Patterns of Admission for Alcohol Dependence Syndrome Treatment among Prisoners Over 18 Years in Poland

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Abstract

Background

Alcohol dependency syndrome is a disease often found among persons staying in prison. Nowadays, in most cases, the patients are treated in prison therapeutic departments and in prison wards. People qualified for therapy wait for the admission in prisons and are transported to the therapy units as soon as the place is unlocked. Addicts are treated by the prison psychiatrists, psychotherapists and psychologists.

Methods

Demographics data from Information and Statistics Bureau CZSW were analyzed over a period of 18 years. This focused on number of admissions and type of therapy (inmates treated in prison therapy department; prisoners awaiting admission to prison therapy department; inmates treated outside the therapy department).

Results

Over 18 years, 29,002 statistical data were collected describing the number of prisoners diagnosed as alcohol addicts and qualified for therapy. Between 2001 and 2002 there was a statistically significant decrease in the number of prisoners treated for alcohol dependence syndrome (p <0.05). In the years 2002 - 2018 there was an increase in the number of prisoners treated due to alcohol dependence syndrome (p <0.05). In 2012, a statistically significant decrease was observed in prisoners treated for alcoholism (p <0.05). Admissions were higher among prisoners in 2013 treated in connection with alcoholism (p <0.05). In the period 2013 - 2018, the changes in the number of prisoners treated due to alcohol dependence syndrome were not statistically significant.

Conclusion

There has been a significant change in admissions for treatment for alcohol dependence syndrome over the past 18 years among prisoners staying in Polish penitentiary units.

Keywords: Addictions; Alcohol dependence syndrome, Prisoners; Prison health care

Introduction

Alcohol dependency syndrome is a disorder, whose diagnosis according to the ICD-10 criterion requires the presence of at least three of the following symptoms for a certain period of time during the previous year:

1. Strong need or urge to drink alcohol.
2. Difficulties in controlling the start or end of drinking or the amount of alcohol consumed.
3. Occurrence of withdrawal syndrome after stopping or reducing the dose of alcohol, manifested by the characteristic symptoms of alcohol withdrawal syndrome or taking the same (or very similar substance) to reduce the severity or avoid symptoms of withdrawal syndrome.
4. Symptoms of tolerance, such as increasing the dose of alcohol to obtain effects that were initially caused by lower doses (a good example is people addicted to alcohol who are able to drink the amount of alcohol that could cause loss of consciousness or death in unaccustomed people).
5. Increasing neglect of other pleasures or interests due to drinking alcohol.
6. Increased time spent on getting alcohol, drinking alcohol or regaining balance after drinking alcohol.
7. Continued drinking despite obvious evidence of harmful consequences such as liver damage due to heavy drinking or depressed mood following periods of drinking large amounts of alcohol [1].

The State Agency for Solving Alcohol Problems estimates that the number of people addicted to alcohol in Poland is about 800 thousand. (2% of the population) [2]. Untreated disease can lead to complications, including cirrhosis, cachexia, polynuropathy, gastritis and the co-occurrence of financial problems in contact with people, family life disorders. Moreover, research shows that alcohol addiction affects penalty increase. People under the influence of alcohol in Poland are mostly perpetrators of violence and there is a statistically significant link between car accidents and alcohol consumption [3]. Some of these people are tried by the court for causing a criminal offense resulting in a restriction of liberty. Convicted persons are sent to prison, where they might be diagnosed alcohol dependence syndrome.
and treatment might be prescribed. Serving a prison sentence where human freedom is limited means that the prisoner has no influence on the choice of the attending physician and the method of treatment, so the whole prison system has the responsibility to care for the sick.

This work was created as an analysis of the number of prisoners diagnosed per alcohol dependence syndrome and qualified for treatment in prisons in Poland in the years 2001-2018. Data was obtained from the Information and Statistics Office of the Central Management of Polish Prison available on the website www.sw.gov.pl.

Methods and Materials

The following epidemiological descriptive study uses secondary sources of information in the form of aggregate reports available at the Information and Statistics Office of the Central Management of Polish Prison available on the website www.sw.gov.pl. The analysis covered a group of prisoners in Poland in prisons in the years 2001-2018.

