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# SPANISH FLU AND MENTAL DISORDERS IN THE MARGRAVIATE OF ISTRIA AT THE END OF WWI

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*ABSTRACT*

*As in the most parts of Europe, Spanish flu with its mortality appeared in the south of the Magraviate of Istria in September of 1918, having the peak of the second wave in October and waning at the end of the December of 1918. The objective of this paper was to explore whether patients of Provincial hospital of Pula, were hospitalised and diagnosed with both Spanish flu and any mental illness, simultaneously or consequently. Hospital registers for the period 1918–1920 reveal no such cases. Lower relevance of mental disorders, administrative omission in diagnoses recording, higher level of diagnostical threshold for mental disorders, and somatisation of mental disorders could explain the lack of connectedness between the two types of illnesses.*

*Keywords: Spanish flu 1918/1919, Pula, influenza virus, biopsychosocial model of health, mental illness, World War I*

# L'INFLUENZA SPAGNOLA E I DISTURBI MENTALI NEL MARGRAVIATO D'ISTRIA ALLA FINE DELLA PRIMA GUERRA MONDIALE

*SINTESI*

*Come nella maggior parte d'Europa, l'influenza spagnola con la sua mortalità apparve nella parte meridionale del Margraviato d'Istria nel settembre del 1918, raggiungendo l'apice nella seconda ondata, nell'ottobre del 1918, e declinò poi fine dicembre dello stesso anno. L'obbiettivo di questo saggio era di indagare se i pazienti dell'Ospedale provinciale di Pola fossero stati ricoverati e se fosse stata loro diagnosticata sia l'influenza spagnola che qualche malattia mentale (contem-*

*poraneamente o di conseguenza). I registri ospedalieri per il periodo che va dal 1918 al 1920 non rilevano casi simili. Una minore presenza di disturbi mentali, l'omissione amministrativa nella documentazione delle diagnosi, come pure un maggiore livello di entrate diagnostiche per i disturbi mentali e la somatizzazione dei disturbi mentali, possono spiegare l'assenza della relazione tra i due tipi di malattie.*

*Parole chiave: influenza spagnola 1918/1919, Pola, influenza virus, modello biopsicosociale della salute, malattie mentali, Prima guerra mondiale*

## SPANISH FLU 1918/1919 IN PULA

The duration of the pandemic in most of Europe, from spring and summer of 1918 until the end of the First World War and the first uncertain months of the aftermath, affected the recording statistics on its morbidity and mortality. However, according to the parish death registers of Pula, hospital register of the Pula Provincial Hospital, and local daily press (*Hrvatski list*, *Polaer Tagblatt*, *Il Gazzettino di Pola)*, it is possible to determine the occurrence and the course of the 1918/1919 Spanish flu in the main Austro-Hungarian port, Pula (Milovan Delić, 2014).

The registers of the deceased, as historical sources, have several deficiencies, one of the first being the question of the accuracy of the cause of death. Unlike hospital registers where the probability of accuracy is greater due to the presence of medical personnel in establishing the cause of death, on the death certificates the cause of death, written by the parish priest, or the doctor, or the family member – could be incorrectly determined, so the wrong information could be obtained for further statistics. In addition to the possible wrong diagnosis, it should be taken into account that some deaths of the Spanish flu may have been unreported. Spanish flu mortality, in the case of Pula, as the main Austro-Hungarian port with considerable war migration, is not possible to tell, since the city population at that time was not ascertained.

