

# The Perception of Various Physician Specialists on Addiction Treatment Methods in Latvia

Velga Sudraba\*

Riga Centre of Psychiatry and Addiction Disorders, Riga Stradiņš University, Latvia

## Abstract

**Introduction:** Many different addiction treatment methods are available in Latvia such as: Evidence-based Psychosocial Interventions (common elsewhere in the world), Opioid Substitution Therapy, and methods popular in the Soviet times (which are not evidence-based). These latter Soviet methods demonstrate the doctor's denial of addiction as an illness and promote "magical thinking" in patients.

**Aim:** of this study was to research the knowledge of various physician specialists on available addiction treatment methods in Latvia and how these methods have been promoted and practiced.

**Material and methods:** A survey developed by the author was used in this study. There were 586 various physician specialists surveyed; their mean age was  $46.8 \pm 10.8$  years. Female were 78% of the respondents.

**Results:** The methods that the doctors were most informed about were Detoxification (96.8%), the Suggestion method without medication intake (86.3%) and the Minnesota program (83.6%). Most often, the doctors suggested the Minnesota program (60.4%) and Detoxification (60.2%) to their patients. A third of the respondents (30.7%) practiced detoxification.

**Conclusion:** The physicians questioned were best informed on acute addiction treatment. Nevertheless, when referring to the bio-psycho-social addiction model, the doctor's knowledge on evidence-based treatment methods for addiction still needed improvement.

**Keywords:** Alcoholics; Detoxification; Drug addicts; Minnesota program; Suggestion

## Introduction

The prevalence of addiction has been growing more and more serious in Latvia. The number of patients with the diagnosis of Substance Use Disorders (SUD) in the medical institution's register [1] fell in 2012 compared to 2010. Still, the number of patients registered with an alcohol-related psychosis has grown, and use of Psychoactive Substances (PAS) among children (0-17 years old) has doubled.

In Latvia, there are numerous possibilities of getting help with substance dependence. Medical professionals implement available methods on patients and patients can also get assistance at specified institutions, but the results have been alarming. In 2012, the mean bed count for substance dependence in state hospitals was 249. This is a decrease of 101 from 2009 when the mean bed count was 350 [2-4]. Taking into account the state's constrained budget conditions, the substance-dependent profile beds have been used mostly for detoxification [5]. With the substance-dependent patients spending a mean of 4.5 [3] days at in-patient care clinics, there is a great risk of relapse. In addition, the current ambulatory care system cannot offer any adequate continuing therapy to these patients, which would ensure a quality relapse prevention program. With the treatment times getting shorter and shorter, the patients return to the acute substance dependence (detoxification) wards multiple times per year [6]. This is a direct result of premature discharge from in-patient care and not receiving the proper psychotherapy. The treatment of substance dependent patients in Latvia is chiefly focused on treatment in a much narrower context when compared to other EU states. According to the definition of treatment in other EU member states, structured interventions using specific medicinal and/or psychosocial techniques [6] are strongly recommended.

Many substance dependence treatment methods popular in Latvia during the 1950s are still in use today. These methods are related to patient "suggestion". From suggestion without medication, to suggestion with intravenous or subcutaneous medication intake just to name a few. These methods of treatment were especially popular and common in Soviet and Post-soviet medicine. Incredibly, during this period, the intellectual and institutional politics disputed the scientific knowledge of the mind and the brain [7-9].

Many addiction specialists describe "suggestion" as a kind of psychotherapy and have called it by a number of names: emotional-stress psychotherapy or "coding" [10], express-stress-psychotherapy or "coding by Dovzhenko" [11]. It is then presented as a magical cure [11,12]. The patient is prompted that his brain will be coded for as long as he chooses – one, two or five years or his whole life [11]. The elderly, (also known as Homo Sovieticus), has been described to be more susceptible to such influence, suggestion and manipulation. The older generation is said to be more conformist-like when compared to younger people [13]. Furthermore, in addition to "coding", "uncoding" exists as well. This is when the patients believe that something has been done to their brain [12,14]. The Medicinal technologies of

\*Corresponding author: Velga Sudraba, Riga Centre of Psychiatry and Addiction Disorders, Riga Stradiņš University, Latvia, Tel: +371-291-155-2; E-mail: [velgasudraba@gmail.com](mailto:velgasudraba@gmail.com)

