
TERRITORIAL FEATURES OF INCIDENCE AND PREVALENCE OF ALCOHOL AND DRUG ABUSE IN THE KOSTROMA REGION

By I. P. Pochitayeva, A. P. Golubeva

Introduction

Over the past 20 years after the collapse of the Soviet Union, abuse of psychoactive substances (PS) has become one of the most serious social and economic problems facing all societal groups, families and causing growing concerns since this problem adversely affects the demographic situation in Russia and poses a real threat to its national security [9]. Even though chronic alcoholism has reduced over the past three years, its share in all substance dependence disorders in different constituent entities of the Russian Federation ranges from 75% to 90%. It is known that detectability of PS addicts, especially drug addicts, remains low. For instance, according to data from the Ministry of Health and Social Development of the Russian Federation, the ratio of people who have drug problems and seek medical advice to the actual number of drug addicts is 1:7 [5]. The number of drug users in Russia, according to sociological surveys, exceeds the official statistical figure 8–10 times and (according to data from the Federal Drug Control Service of the Russian Federation) accounts for nearly 2% of the national population. Users of opiates, including heroin, account for 90% of drug addicts.

In Russia, the trends in drug and alcohol abuse prevalence have pronounced regional differences [9, 8, 4, 1, and 6]. In these regions, action for prevention and control of alcohol and drug abuse should be organized taking into account social, hygienic, economic, and geographical regional specific features primarily in order to prevent early deaths among people of active working age and develop purposeful preventive measures.

Research materials and methods

With a population of 688,000 and urban residents accounting for 70%, the Kostroma Region is located in the center of the European part of Russia and is part of the Central Federal District of the Russian Federation.

The economic and geographic location (on main traffic arteries) of the cities of Kostroma, Sharya, Volgorechensk, Buy, and Nerekhta and their high economic potential necessitate high-priority and prompt measures on the part of drug control authorities.

Caused by a continuing phase of economic instability that arose in 2009–2010, the social and

economic labor situation is characterized by high unemployment levels.

We compared drug situations in the Kostroma Region, Russia [9], the Republic of Sakha (Yakutia) [6], the Novosibirsk Region [2], and the Kabardino-Balkarian Republic [4].

We studied substance dependence disorders for the 1999–2011 period and the territorial features of incidence of substance dependence disorders by evaluating and analyzing statistical data (reports and overviews) for 13 years of observation, interviews with young people and alcohol and drug addicts, and addiction relapse risk factors.

Results and discussion

Over the past years of observations (2009–2011) in the Kostroma Region, mental and behavior disorders caused by PS abuse varied as follows: primary incidence – from 239.3 to 211.6 and prevalence – from 3,098 to 2,872.5 per 100,000 residents, or about 3.0% of the total population (the Russian Federation – 2.3%). The equalization of time series over 13 years of observations made it possible to identify a trend toward increasing primary incidence and prevalence with low average annual rates with an increase of 1.82% and 1.56% respectively.

Primary incidence and prevalence of substance dependence disorders vary substantially across the constituent entities of the Russian Federation.

In the Kostroma Region, for example, the number of registered drug addicts (185.6 per 100,000 residents) is 2.2 times higher than in the Republic of Sakha (Yakutia) [6], 2–3 times lower than in the Novosibirsk Region [2], while primary incidence is 19% higher than in the Kabardino-Balkarian Republic [8]. Different causes of drug abuse were identified in Yakutsk and Neryungri, the Republic of Sakha (Yakutia) [6].

We studied the territorial features of primary incidence and prevalence of substance dependence disorders in the Kostroma Region (Table 1).

The analysis of data shown in Table 1 makes it possible to conclude that the highest levels of prevalence of substance dependence disorders occur in 4 districts: the Manturovo, Sudislavl, Ponazyrevo, and Krasnoselsky districts. For example, the Manturovo District ranks first for primary incidence and prevalence of chronic alcoholism, while the highest levels of primary incidence and prevalence of drug addiction can be observed in Kostroma and the Kostroma and Nerekhta districts.

The data related to the trends in and territorial features of substance dependence disorders in the

Kostroma Region population require detailed and in-depth research to identify relevant underlying factors that can be combined in two large groups: risk factors for disease occurrence and recurrence and factors related to provision and quality of public medical aid.