According to the data from the register of the deceased in Pula, about 152 deaths of the Spanish influenza were noted from September 1918 until the end of March 1919 for the city itself. In the same period, 213 patients with the Spanish flu diagnosis were admitted to the Provincial Hospital of Pula; 21 deceased among

*Tab. 1: № of deceased of the Spanish flu in Pula (ROP, RD 1914–1924; GHP, HR 1918, 1919).*[1]

| Period | Sep 1918 | Oct 1918 | Nov 1918 | Dec 1918 | Jan 1919 | Feb 1919 | Mar 1919 | Total |
|---|---|---|---|---|---|---|---|---|
| Deceased at home | 4 | 60 | 39 | 35 | 7 | 2 | 5 | 152 |
| Deceased at hospital | 0 | 13 | 3 | 3 | 1 | 0 | 1 | 21 |
| **Total** | **4** | **73** | **42** | **38** | **8** | **2** | **6** | **173** |

them had place of residence in Pula. Hence, the pandemic in Pula coincided with the pandemic in the world – a virus of the insignificant first wave mutated in late August, and in the second wave that hit in September, October, November and December 1918 caused a large mortality in Pula.

Patients with the diagnosis of the Spanish flu that were admitted to the hospital at the end of August 1918, were discharged healthy. The first death of the Spanish flu in the Pula death registry book was recorded on 19th September 1918, and the first death of the Spanish flu in hospital took place on 8th October 1918. The second, more severe flu wave in Pula, started in September 1918, with the number of fatalities experiencing the peak in October. It decreased by the end of December and then calmed down in the first three months of 1919 (Tab. 1).

It has to be noted that December 1918 shows gradual, but not strong decrease in the intensity of the flu, indicating that the second wave may have been extremely strong. Namely, after the collapse of the Austro-Hungarian Monarchy in November 1918, many people of the Austrian origin left the city of Pula. So while looking at the number of influenza related deaths in December, the diminished number of residents must be taken into account, which then points to a larger Spanish flu mortality. In January, February and March 1919, the pandemic significantly weakened. Although Pula's mortality of the Spanish flu cannot be calculated[2] because of the scarcity of population figures in the city when the flu occurred, it can be assumed that the number of 173 reported deaths of the Spanish flu is not small and that the mortality rate in Pula can be only higher than 4.4‰.[3]

1 Registrar's Office Pula, Register of Deceased, 1914–1924, General Hospital Pula, Hospital Registry 1918, 1919.

2 According to 1910 census Pula had 42,548 residents (Perselli, 1936). However, war conditions in 1915 brought mandatory emigration of population from the southern Istria to the inner Austrian Monarchy. Most of them did not return by the September 1918 when the deadly second wave began.

3 Spanish flu mortality rates vary from countries to continents. Recent study suggests global mortality of 28‰ (Moxnes & Christophersen, 2008).

*Tab. 2: № of deceased of the Spanish flu in Pula from 1st September 1918 till 31st March 1919 (ROP, RD 1914–1924; GHP, HR 1918, 1919).*

| | Deceased at home | Deceased at hospital | Total |
|---|---|---|---|
| Men | 85 | 8 | 93 |
| Women | 67 | 13 | 80 |
| **Total** | **152** | **21** | **173** |
| Age > 6 | 24 | 0 | 24 |
| Age 7 – 15 | 7 | 0 | 7 |
| Age 16 – 40 | 84 | 19 | 103 |
| Age 41 < | 37 | 2 | 39 |
| **Total** | **152** | **21** | **173** |

As far as gender distribution is concerned (Tab. 2), Spanish flu with its mortality has globaly hit more men than women (Noymer & Garenne, 2000). These results have been brought by researches in the countries that kept their books neatly in the era of war and that were not affected by the war. In Europe, the trend has been the opposite, more women have died. This female predominance is explained mainly by the gender imbalance in the urban areas, with more female residents, due to the war situation (Winter & Robert, 2008).

The pandemic in the example of Pula showed its usual age trend (Tab. 2): even more than half of the deceased in the city were those from the age group of 16 to 40, the most vivid segment of society. It confirmed the pandemic's main feature, distinguishing it from the "ordinary" flu where mortality is at its highest among children and elderly.