Received November 24, 2013; Accepted February 13, 2014; Published February 17, 2014

**Citation:** Sudraba V (2014) The Perception of Various Physician Specialists on Addiction Treatment Methods in Latvia. J Alcohol Drug Depend 2: 149. doi:10.4172/2329-6488.1000149

**Copyright:** © 2014 Sudraba V. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

The National Health Service (NHS) state that: “the prevention of addiction-illness relapse, using psychotherapy, suggestion therapy and sensibilizing medicine” is “a method for treating alcohol addiction, aimed towards ensuring long-term abstinence [15]”, using Nitrofurantoin group medications, vitamins (*Acidum nicotinicum*), Xantanol group preparation specimens for sensibilizing therapy and for aversive conditioning.

A “suggestion” with a medical treatment (Disulfiram) implantation under the skin is also offered. This guarantees abstinence from PAS for many years, without any additional therapy needed for addiction patients.

Since 1996, replacement pharmacotherapy (opioid substitution therapy) has also been used in Latvia. This replacement pharmacotherapy has been done using methadone, and since 2005, buprenorphine. Latvia contains the lowest number of methadone program patients in the whole E.U. [16]. However, it has to be emphasized that after detoxification the patients were immediately included in long-term pharmacotherapy. This carries with it a great risk of relapse due to the burdensome nature of psychosocial treatment in Latvia.

Latvia also has three Minnesota Program (MP) wards. Their capacity is limited however, with only 40 beds. In fact, over the past 20 years, not a single new ward has been established. The addict rehabilitation programs have also been practically eliminated with the state now paying for a mere 6.6 patients. As a result, the rehabilitation of substance dependent adults in the state is practically non-existent.

Heinz et al. [17] describes a similar situation. Heinz has shown that only 5% of the patients get the proper treatment. Every year about 30% of alcohol dependant people arrive at hospitals for treatment of the physical illnesses caused by alcoholism, instead of seeking treatment for the alcohol dependence itself. As the addictions are the root cause of many of the physical impediments and illnesses [18,19], several questions arise: 1. Were the doctors informed on dependence treatment options? 2. Did they practice these options themselves? 3. Did they recommend these methods to their patients? 4. Did they direct their patients to places they could receive care?

Aim of this study was to research the knowledge of various physician specialists on addiction treatment methods in Latvia and how these methods have been promoted and practiced.

## Material and Methods

### Participants of the study

There were 586 various physician specialists, working in different regions of Latvia, surveyed. The age of the participants varied from 24 to 74 years, the mean age – 46.8 (SD ± 10.8); and 78% (457) of them were female. Two thirds of the doctors surveyed were in the age group of 40-59 years of age. The participants had the following specialties: Internal Specialists-217, General Practitioners-149, Psychiatrists-94, Surgeons-38, Psychotherapists-29, Pediatricians-27, Addiction Specialists-25, and Dentists-7. The distribution of specialties by percentage can be seen in Figure 1.

### Measurement

A survey developed by the author of this study was used consisting of 14 questions. There were four socio-demographic questions; eight questions on encountering addiction patients on the doctor's professional day-to-day routine, on treatment methods and self-help

groups, the suggestion of these methods to patients, or the use of these at the doctor's own practice; two open questions on the shortcomings and improvements in addiction help. For the first 12 questions, the respondents answered the questions that referred to their knowledge, practice or promotion of treatment with a “Yes” response. The last two questions called for written responses. But these last two questions will not be analyzed in this study. Beforehand, a pilot study for the validation of the survey was carried out, using surveys and interviews.