Of the total number of patients registered in the Kostroma Region, most registered patients were people with chronic alcoholism and alcoholic psychoses and alcohol users with deleterious consequences (86.1%), in the Russian Federation – 82.2%. Drug addicts and abusers accounted for 13.1% (the Russian Federation – 17.3%), while patients with toxicomania and those who abuse non-narcotic PS account for 0.8% (the Russian Federation – 1.1%) (Figure 1).

Therefore, of all substance dependence disorders in the Kostroma Region, special emphasis was placed on alcoholic disorders.

The highest levels of alcoholism with psychoses were observed in the Manturovo, Pyshchug, and Susanino districts respectively. In these districts, primary incidence of alcoholism is nearly 2–3 times higher than the average regional level (Figure 2).

For instance, primary incidence of chronic alcoholism with psychoses and alcoholic psychoses exceeded the regional level 2.8 times in the Manturovo District, 2.2 times in the Pyshchug District, and 2.1 times in the Susanino District.

Fundamental analyses of risk factors related to incidence of chronic alcoholism in the above-mentioned and other problems districts of the Kostroma Region identified a connection with considerable violations in moral, ethical, intellectual, and domestic spheres; violations of labor status; and vulnerable family status—these districts were characterized by frequent criminal offences, criminal records, prevalence of craniocerebral injuries, and organic diseases of the central nervous system.

The Kostroma Region's territorial entities showed the same rank distribution of chronic alcoholism prevalence indicators.

Questionnaire surveys among chronic alcohol addicts showed dependence of relevant indicators on age-sex structure, social status, family traditions, and friend-related social environment.

In the Manturovo District, most people are engaged in heavy manual labor (harvesting timber). In addition, a special commandant's office, special penitentiary institutions, and a large biochemical integrated plant has operated in this district since the 1990s. At present, after deinstitutionalization people stay and work in this district, forming specific social risk groups.

The Pyshchug District is characterized by ruined villages, predominant middle- and old-aged

population, unemployment, and low living standards.

The Susanino District is well-known for its widespread moonshining practices with oftentimes low-quality alcoholic products.

Medical aid appealability and, primarily, availability of drug therapists and psychiatrists play an essential role in registration of alcohol addicts. No incidence of chronic alcoholism was registered in the Kologriv and Neya district, where no drug therapists were available, with no diagnostic procedures for alcoholic disorders put in place.

In Russia, due to increased individual stress levels (measured using the Rider test), i.e. decreasing income level, personal threat, apprehensiveness, domestic conflicts and frustration, as well as the absence of institutions for compulsory medical treatment, low-quality alcoholic products cause a high prevalence of such chronic alcoholism-related complications as alcoholic psychoses. In this respect, the worst situation can be observed in the Pyshchug, Susanino, and Manturovo districts (Figure 3).

Analyses of primary incidence (39.7 per 100,000 people) of alcoholic psychoses in the territorial entities of the Kostroma Region made it possible to identify a connection between incidence of chronic alcoholism and factors determining efficiency of psychosis prevention. For example, incidence of primary psychoses exceeded the average regional level 4 times in the Pyshchug District, 3 times in the Susanino District, and 2.7 times in the Manturovo District, which is indicative of inefficient preventive measures for alcoholic psychoses.

In different territorial entities of the Kostroma Region, differences in drug addiction levels can be explained by a combined effect of social, biological, and economic factors, population density, communications levels, and levels of preventive measures. In terms of drug addiction prevalence, the worst situation can be observed in the City of Kostroma and in the Kostroma and Nerekhta districts. Most people who sought narcological medical advice were opium addicts; according to anamnestic data, 90% of them were people who used Desomorphine, a cheap and easily available drug made of polyvalent codeine-containing drugs available at pharmacies. Desomorphine abuse caused a considerable increase in heavy complications and a rise in mortality among drug addicts. Patients aged 20–39 and 18–19 account for 98.2% and 1.8% respectively. Most patients (83.3% in 2010) were men, while women accounted for only 16.7%. In this connection, the number of female patients has increased from 14.3% to 16.7% over the past.

Conclusion

In the territorial entities of the Kostroma Region, incidence and prevalence of chronic



alcoholism and drug addiction are caused by a combined effect of the following factors: addiction incidence and relapse risks and the organization of narcological aid.

In the territorial entities of the Kostroma Region, the main problem of incidence of substance dependence disorders is prevalence of alcoholic disorders, including chronic alcoholism.