In the researched areas of northern Croatia, the number of casualties is also higher among woman then men, and it seems logical to assume that this should be the case with Pula, but Pula has proven the opposite of this trend. One of the reasons for the greater sex proliferation of men in the case of the Spanish flu mortality and for a deviation from the European trend, could be the lack of women in the city. Namely, women have probably not yet returned from the war-exile during that time. On the other hand, there was a smaller number of Pula men who actually went to the battlefield.[4]

The emergence of the autumn wave of Spanish pandemic in Istria coincided with its occurrence in some parts of Croatia: the daily press wrote about the Spanish influenza in mid-October in Zadar, Rijeka and Sušak, and already on the 21st October 1918 there were news about an epidemic that encompassed Dalmatia and the eastern

4 It is assumed that 16% of men was recruited in the Administrative District of Pula. However, they did not all leave Pula, a part of recruited men continued to work in the military shipyard (Dukovski, 2011).

and central parts of Croatia (Pantić et al., 2006). Spanish flu with its mortality was present in Pula also in the first three months of 1919, but the question arises whether it was the third pandemic wave that affected Europe and the world at that time. There is a question of existence of the third wave in 1919 in Croatia, since, as Anušić noted for the northern Croatia, the declining mortality rates of the second wave at the beginning of 1919 were still relatively high. Because of that, the tail of the second wave could have easily been mistaken with the third wave, i.e. it could have created the illusion of the existence of a separate wave (Anušić, 2015).

## SPANISH FLU IN THE MEMORY

The lack of records of the contemporaries about the notable pandemic phenomenon in Istria, either in the form of description of the course, or as impression of the disease, can be explained by the lethargy, depression and serious psychological consequences which took the energy and will to put the experience on a paper. Even when the illness with all its consequences has passed, victims or their relatives did not have the strength to remember the experience again. Other reasons could include insensitivity and neglect of the country because of five years of constant warfare and the fact that most deaths caused by the flu happened behind the closed door in the privacy of the house, so they were invisible for the public eye, and that this was, after all, „just a flu“ (Honigsbaum, 2008).

The reason for the absence of the Spanish flu notes in the contemporaries' writings and thereof unique historical sources, as well as in the collective memory, Crosby explains with the "oblivion mentality". It is based on several philosophical theories that argue that the plagues of various kinds are to be forgotten as soon as possible – here alluding to the speculations of the German philosopher and sociologist Walter Benjamin who claimed that the primary index of the development of the individual and society as a whole was to forget the ruins of the past (Crosby, 2003).

One of the valuable sources for the Spanish flu "memory" is the Catherine Anne Porter's novel *Pale Horse, Pale Rider* first published in 1939, in which she gives detailed glimpses of her impression of the flu in which pessimistic view on life after surviving the flu could be noticed. Along with the pessimistic view of the world and the inability to fit into the life course, she also invokes a discomfort with life and even a revolt against the "imposed" healing. Catherine Anne Porter's *curriculum vitae* is an example of how the illness could affect a new, pessimistic attitude towards the world where an individual maybe does not want to continue living, and with the loss of control in experiencing the illness, loses also the will of deciding to survive. She found herself on the path of recovery and she had to accept her new life in the same way as her recent past (Porter, 1990). There has probably been a large number of similar biographies of individuals in the example of Istria that have experienced a similar mental disruption and whose survival of the Spanish flu has left long lasting consequences in mental status, although they were suppressed in a painful struggle with the other plagues of that period as well as with the pressure of mere survival.

Stimulated by this idea, the purpose of this paper was to explore if the typical symptoms of the Spanish flu, like chills, headache, sore throat, gout, cyanosis, nausea and vomiting were accompanied also by the psychological ones.

Recent studies show that virus specificity could stimulate the response of the immune system which could have influenced many diseases, including depression after the Spanish flu (Patterson, 2012). Almost a century after the influenza pandemic 1918–1919 scientists generated a virus with the complete coding sequences of the eight viral gene segments from the 1918 virus and revealed that no other human influenza viruses (that had been tested) demonstrated such high lethal outcomes (on mice) (Tumpey et al., 2005). It is speculated that the high pathogenicity of this virus was connected to its appearance as a human-adapted avian influenza virus (Taubenberger et al., 2005). Contrary from the 1957 and 1968 pandemics, the 1918 virus was most probably not a human/avian reassortant virus, but an avian like virus that entirely adapted to humans (Reid et al., 2004a; Reid et al., 2004b).