The following variables were taken for analysis: The number of prisoners addicted to alcohol staying in wards, the number of prisoners addicted to alcohol waiting to be admitted to the ward, the number of prisoners addicted to alcohol treated outside the ward and the total number of prisoners addicted to alcohol as a percentage of the total number of prisoners.

Results

Characteristics of the studied population

In 2001, the number of prisoners treated for alcohol dependence syndrome was 2,495 people and constituted 3.13% of the total population of prisoners, while at the end of 2018 this number was 2,127 and this year the percentage of prisoners treated for alcohol dependence syndrome in relation to the total number of prisoners was 2.95%.

The trend graph of the percentage of prisoners treated for alcohol dependence as a percentage of all prisoners is presented in figure 1.

In the period 2002 - 2012 there was a constant slight increase in the percentage of prisoners treated in relation to the total number of prisoners - at the end of 2011 this percentage reached the level of 2.27%. Year 2012 presents a significant decrease in the percentage of prisoners treated in relation to the total number of prisoners - from 2.27% to 1.78% at the end of 2012 year, followed by an increase to 2.67% in 2013. In the years 2014 - 2018 changes in the percentage ratio of the number of prisoners treated for alcoholism in relation to the total number of prisoners are not statistically significant - they range between 2.81% and 2.95%.

The trend in the number of prisoners in Poland treated for alcohol dependence syndrome in absolute values in the years 2001 - 2018 is presented in figure 2.

In the analyzed period, with the exception of 2001, which is significantly different from the other analyzed years, the average number of prisoners treated for alcohol dependence was 1,559 prisoners and increased in the examined period from the number of 539 prisoners treated in 2002 to the number of 2,127 prisoners treated in 2018, which is identified as a statistically significant increase.

In 2002 compared to 2001 there was a statistically significant decrease in the number of prisoners treated for alcohol dependence syndrome from the level of 2,495 people to the level of 539 people (almost five-fold decrease).

Starting from 2002, the total number of prisoners treated for alcohol dependence in prisons in Poland showed an upward trend except for 2008-2010 and 2013-2018, when the increases were not statistically significant.

In 2012, a statistically significant decrease was observed in prisoners treated in connection with alcohol dependence syndrome. As observed in the table 1 below, it was observed that the decrease was related to the decrease of prisoners qualified for the group awaiting admission to the department at the end of 2012 (a decrease of 416 people). The appearance in 2013 of a group of inmates treated outside the department in statistically significant numbers (671 people at the end of 2013 compared to 3 people at the end of 2012) constituted a statistically significant increase and contributed to a statistically significant increase year-over-year of the total number of prisoners treated in Polish prisons.
Characteristics of the studied population by subgroups

The number of prisoners treated in connection with the alcohol dependence syndrome staying in treatment departments, the number of prisoners waiting to be admitted to the department and the number of prisoners treated for the alcohol dependence syndrome outside the department in the years 2001-2018 is presented in Table 1 below (statistically significant year-on-year increases are marked in blue, statistically significant year-on-year decreases are marked in red).

| Date       | Inmates Treated in Departments | Inmates Waiting for Admission to the Department | Inmates Treated Outside the Department | Inmates Treated for Alcohol Dependence Syndrome - Total |
|------------|--------------------------------|-----------------------------------------------|----------------------------------------|--------------------------------------------------------|
| 31.12.2018 | 1108                          | 546                                           | 473                                    | 2127                                                   |
| 31.12.2017 | 1167                          | 502                                           | 467                                    | 2316                                                   |
| 31.12.2016 | 1139                          | 439                                           | 413                                    | 2011                                                   |
| 31.12.2015 | 1088                          | 428                                           | 519                                    | 2035                                                   |
| 31.12.2014 | 1008                          | 496                                           | 564                                    | 2068                                                   |
| 31.12.2013 | 1015                          | 421                                           | 671                                    | 2107                                                   |
| 31.12.2012 | 1075                          | 421                                           | 2                                      | 1498                                                   |
| 31.12.2011 | 1008                          | 837                                           | 1                                      | 1846                                                   |
| 31.12.2010 | 943                           | 727                                           | 2                                      | 1672                                                   |
| 31.12.2009 | 881                           | 721                                           | 0                                      | 1602                                                   |
| 31.12.2008 | 792                           | 722                                           | 1                                      | 1515                                                   |
| 31.12.2007 | 762                           | 627                                           | 0                                      | 1389                                                   |
| 31.12.2006 | 706                           | 492                                           | 2                                      | 1200                                                   |
| 31.12.2005 | 655                           | 444                                           | 1                                      | 1080                                                   |
| 31.12.2004 | 546                           | 399                                           | 3                                      | 948                                                    |
| 31.12.2003 | 460                           | 259                                           | 15                                     | 734                                                    |
| 31.12.2002 | 396                           | 119                                           | 24                                     | 559                                                    |
| 31.12.2001 | 384                           | 180                                           | 1931                                   | 2495                                                   |