### Settings

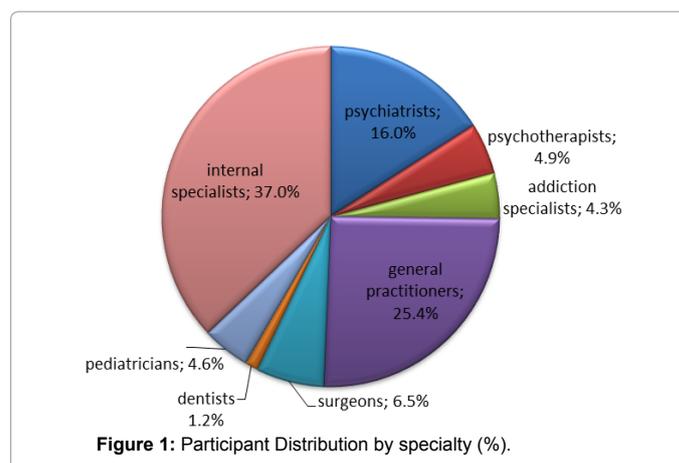
The surveys were electronically distributed to doctor associations (99) registered with the Latvian Medical Association (except the Latvian Association of Pathologists). From March 1, 2010, to December 31, 2011, there were 639 responses received of which 53 (8.3%) were unacceptable due to missing or deficient answers. There were 586 surveys that were deemed acceptable. The minimal number of respondents in order to obtain statistical validity of results was 560 doctors, assuming a 95% confidence interval ± 4% sampling error, and with a proportion of 50% [20]. At the end of 2011, there were 6,953 physicians and 1,474 dentists (8,427 in total) registered.

### Results

During their day-to-day professional work, 81.1% of the doctors encountered alcoholics, 45.5% encountered drug addicts, 30.7% encountered gamblers, but 17.7% responded that they did not encounter addicts during their daily professional work (Figure 2).

When asked, what addiction treatment methods they are familiar with, the respondents specified that they were familiar with detoxification (96.8%), the suggestion method without medication intake (86.3%) and MP (83.6%). A smaller number of respondents (82.1%) noted that they were familiar with the Suggestion method involving sewing depot implantation sample treatment under the skin. An even smaller number of respondents were familiar with replacement therapy (69.3%); suggestion with i/v medication intake (67.9%); rehabilitation communities for drug addicts (62.6%). Of all the respondents, 1.0% replied that they were not familiar with any of the presented methods. The statistical indicators for familiarity with addiction therapies by specialty are given on Table 1.

When responding to which of the treatment methods the respondents advise to their patients, the most common answers were MP (60.4%) and detoxification (60.2%), a fourth (25.8%) of the



respondents admitted to advising the suggestion method without medication intake and rehabilitation communities for drug addicts (Table 2).

Suggestion with depot preparation implantation under the skin was advised by 22.9% of the respondents, venous injection by 18.4%; replacement therapy by 21.2%. Of all the respondents, 21.5% noted that they do not advise any of the presented methods.

The respondents of the study not only advised these methods, but also practiced them in their everyday professional work. A third (30.7%) practiced detoxification. The other methods were practiced by a relatively small group of the surveyed doctors: 4.4% practiced suggestion with medication injection i/v; 3.1% - practiced replacement therapy; 2.4% practiced suggestion with planting of depot preparation s/c and without medication intake; 4.1% practiced MP; 1.4% recommended addict communities. There were 65.4% of the respondents that noted that they do not practice any of the addiction treatment methods. One can see the practiced addiction treatment therapies by specialty on Table 3.

When compared by specialty, the addiction treatment methods most practiced by addiction specialists were: detoxification (84.0%), suggestion with medication injection i/v (52.0%) and replacement therapy for addicts (40.0%). Moreover, 4.0% of the addiction specialists did not practice any of the methods at all.

## Discussion

In this study, it has been established that the familiarity with addiction treatment methods, the advising of these methods and the practice of these methods varies among different physician specialists. There were 586 doctors of different specialties surveyed in different regions of Latvia. Most of the respondents were doctors aged 40-59 years old. This leads one to believe that these were specialists with significant professional and life experience. By specialty, most of the respondents were internal specialists and general practitioners. This would lead one to assume that in their everyday professional work, these specialists must have surely been examining and observing SUD patients in relation to somatic illnesses caused or intensified by the use of PAS. The respondents also noted that in their professional work they encountered SUD patients – mostly alcoholics. Psychotherapists