Virus of the Spanish flu is still a vivid subject of scholarly research, although it is safe to determine that there is association between the Spanish flu virus and other viruses of the flu epidemics in the 20th century. For example, it is known that the flu that occurred in 2009 is caused by a fourth-generation descendant of the bird-swine-human influenza virus of 1918 (Patterson, 2012).

## INFLUENZA PANDEMIC AND MENTAL ILLNESSES

It can be hypothesised that there was co-morbidity of the influenza and other illnesses, including mental. Reports about the incidence of mental disorders succeeding epidemics of influenza were found in occasions of different flu pandemics. In the findings that date from the second half of the 19$^{th}$ century through the end of the WWI, mental disorders and illness were almost unanimously labelled as *psychoses* (Bürgy, 2008). At the dawn of the 20$^{th}$ century George A. Rorie (1901) stated it as a fact that nervous and mental disorders appeared more often after influenza than after any other acute infectious diseases and cited psychiatrist Thomas Smith Clouston who had suggested that the effects of influenza on the mental condition of Europe had been more damaging than all the continued fevers put together. Torrey et al. (1991) refer to the source that mentions mental disorders subsequent to influenza as early as 1846. Then on the occasion of the 1889–1890 influenza pandemic, Julius Althaus, the German-English neurologist found 34 articles recording mental illnesses following influenza (Rorie, 1901). One of the first authors in the Austrian littoral who suggested that connection between the influenza and mental disorders existed in the period 1918–1919 was the Slovenian neuropsychiatrist Ivan Robida (1919a, 1919b). He observed increased occurrence of psychiatric diseases accompanying influenza in its autumn wave (October 1918 – February 1919). For the same pandemic the American psychiatrist Karl A. Menninger reviewed articles and informed about 200 postinfluenzal mental illnesses admitted solely to Boston Psychopathic Hospital (Menninger, 1926). Torrey, Bowler and Rawlings (1991)

quote sources from at least half a dozen countries that documented manic and schizophrenic-like psychoses following a more recent influenza pandemic of 1957, famous for its especially neurotropic viral strain.

In today most dominant approach to health and illness, biopsychosocial model (Engel, 1977; 1980), many phenomena can be linked and recognised as influencing each other. The central idea of the model is that nothing exists in isolation and each cell or each person, as well as each system is affected by its/her/his environment. Concretely, neither the cell nor the person can be fully described, analysed, diagnosed or treated unless the whole dynamic system and its environment are taken into consideration (Engel, 1980). It helps to understand that, for example, suffering or illness can be affected by multiple layers and contexts, from the molecular to the societal (Borrell-Carrió et al., 2004). The processes that are interactively included in health and illness are not only biological, but also psychological and social. Since the model has been introduced, basic and applied research in all kinds of settings and areas has acknowledged the worth of the biopsychosocial perspective and proven how the three processes interact to influence health status (Suls & Rothman, 2004).

Almost a century before G. Engel conceptualised the biopsychosocial model, two psychiatrists, J. Macpherson and W. F. Farquharson have offered some explanations for potential co-morbidity of influenza and mental disturbances. They argued that the pathological aspects of depressed emotions and the physical decline provoked by influenza triggered the initiation of melancholia (Rorie, 1901). Contemporary perspective suggests there is bigger neuropathogenic potential in natural infections than what would commonly be expected (Schlesinger et al., 1998). The possibility of the neuropsychiatric illness onset, most probably includes interactions between genes' proneness and environmental influences, which could involve viral infections. Avian strains are frequently neurotropic and can spread to the brain in laboratory animals. They do not necessarily cause death, but can trigger persistent changes in emotional, cognitive and behavioural functions (Beraki et al., 2005; Kristensson, 2006). These findings, however, only explain how influenza virus affects the brain in laboratory animals. A hundred years after the 1918–1919 influenza pandemic there is no report about avian influenza spreading to the brain in humans, and it can only be speculated that this virus may be a threat for human brains as well (Kristensson, 2006).