For the purposeful prevention of substance dependence disorders, adequate organization of narcological aid (personnel, diagnostic, and financial resources) should be put in place in specific territorial entities, while taking into consideration the most relevant specific disorder risk factors: population structure in terms of age, sex, social status, education and employment levels, and family and local traditions.

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UDC 616.89-008.441.33-036.22 (470.317)

Summary

We present an evaluation and analysis of the changes in and territorial features of substance dependence disorders in the Kostroma Region, based on the 1999–2011 statistical materials that describe the structure and levels of primary incidence and prevalence. We determined the specific features of territorial differences in chronic alcoholism and drug addiction indicators. In addition, we determined their connection with disorder risk factors. No dependence was determined for chronic alcoholism levels on drug addiction indicators. For purposeful prevention of substance dependence disorders in specific districts, it is necessary to study specific disorder and relapse risk factors and the organization of narcological aid.

Key words: substance dependence disorders, chronic alcoholism, psychoses, drug addiction, territorial entities, Kostroma Region.

Irina Petrovna Pochitayeva, Candidate of Sciences (Medicine), a leading researcher at the Laboratory for Labor Productivity in Public Health Services, Research Institute for Public Health and Medical Administration, Sechenov First Moscow Medical University.

Telephone: 89859247906, justforyouip@gmail.com

Alla Prokofyevna Golubeva, M. D., a professor at the Department for Public Health and Healthcare, Sechenov First Moscow Medical University.

Moscow, 119454, ul. Koshtoyantsa, 5, apt. 60, telephone: 89161643977, apgolub@mail.ru

Table 1

Primary incidence and prevalence of substance dependence disorders in specific territorial entities of the Kostroma Region in 2010 (in indicator ranks per 100,000 people)

N o.	District	Primary incidence			Prevalence		
		Total	Chronic alcoholism	Drug abuse	Total	Chronic alcoholism	Drug abuse
1	Kostroma	9	12	3	7	6	1
2	Volgorechensk	12	13	7	25	25	7
3	Antropovo District	19	20	-	26	26	-
4	Buy District	17	18	-	23	24	11
5	Vokhma District	24	24	-	21	21	12
6	Galich District	13	11	-	16	16	-
7	Kadyi District	5	5	-	13	13	-
8	Kologriv District	-	-	-	20	20	-
9	Kostroma District	7	9	4	8	8	2
10	Krasnoselsky District	8	6	9	5	5	6
11	Makaryev District	15	14	-	22	22	-
12	Manturovo District	2	1	8	1	1	8
13	Mezha District	20	21	-	10	10	-
14	Neya District	-	-	-	18	18	-
15	Nerekhta District	6	8	2	9	9	3
16	Oktyabrsky District	18	19	-	19	19	-
17	Ostrovsky District	21	22	-	2	2	10
18	Pavino District	16	16	-	24	23	-
19	Parfenyevo District	11	10	6	14	14	9
20	Ponazyrevo	23	15	-	4	4	-
21	Pyshchug District	1	2	-	11	11	-
22	Soligalich District	22	23	-	6	6	-
23	Sudislavl District	3	4	1	3	3	6
24	Susanino District	4	3	-	17	17	-
25	Chukhloma District	10	7	-	12	12	-
26	Sharya District	14	17	5	15	15	4
	Total for the Region	242.8	113.7	19.9	3,052.1	2,374.5	166

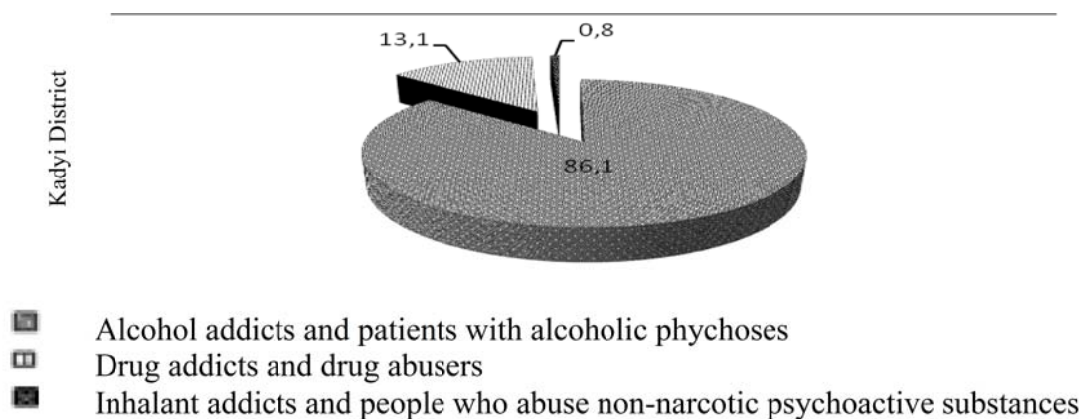


Figure 1. Structure of patients with substance dependence disorders in the Kostroma Region by disorder group (% of the total)