Table 1: The number of prisoners treated per alcohol dependence syndrome in the years 2001-2018 broken down into subgroups; Source: Own study based on information provided by the Information and Statistics Office of the Central Statistical Office; Year-on-year increases statistically significant are marked in blue, statistically significant year-on-year decreases are marked in red.

In 2001, out of the total amount of 2,495 prisoners treated for alcohol dependence, 77% (1,931 prisoners) were treated outside the department; in the following year the number of prisoners treated outside the department decreases by 98% to the number of 24 people and this is a statistically significant decrease.

The absolute number of prisoners treated in connection with alcohol dependence syndrome increased statistically significantly in the years 2003-2008, 2011 and 2013. In 2012, the number of inmates treated for alcohol dependence syndrome fell by 348 people (23%) and this is a statistically significant decrease - the decrease in 2012 was mainly related due to almost a half of the number of prisoners awaiting admission to the department, while the number of inmates remaining in the department and inmates treated outside the department remained unchanged. In 2013, there was a statistically significant increase in the number of inmates treated outside the department (from 2 inmates to 671 inmates), which contributed to a statistically significant increase in the number of treated inmates in total. In the remaining years analyzed, the number of prisoners treated in connection with alcohol dependence syndrome remained at a similar level-changes in numbers in the years 2014 - 2018 were not statistically significant.

The largest subgroup among prisoners treated for alcohol dependence syndrome was a subgroup of inmates located in the department and, with the exception of 2001, it was the subgroup with the highest amount of inmates treated for alcohol dependence syndrome.

The chart showing the trend of the number of prisoners treated for alcohol dependence syndrome treated in the department in the years 2001 - 2018 is presented in figure 3.

In the analyzed period, the average number of prisoners treated for alcohol dependence syndrome and treated in the department was 840 people and, with exception of 2001, constituted in all years the largest subgroup among all those treated for alcohol dependence syndrome (on average 57% of all prisoners in the period 2002 - 2018). The number of inmates staying in the analyzed period in the treatment department of alcohol addicts showed a statistically significant upward trend - on average in the period under study it was an increase of 7% in the years 2002 - 2018, statistically significant increases year-to-year were recorded in the years 2003 - 2005 and in 2009.

The second analyzed subgroup of prisoners treated for alcohol dependence syndrome was a subgroup of prisoners awaiting for admission to the department. This was a subgroup significantly smaller than the first subgroup - in the years 2002 - 2018 it was on average 487 prisoners and it is on average 34% of all prisoners treated for alcohol dependence syndrome.

The chart showing the trend of the number of prisoners treated for alcohol dependence awaiting admission to the department in the years 2001 - 2018 is shown in figure 4.

The most statistically significant decrease occurred in 2002 - the number of inmates waiting for admission dropped from 180 to 119 persons and in 2012-the number of inmates waiting admission to the department dropped from 837 to 421 (almost by half), a statistically significant decrease was also recorded in 2015 (decrease from 496 to 428 prisoners).

The third, on average, least numerous subgroup of prisoners treated for alcohol dependence is the subgroup of prisoners treated outside the department.
The trend graph for the number of prisoners treated outside the ward for alcohol dependence syndrome in the years 2001-2018 is presented in figure 5.

At the end of 2001, the number of inmates treated outside the department was 1,931 people and was the most numerous subgroup of inmates treated (77% of all inmates treated for alcohol dependence syndrome). From 2002 to 2012, the number of inmates treated outside the department decreased significantly (24 in 2002 and 15 in 2003) and ranged from 0 to 3 inmates in the period 2004 - 2018, which constitute statistically insignificant values; statistically significant values amounting to an average of 25% of the total number of prisoners with alcohol dependence syndrome began to be noted from 2013, in 2013 - 2014 and in 2015 - 2016 the number of prisoners treated outside the department increased statistically significantly and stood at an average level of 521 prisoners.