The biopsychosocial approach to health and illness further helps in comprehending the patient's subjective experience as a crucial contributor to a more precise diagnosis, health outcomes, and appropriate service provision (Borrell-Carrió et al., 2004). There is evidence that many health conditions increase the risk for mental disorder, and the consequence of comorbidity is more complicated help-seeking, diagnosis, prognosis and treatment (Prince et al., 2007). More specifically, there is scientific support today for the many complex connections between common anxiety and mood disorders and viral infectious diseases (Prince et al., 2007; Coughlin, 2012). Even more concretely, evidence was found that majority of survivors of pandemic 2009 influenza A (H1N1)-associated ARDS had psychologic impairment and poorer quality of life as one-year long term outcomes (Luyt et al., 2012).

Having in mind that exposure to war is one of the highest risk factors for health, there is a reason to anticipate that war could have been a moderating variable in linkage between the influenza and mental disturbances. Exposure to war can increase the risk of emerging an anxiety, mood, or impulse-control disorder by at least three times (Karam et al., 2008). So the objective of this research was to explore whether same patients hospitalised and diagnosed with Spanish flu were also hospitalised and diagnosed with some mental disturbance(s) either at the same time or up to a year later than the biggest wave of the Spanish pandemics in the Margraviate of Istria has occurred.

## METHODOLOGY

The sample in this study comprised patients recorded in the Pula hospital registers (GHP, HR 1918, 1919, 1920) that were diagnosed with two spectra of illnesses: Spanish influenza and mental illnesses. Diagnoses that were taken into consideration related to Spanish influenza were noted as: *morbus Ispana*, *Spanish flu, influenza, influenza and pulmonite* and *Spanish influenza*. Mental illnesses that were taken into consideration were noted in the hospital registers as: *melancholia, melancholia in pregnancy, neurasthenia, obsessive neurasthenia, psychasthenia, hysteria, hysteria in pregnancy, neurosis, sexual neurosis, psychoneurosis, psychosis (acute, alcoholic, hypochondriac, puerperal, hallucinogenic), periodic mania, religious mania, periodic manic depression,* and *dementia (praecox, paranoid senile).*

Data were collected for the period 27th August 1918 through 31st December 1920 because the first time *morbus Ispana* was mentioned as a diagnosis in the hospital book on 27th August 1918. The big wave of the flu pandemic was over by the end of March 1919, so the period of more than a year and a half was taken as a monitoring period for the consecutive occurrence of mental disorders.

Besides diagnoses, basic demographic variables related to patients and their hospital status were also collected from the same sources: name, family name, sex, birth year, address, admission date and outcome of treatment. This helped in identification of patients, especially since many of them shared the same family names and names.

## RESULTS

In order to explore whether the same patients hospitalised and diagnosed with Spanish flu were also hospitalised and diagnosed with some mental disturbance, data were compared. In Pula hospital there were totally 213 patients ($N_{male} = 103$; $N_{female} = 110$) diagnosed with Spanish influenza in the period from 27th August 1918 through 31th March 1919 (GHP, HR 1918, 1919, 1920). Slightly more than a half of them (N = 122) had the address in Pula, while slightly less than a half (N = 91) lived in the other southern parts of the Margraviate of Istria. Out of 213 patients 180 were dismissed alive. None of these patients, however, was either at the same time or by the end of 1920 hospitalised with the diagnosis of any mental illness. In the period from 27th August 1918 till 31th December 1920 there were 200 patients ($N_{male} = 88$;

$N_{female}$ = 112) diagnosed with mental illnesses. Some of them were hospitalised two or three times in that period (N = 20). The greatest number of hospitalised patients with Spanish influenza was in 1918 (N = 197), with the peak in October and November. The number of diagnosed mental illnesses was almost equal in the two observed years (N = 106 in 1919 and N = 103 in 1920).