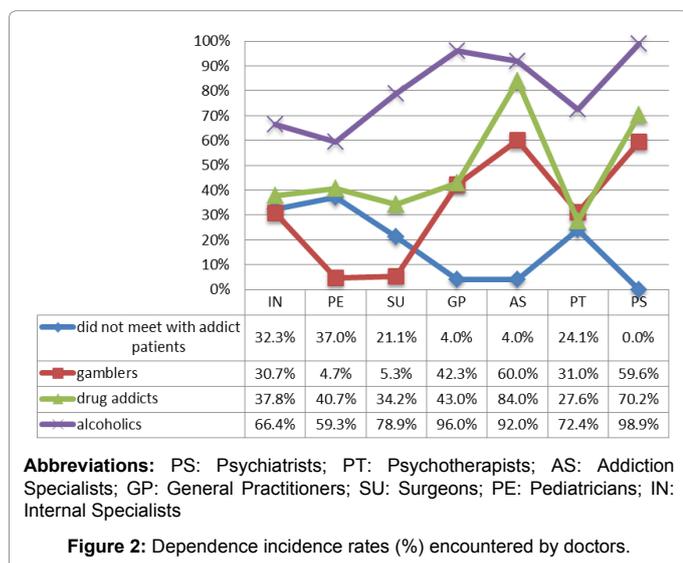
encountered more addicts than internal specialists. This may have been due to the fact that psychotherapists contact patients over a longer period of time or had better knowledge of the bio-psycho-social etiology and outcome of the illness. While treating the addicted patients, one cannot disregard the importance of the patient's personality functional level, the psychological defense mechanisms, the national costs in cases of relapse, and finally, the possible outcome of invalidity.

Nonetheless, nearly a fifth of the respondents noted that they did not encounter SUD patients. This means (1) during their everyday work, the doctors mainly pay attention to illnesses related to their own specialty; (2) that the doctors have trouble recognizing symptoms and patients of addiction (3) they have problems linking physical symptoms to the use of psychoactive substances. This begs further study in the future. Physical and mental health problems caused by the discontinuation of substance use are non-specific. They can affect any organ system of the body and they can manifest themselves as dysfunctional organs or illnesses [18,21]. What really begs further pondering on this subject is that in their everyday work, SUD patients are encountered not only by internal specialists and general practitioners, but also by addiction specialists. This leads one to wonder whether the respondents were being either careless or dishonest about their answers. Questions also arise from the fact that a third of internal specialists noted that they did not encounter SUD patients, but at the same time an equal number of internal specialists noted that they encountered gamblers. This leads one to assume that doctors that encountered SUD patients had difficulty in diagnosing SUD or talking about it to their patients [22-24].

Indeed, in 80% of the cases, the patients did not continue to undergo treatment after the initial first treatment, even though this is recommended due to the chronic illness nature of addiction. The length of the treatment shortens and the number of re-admitted patients increases. Researchers from Germany expressed the same view [17] with only 5% receiving the proper treatment. Every year about 30% of alcohol dependent patients find themselves in hospitals, being treated for the physical illnesses caused by alcoholism instead of the alcohol dependence itself [17].

The survey also inquired about the familiarity of the respondents to different addiction treatment methods. Of all the respondents, only a few specialty physicians were fully informed on separate methods (psychiatrists and addiction specialists were informed on detoxification, psychotherapists – on MP). It is hard to imagine how the patients are going to be informed of their chronic, relapsing illness, if the specialists themselves were not informed or were only partially informed. None of the surveyed psychiatrists, psychotherapists, addiction specialists and pediatrics admitted to not knowing any of the methods. At the same time however, some surgeons, general practitioners and internal specialists noted that they were not familiar with any of the methods. The responses from the addiction specialists cause one to think. Why was there part of the specialists who were not familiar with, for example, replacement therapy, addiction rehabilitation communities, and MP and suggestion methods. This suggests that these specialists have trouble offering proper care to substance dependents, designating the help they need or pointing them towards a medical institution that offers the medical help needed. This also highlights the necessity of making addiction specialists, not only doctors of different specialties, familiar with addiction treatment therapies and other treatments.

When asked about advising methods of help for addiction, the respondents note that they mostly recommend MP and detoxification.