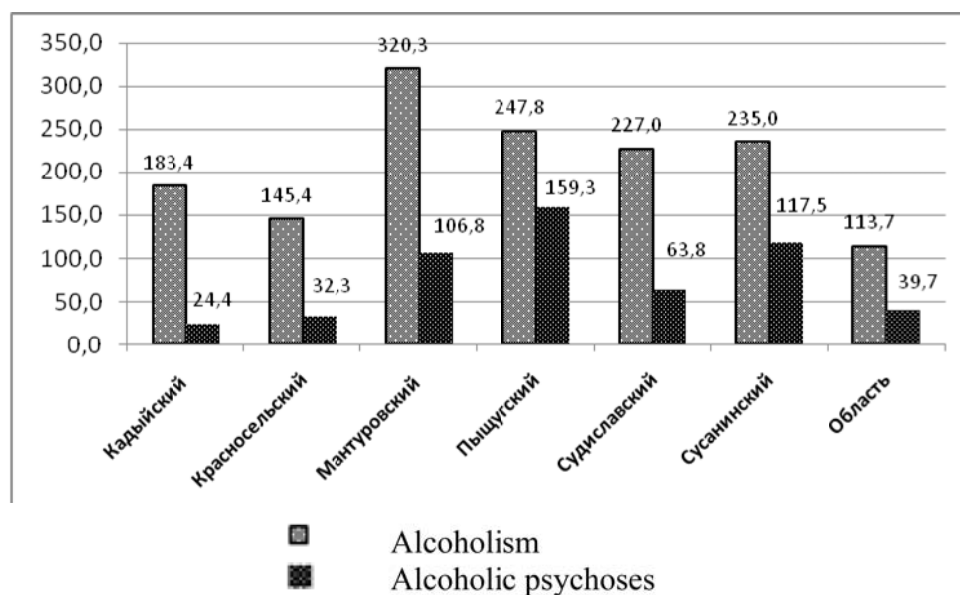


Figure 2. Primary incidence of chronic alcoholism and alcoholic psychoses in 6 districts where relevant indicators exceed the average regional data

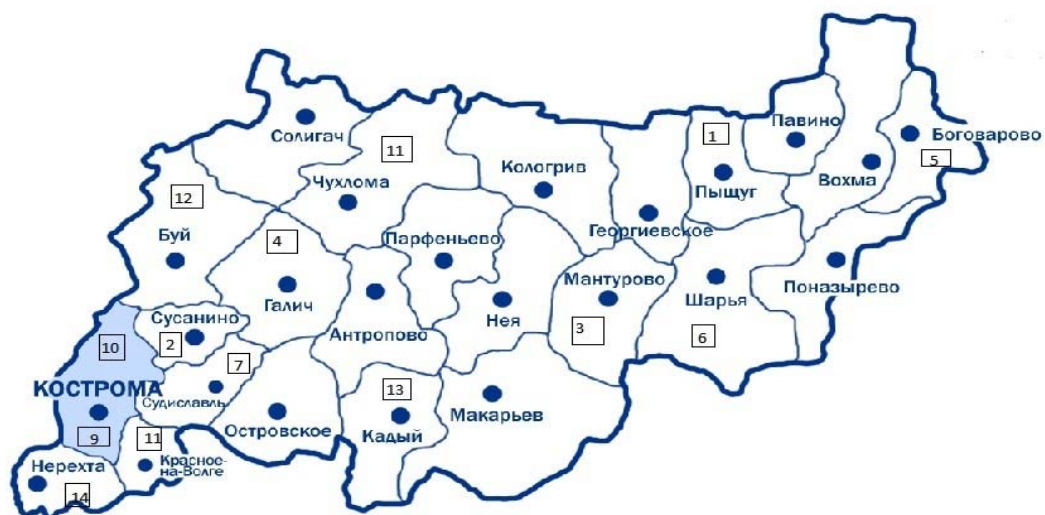


Figure 3. Incidence of alcoholic psychoses in different territorial entities of the Kostroma Region in 2010 (in ranks)