## DISCUSSION

Pula hospital registers show that patients hospitalised and diagnosed with Spanish influenza and patients hospitalised and diagnosed with any mental illness were not the same (GHP, HR 1918, 1919, 1920). So no connection can be established between the two diagnoses – Spanish influenza and mental illness.

It may be possible that Spanish influenza and mental illnesses or disorders *are really not related*. They have different causes and different physiological foundations; one of them is a contagious viral disease spread through airborne respiratory secretions, while mental illnesses do not have a clear cause, but result from a combination of biological psychological and social factors. So there is a possibility that Spanish influenza and mental illnesses do not share any common variance, their trajectories differ and people have mental illnesses regardless of the influenza pandemic.

It is, though, a bit surprising that connection between Spanish influenza and mental illnesses was not found, with so much evidence in the literature about their probable co-morbidity. So, several explanations for such a result focus on possible reasons why the connectedness between Spanish influenza and mental illnesses was not confirmed.

(1) One of the explanations is that mental illnesses were *not considered that relevant* compared to other illnesses. Possible reasons for that could be that no (or far less) attention was paid to mental disturbances as they were not really treated as important health decrement, but more as a weakness of character (e. g. Jorm & Griffiths, 2008). The other possible reason for irrelevance of mental disorders might be the social context, more precisely the war situation. It could be that while prioritising their needs, people treated a mental disturbance as less important than the strive for surviving or the care for the ill community members (family, in the first place). It was probably more important to work and function in the more uncertain surroundings, than to stumble and have the luxury of going to hospital for some ephemeral problems of the mind. And, of course, the most prominent reason in this category is stigma related to mental disorders. There is proof that stigma does affect people with mental illnesses so that they, among other things, do not feel comfortable seeking professional help (Clement et al., 2015).

(2) Although not very likely, an explanation contrary to the previous one can be offered. Perhaps patients hospitalised and diagnosed with mental illnesses had previously been infected with influenza and survived it at home, without being hospi-

talised. Their mental condition was maybe taken more seriously because their family members recognised it as dangerous and potentially destructive or self-destructive. There are no sources to establish the number of the diseased in Pula who were suffering at home, but it can be assumed, given the statistics of anticipated global morbidity, that the number of those could have been much higher than of those who were suffering at a hospital.

(3) The other category refers to the problem of *undiagnosed mental disorders*. It is likely that mental illnesses were either medically or administratively unrecognised. From the medical perspective, it could be that physicians were focused on one main disease, such as Spanish flu and its treatment, while mental disorders remained in its shadow. There is evidence in the later part of the 20th century medicine that nonpsychiatric physicians treating nonpsychiatric patients provided a different product than psychiatrists, such as listing a wider range of diagnoses (Schurman et al., 1985). It could also be that a very banal reason is responsible – maybe *administratively* it was either a rule or a custom to make a record of only one or two main diagnoses in the hospital register, so mental illnesses were simply omitted in cases of multiple diagnoses.

(4) Another possible explanation is that mental disorders were not diagnosed because their symptoms were not identified at or above the *clinical threshold*. For example, depressiveness could have been recognised at a subclinical level, not satisfying the criteria for the clinical diagnosis. However, a patient could have had more depressive symptoms than normally, due to Spanish influenza, but it was still less than necessary to be diagnosed. There is evidence that people that score below the threshold on instruments used for assessing depression can have symptoms of depression that might be related with poorer health status (Hybels et al., 2001). As George Engel, the author of the biopsychosocial model of health would said: *The boundaries between health and disease, between well and sick are far from clear and never will be clear, for they are diffused by cultural, social and psychological considerations* (Engel, 1977, 132).