Methods	PS (94)	PT (29)	AS (25)	GP (149)	SU (38)	PE (27)	IN (217)
Detoxification	<b>100.0</b>	96.6	<b>100.0</b>	98.0	92.1	96.3	95.9
Suggestion with medication s/c	<b>93.6</b>	86.2	92.0	90.6	78.9	48.1	74.7
Suggestion with medication i/v	91.5	75.9	<b>96.0</b>	77.2	42.1	29.6	57.6
Suggestion without medication intake	<b>96.8</b>	93.1	96.0	89.3	73.7	77.8	81.6
Replacement therapy	91.5	72.4	<b>92.0</b>	75.2	44.7	66.7	58.5
MP	92.6	<b>100.0</b>	96.0	87.9	60.5	92.6	76.5
Drug addicts communities	78.7	65.5	<b>92.0</b>	61.1	50.0	70.4	54.5
Not familiar	0.0	0.0	0.0	0.7	5.3	0.0	0.9

**Abbreviations:** PS: Psychiatrists; PT: Psychotherapists; AS: Addiction Specialists; GP: General Practitioners; SU: Surgeons; PE: Pediatricians; IN: Internal Specialists

**Table 1:** The respondent's familiarity with addiction treatment methods by specialty (%).

Methods	PS (94)	PT (29)	AS (25)	GP (149)	SU (38)	PE (27)	IN (217)
Detoxification	80.9	31.0	<b>88.0</b>	75.2	44.7	25.9	50.2
Suggestion with medication s/c	42.6	10.3	<b>56.0</b>	26.8	23.7	3.7	12.0
Suggestion with medication i/v	38.3	6.9	<b>52.0</b>	25.5	7.9	0	7.4
Suggestion without medication intake	<b>40.4</b>	6.9	40.0	35.6	23.7	0	18.0
Replacement therapy	33.3	6.9	<b>60.0</b>	24.2	13.2	3.7	15.7
MP	81.9	79.3	<b>92.0</b>	72.5	34.2	44.4	44.2
Drug addicts communities	39.4	27.6	<b>72.0</b>	24.2	15.8	14.8	19.4
Did not advise	6.4	17.2	0	7.4	36.8	<b>44.4</b>	33.6

**Abbreviations:** PS: Psychiatrists; PT: Psychotherapists; AS: Addiction Specialists; GP: General Practitioners; SU: Surgeons; PE: Pediatricians; IN: Internal Specialists

**Table 2:** Addiction treatment methods advised by the respondents to their patients, respondents shown by specialty (%).

Methods	PS (94)	PT (29)	AS (25)	GP (149)	SU (38)	PE (27)	IN (217)
Detoxification	57.4	0	<b>84.0</b>	32.2	21.1	11.1	21.2
Suggestion with medication s/c	5.3	0	<b>32.0</b>	0.7	0	0	0
Suggestion with medication i/v	12.8	0	<b>52.0</b>	0.7	0	0	0
Suggestion without medication intake	6.4	0	<b>12.0</b>	1.3	2.6	0	0.9
Replacement therapy	7.4	0	<b>40.0</b>	0.7	0	0	0
MP	4.3	6.9	<b>36.0</b>	3.4	2.6	3.7	0.9
Drug addicts communities	0	3.4	<b>12.0</b>	0	0	3.7	1.4
Did not practice	35.1	93.1	4.0	65.8	73.7	85.2	76.5

**Abbreviations:** PS: Psychiatrists; PT: Psychotherapists; AS: Addiction Specialists; GP: General Practitioners; SU: Surgeons; PE: Pediatricians; IN: Internal Specialists

**Table 3:** Addiction treatment methods practiced by respondents in their day to day professional work, respondents by specialty (%).

These responses were marked by almost two thirds of the respondents. Even so, taking into account the limited possibilities of MP wards in Latvia, this kind of help is given to a mere fraction of patients.

The doctors questioned not only advised some of the methods to their patients, but they also practiced some of the methods themselves during their professional everyday work. Addiction specialists practiced detoxification most often. More than half practiced suggestion with medication injection i/v. Since this method is not evidence based, it might match the specialist's positions that (1) the patients are responsible for their illness, and therefore, they must be punished [22,25,26] or (2) the specialist's faith in "magical" methods [11,12], or (3) their inability to view a patient as a dysfunctional personality [14,27]. More exploration is needed due to the fact that none of the surveyed surgeons marked that on their day-to-day professional work did they use suggestion method with s/c input of medications. Even though Medicinal technologies of The National Health Service states that this procedure is done with the cooperation of an addiction specialist and a surgeon [15]. Perhaps this has to do with the small number of surgeons surveyed, which could have been a limitation of this study. It would be useful to do a study on a larger scale with a greater number of respondents. This study also shows that one in five surgeons practiced detoxification. This corresponds to what is written in the literature that these specialists encounter highly

