sveikatos sistemos iššūkis buvo vadinamosios socialinės ligos: tuberkuliozė, didelis kūdikių mirštamumas (dėl socialinių veiksnių), plaučių uždegimas, širdies ligos, vėžys (navikinės ligos), alkoholizmas, psichikos ligos ir užkrečiamosios ligos.
2. Kuriant sveikatos apsaugos sistemą Lenkijoje buvo remiamasi C. E. A. Vinslou visuomenės sveikatos samprata (1920 m.): buvo sukurti T. Janiševskio ir J. Poliako modeliai, Vilniaus krašte sveikatos apsaugos sistema veikė kaip šių modelių simbiozė, tačiau C. E. A. Vinslou visuomenės sveikatos idėjos Vilniaus krašte įgyvendintos tik iš dalies.
3. Stepono Batoro universiteto Medicinos fakulteto reikšmė išaugo ketvirtajame dešimtmetyje: trečiojo dešimtmečio pabaigoje susiformavo katedrų ir klinikų struktūra, išsikristalizavo svarbiausios mokslinio darbo kryptys, orientuotos į valstybinės sveikatos apsaugos strategijos prioritetus, fakultete imta rengti vis daugiau studentų, su higienos mokslo pagrindais studentai buvo supažindinami per medicinos ir farmacijos studijas.
4. Medicinos fakulteto mokslininkų potencialas buvo reikšmingas. Paskelbtos 1577 publikacijos, iš kurių 13,26 % – tarptautiniuose mokslo žurnaluose. Apginta 100 daktaro disertacijų, iš kurių 20 habilitacinių. Apie 20 % fakulteto publikacijų buvo tiesiogiai skirtos visuomenės sveikatos problemoms. Higienos katedroje apgintos aštuonios daktaro disertacijos, iš jų dvi habilitacinės. Fakulteto mokslininkai aktyviai dalyvavo Lenkijos ir Europos universitetų mokslinėje veikloje, po SBU uždarymo įkūrė atskirus mokslo centrus Lenkijoje. SBU MF veikė viena iš trijų savarankiškų higienos katedrų visoje Lenkijoje, susikūrė viena įtakingiausių šalyje socialinės ir darbo higienos mokykla.

5. Stepono Batoro universiteto Medicinos fakulteto indėlis į sveikatos apsaugos sistemos gerinimą Vilniuje buvo svarbus: fakultete papildomai mokomi Vilniaus vaivadijos gydytojai, slaugės ir sveikatos apsaugos sistemos pareigūnai, fakulteto mokslininkai dirbo maždaug pusėje su sveikatos apsauga susijusių Vilniaus miesto institucijų. Universiteto mokslininkai siūlė strategijas, kuriomis siekta tobulinti miesto sanitarinę inžineriją, maisto produktų gamybos ir pardavimo kontrolę, higienines sąlygas mokyklose, gyventojų namuose, rašė populiariojoje spaudoje.
6. Stepono Batoro universiteto Medicinos fakulteto mokslininkų iniciatyva Vilniaus krašte buvo plėtojamas institucijų tarpusavio bendradarbiavimas, kuris sudarė prielaidas C. E. A. Vinslou ir J. Poliako visuomenės sveikatos idėjoms įgyvendinti: šioje teritorijoje veikė sveikatos centrai, gyventojams pagalbą namuose teikė socialinės slaugės, mokslo, visuomeninės ir vietos valdžios institucijos iš dalies kompensavo sveikatos priežiūros organizavimo sunkumus valstybės periferijoje.
7. Stepono Batoro universiteto Medicinos fakulteto mokslininkų rekomendacijose, skirtose vietos valdžios institucijoms, buvo suformuluotos plataus masto socialinio pobūdžio strategijos: tarpinstitucinis bendradarbiavimas vykdant visuomenės švietimą ir sveiko gyvenimo būdo propagandą, rūpinantis jaunimo užimtumo problemomis, gerinant sanitarines sąlygas buityje ir plečiant socialines garantijas, kovojant su skurdu ir tamsumu, skatinant visuomenės sąmoningumą; reformuojant ūkio sanklodą, reguliuojant maisto produktų kainas bei tobulinant gydymo ir socialinių įstaigų veiklą, kitomis priemonėmis įveikiant pirmines socialinių ir užkrečiamųjų ligų priežastis.
8. Stepono Batoro universiteto Medicinos fakulteto mokslo modelis buvo pagrįstas higienos ir bakteriologijos katedrų bei tyrimo lauko atskyrimu. Vilniuje sukurta savarankiška Higienos katedra. Vilniečių mokslo darbuose dominavo lokalaus ir valstybinio masto socialinės higienos strategijos, plėtoti darbo, mokyklų higienos moksliniai tyrimai, buvo paskelbtos vienos pirmųjų visoje Lenkijoje studijų darbo, mokyklų higienos, drabužių, kalbos ir balso higienos klausimais. K. Karafos–Korbuto higienos vadovėlis „Higienos apybraiža“ buvo pirmasis ir vienintelis tarpukario Lenkijoje. „Higienos archyvas“ buvo pirmasis Lenkijoje higienos problemoms skirtas periodinis leidinys.