(5) A very likely reason for undiagnosed mental disorders can be *somatisation.* There is evidence that people with unrecognised depression present themselves to the health care system for physical complaints (Betrus et al., 1995). Having somatic problems is far less stigmatised and is socially more widely accepted than to have mental problems. So it is possible that all kinds of reported and diagnosed physical symptoms and illnesses were a result of transformed mental disorders.

(6) The number of people that died due to the influenza infection in the period 1918–1919 in the whole Margraviate of Istria can be estimated to be 8,000 (Žerjavić, 1993), but no estimations are available for Pula. The size of the hospital suggests that there were not enough beds for all of the infected people, but also not all of

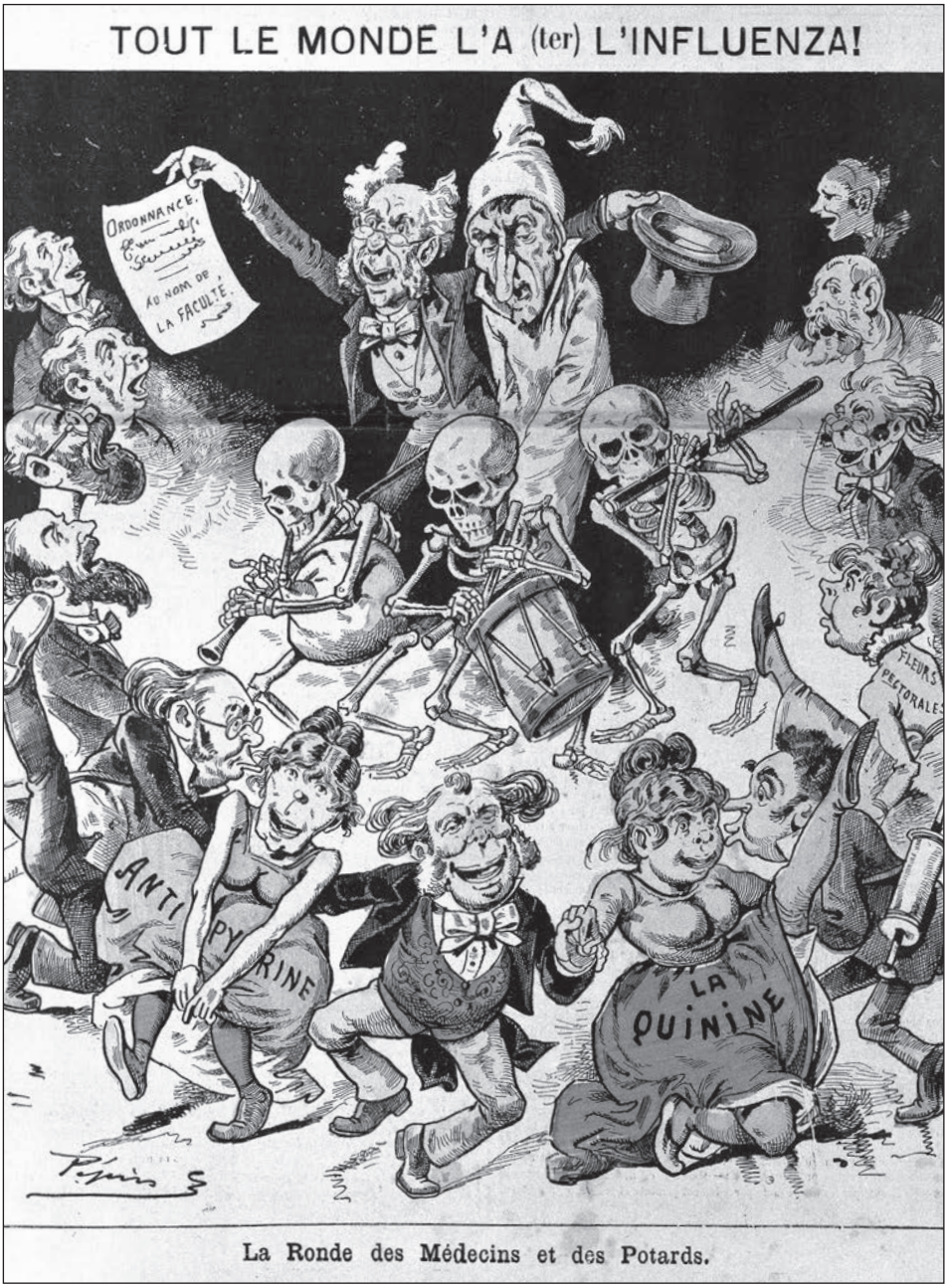


*Fig. 1: A man with influenza, taken in hand by a doctor, surrounded by dancing politicians (Wikimedia Commons).*

them even tried or wanted to go to hospital for various possible reasons (e. g. the distance from home, the lack of transportation possibilities, the lack of finances, the fear that hospital was a place only to die at, etc.), so the accurate situation is rather slipping away.

The possible reasons are not listed according to the importance. It is even very likely that the combination of more of them could explain why the influenza pandemic of 1918–1919 was not recorded as accompanied by any mental illness in the Margraviate of Istria in the Pula hospital patients.

## CONCLUSION

Results indicate that there was no connection between Spanish influenza and occurrence of mental illnesses in the period of the Spanish flu pandemic in the Margraviate of Istria from 1918 through 1920. It can be seen as a proof that these illnesses really did not correlate. On the other hand, the lack of their correlation could be ascribed to several reasons: maybe mental disorders were at that time and in those war circumstances not considered to be that relevant to be diagnosed compared to other illnesses; also mental disorders could have been undiagnosed either because of medical or administrative omission; it