intoxicated patients [18]. The replies of the general practitioners makes one reflect. Moreover, they show that a third of general practitioners practiced detoxification in their everyday work, even though this was not a first-hand responsibility of the general practitioner. There is no data as to whether these patients were motivated to get further therapy. Perhaps, the general practitioners thought that detoxification was enough. To reveal this, an extended study would be needed in place. One tenth of the pediatricians practiced detoxification as well. This means that under-aged people have the chance to gain and use PAS in an uncontrolled atmosphere. It also means that children and teenagers were not aware nor educated enough on the dangers of PAS. This fact may be due to the marked increase of PAS [28]. The number of women addicts with malicious intentions has increased and that can cause many different changes in child development [29,30], and increases SUD intensity [31].

Indeed, a great deal of contemplation stems from the fact doctors of practically all specialties mentioned in this study claim that they practiced MP. This is a program that is realized at an in-patient clinic, which is based on group therapy. Furthermore, it illustrates the contradictory nature of the responses received. The doctors say that they were unfamiliar with MP, but at the same time they practiced it. This would lead one to believe that their familiarity with this method

was insufficient. It is probable that these doctors provided socially desirable answers.

## Limitations of the Study

In the group of respondents, 8.4% of the doctors practicing in Latvia were surveyed. The number of the surveyed respondents matches the statistical validity indicators of the sample even though the use of available sample must be noted as a limitation of this study. It is possible that the poor cooperation in the study was associated with lack of interest and/or lack of experience with the doctors in this particular field. Also, the electronic surveys must be acknowledged as a limitation. This may have created difficulty responding to and receiving the survey for those respondents, whose electronic resources were not available.

The stratum of doctors by specialty shows that the best represented groups were psychotherapists (80%), psychiatrists (37%) and addiction specialists (42%). In fact most substance addicts turn to these specialists most of the time because of mental disorders or acute somatic impediments. A smaller number of intern specialists have been surveyed (5%), which was also a limitation of the study. In the scientific literature, there are studies on the doctor's attitude towards addiction patients and the doctor's familiarity with addiction problems. In these studies, it can be seen that physicians of only one specific specialty were surveyed (general practitioners, first aid doctors etc.) [22,23]. In this study, it was critical to underline the importance of the problem at hand. Therefore, many doctors from different specialties were surveyed.

## Conclusions

In Latvia, methods not based on evidence are still advised to SUD patients by physicians.

1. The respondents are most informed of detoxification, which is not a SUD treatment method. In fact, it is a method of acute help. The respondents are also well-informed on suggestion method without medication intake, which does not change anything for the patient on his/her bio-psycho-social plane.
2. The respondents are least informed about rehabilitation communities for addicts, which have been decimated in Latvia.
3. Physicians must receive more education on addiction illness, the signs and possible outcomes of such illness. In this way, the specialist's attention would turn towards the need to stimulate patients to receive therapy, and not merely rely on passive, magical methods.
4. It is important to expand MP possibilities, by appropriating finances that could ensure improvements of the SUD patient's bio-psycho-social functioning.
5. It would be useful to extend the sample studied by surveying more doctors.

## References

1. (2012) Health Care Statistics. Disease Prevention and Control Centre Public Health.
2. (2011) Use of Psychoactive substances and its consequences in Latvia 2010. National Health Service Thematic report, 19th edition, Riga.
3. (2013) Inpatient care. Centre of Disease Prevention and Control. Statistical data on the 2012th year, Riga.
4. (2010) Statistical data on the hospital bed fund and its utilization rates, employment rates Latvian surgical hospitals and hospital patients treated in 2010. Centre of Health Economics Inpatient care, Riga.
5. (2011) European Monitoring Centre of Drugs and Drug Addiction, National Health Service, State of the drugs problem in Latvian 2010th year. National Report. Riga: Reitox.
6. (2011) Guidelines on containment of drugs and psychoactive substances and their dependence and control for the period 2011 to 2017. Ministry of Interior.
7. IwaniecHH (2001) The modern concept of substance abuse treatment. Lectures on Addiction. Ivanets HH, Moskva, Editors, Medical Practice.
8. Mendeleovich VD (2005) Modern Russian addiction treatment: the paradoxical principles and faulty procedures. *Drug and alcohol abuse*.
9. SofronovAG (2003) Actual problems of domestic addiction. *Наркология* 3: 2-6.
10. RoznovBE, BurnoME (1987) System of emotional-stress psychotherapy patients with alcoholism. *Советская Медицина* 8: 11-15.
11. MiroshnichenkoLD, PelipasBE (2001) Addiction Treatment Dictionary. Moskva: Anacharsis, Russia.
12. Raikhel E (2010) Post-soviet placebos: epistemology and authority in Russian treatments for alcoholism. *Cult Med Psychiatry* 34: 132-168.
13. Oushakine SA (2000) The Quantity of Style. Imaginary Consumption in the New Russia. *Theory Culture & Society* 17: 97-120.
14. Chepurnaya O, Etkind A (2006) Instrumentalization of death. Lessons antialcoholic therapy. *Отечественные Записки* 27: 201-213.
15. (2004) Database of Medical technology for Therapeutic use. National Health Service [In Latvian].
16. Avants SK, Margolin A, Usubiaga MH, Doebrick C (2004) Targeting HIV-related outcomes with intravenous drug users maintained on methadone: a randomized clinical trial of a harm reduction group therapy. *J Subst Abuse Treat* 26: 67-78.
17. Kienast T, Heinz A (2003) Therapy and supportive care of alcoholics: guidelines for practitioners. *Dig Dis* 23: 304-309.
18. (2004) Neuroscience of psychoactive substance use and dependence. World Health Organization, Geneva, Switzerland.
19. Gitlow S (2001) Substance use disorders. A practical guides in psychiatry. Second edition, Lippincott Williams & Wilkins, Philadelphia, USA.
20. Sample Size Calculator. Creative Research Systems.
21. Anderson P, Baumberg B (2006) Alcohol in Europe. A public health perspective. A report for the European Commission. Institute of Alcohol Studies, UK.
22. Tang YL, Wiste A, Mao PX, Hou YZ (2005) Attitudes, knowledge, and perceptions of Chinese doctors toward drug abuse. *J Subst Abuse Treat* 29: 215-220.
23. Rapley T, May C, Frances Kaner E (2006) Still a difficult business? Negotiating alcohol-related problems in general practice consultations. *Soc Sci Med* 63: 2418-2428.
24. Kelleher S, Cotter P (2009) A descriptive study on emergency department doctors' and nurses' knowledge and attitudes concerning substance use and substance users. *Int Emerg Nurs* 17: 3-14.
25. Burns E (2004) *The Spirits of America: A Social History of Alcohol*. Temple University Press, Philadelphia, USA.
26. Roizen R (2004) How Does the Nation's 'Alcohol Problem' Change from Era to Era?: Stalking the Social Logic of Problem Definition Transformations since Repeal. *Altering American Consciousness: The History of Alcohol and Drug Use in the United States, 1800-2000*. Tracy SW, Acker CJ (editors). University of Massachusetts Press, Boston, USA.
27. Miller WR, Hester RK (2003) Treating alcohol problems: Toward an informed eclecticism. *Handbook of alcoholism treatment approaches: Effective alternatives*, Hester R, Miller W (editors), 3rd edition, Boston: Allyn & Bacon, USA.
28. (2011) Situation of the drugs problem in Europe. European Monitoring Centre of Drugs and Drug Addiction. 2011 report. Lisbon.
29. Sokol RJ, Delaney-Black V, Nordstrom B (2003) Fetal alcohol spectrum disorder. *JAMA* 290: 2996-2999.
30. Fryer SL, McGee CL, Matt GE, Riley EP, Mattson SN (2007) Evaluation of psychopathological conditions in children with heavy prenatal alcohol exposure. *Pediatrics* 119: e733-741.
31. (2012) Mental and behavioral disorders due to psychoactive substance use. Centre of Disease Prevention and Control Health care statistics. The statistics for the year 2011, Riga.