could be that symptoms of mental disturbances were not considered to be clinically significant; and people could have transformed their mental disorders into socially more acceptable physical symptoms and illnesses. So the lack of evidence cannot be taken as a certain conclusion for the lack of connectedness. The limitations in reliable data and standardised diagnostic criteria are the main concerns is such studies.

# ŠPANSKA GRIPA IN DUŠEVNE MOTNJE V MARKGROFIJI ISTRA OB KONCU PRVE SVETOVNE VOJNE

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*POVZETEK*

*S pomočjo puljskih župnijskih mrliških knjig, bolnišničnega registra puljske deželne bolnišnice in lokalnega dnevnega tiska je mogoče določiti pojavljanje španske gripe tekom 1918/19 v osrednjem avstroogrskem pristanišču, Pulju. Poleg prevladujočih fizičnih manifestacij, ki jih je izkazovala bolezen, nekateri viri različnih provenienc namigujejo, da bi influenco lahko, bodisi sočasno ali konsekutivno, spremljale tudi duševne motnje. Namen prispevka je bil raziskati, ali so bili isti pacienti, ki so bili v puljski bolnišnici hospitalizirani in diagnosticirani s špansko gripo, tudi hospitalizirani in diagnosticirani s kakšno duševno boleznijo (denimo depresijo, psihozo, manijo itd.) v času od pojava španske gripe, konec avgusta 1918, do konca leta 1920. Rezultati razkrivajo, da noben pacient z diagnozo influence ni bil niti sočasno niti konsekutivno diagnosticiran s kakršnokoli duševno boleznijo. Odsotnost povezave med obema tipoma bolezni je mogoče pojasniti z več možnimi razlagami, na primer: manjša relevantnost duševnih motenj; medicinsko ali administrativno opuščanje pri zapisovanju diagnoz; višja raven diagnostičnega praga za duševne bolezni; ter somatizacija duševnih motenj. V prispevku je sodobni okvir razlaganja medicinske plati tega fenomena primerjan s historičnim kontekstom, zlasti zaradi omejitev povezanih z zanesljivostjo podatkov in standardiziranimi diagnostičnimi kriteriji.*

*Ključne besede: španska gripa 1918/1919, Pulj, virus influence, biopsihosocialni zdravstveni model, duševne bolezni, prva svetovna vojna*

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