Discussion

According to data from the Central Statistical Office of Poland in 2017, it appears that in 2016, over 4% of all Poles were treated in counseling centers for people with mental disorders, addicted to alcohol and other substances [4]. It is estimated that around 800,000 people in Poland may be addicted to alcohol, while the number of people abusing alcohol may be reaching 2 million [5]. Among inmates, it is estimated that the problem of alcohol addiction is much larger. It is estimated that up to 30% of people who come to prison are alcohol addicts, of which the number may be even higher for penitentiary recidivists [6]. Studies conducted by the author during 10 years of work in prison showed that among prisoners about 30% of men were under 30 years old. Research on the trend in alcohol use behavior patterns among U.S. adults ages 18 - 65 showed that prevalences of the Infrequent Heavy Episodic and Extreme Drinkers peaked around ages 22 - 24 [7]. The above observations may explain the increased problem of alcoholism among prisoners. Education and the environment in which a person lives can have an impact on his future. Lack of interest of parents / guardians in a child, exposure to aggression, lack of resourcefulness of parents / guardians and the presence of alcohol from an early age can affect both subsequent alcohol abuse leading to addiction, as well as the commission of crimes resulting in a penalty of imprisonment [8]. The study conducted by The National Monitoring of Adolescent Prescription Stimulants Study showed that 6.8% of youth within a month used prescription stimulants. Part of this group admitted that they used these substances for non-medical purposes and were in close relationships with people who endorse binge drinking [9]. In addition to alcohol dependence, the prison population is characterized by the problem of using other stimulants, including injection drugs. The use of unsterilized equipment and a lack of knowledge about cross-infection results in an increased risk of developing hepatitis C [10]. Studies in Northern California have shown that people in the "increasing group of marijuana use" consumed alcohol more frequently [11]. The Alcohol Use Disorders Identification Test (AUDIT) performed among prisoners identifying alcohol consumption disorders is a useful tool for detecting alcohol use among prisoners and at the same time it can identify other drug problems [12]. Alcohol consumption plays an important role in aggressive behavior and is recognized as a driving force for committing crimes [13]. In 2018, the report ‘Towards national measures of alcohol-related crime’ was created, in which an important role in heavy crime is attributed to the component of excessive alcohol consumption as the main driving force of the phenomenon [14]. The high number of people addicted to alcohol imposes an obligation to the Polish prison system for the development of effective treatment methods. Over the years, national legislation has changed with intention to allow prisoners to qualify for therapy - the goal of the changes ways to allow as many prisoners as possible to receive individualized forms of therapy. Undoubtedly, in the conditions of prison isolation it is easier to maintain alcohol abstinence than outside the prison isolation and therapeutic programs provided to inmates in therapeutic departments practically do not differ from those carried out outside the prison isolation [15].

There are 33 therapeutic wards for alcohol-dependent prisoners in Polish prisons and detention centers, which have 1,187 places in total [16]. According to data from the Central Board of the Prison Service in Poland, alcohol addicts are serving a prison sentence in, among others, therapeutic departments of prisons in Zamość, Wronki, Radom, Opole Lubelskie [17]. Therapy programs for prisoners with alcohol dependence syndrome usually last about 3 months, during which patients under appropriate conditions undergo targeted therapy by qualified personnel [18]. It is worth noting that over the years, along with the increase in demand, the number of such centers increases and the largest group of inmates qualified for therapy are people addicted to alcohol [19]. Diagnosis of diseases during imprisonment is made by prison psychiatry specialists and referral to therapy is made by psychiatrists or psychologists after doctor’s consultation.
Alcohol dependence syndrome in Polish prisons is diagnosed on the basis of diagnostic criteria contained in the Classification of Psychiatric Disorders and Behavioral Disorders ICD-10 and screening tests, including the diagnostic questionnaire for alcohol addiction syndrome according to Dr. Woronowicz [20,21].

Before the prisoner attends a specialist consultation to a psychiatrist or goes under the care of the prison psychologist, he undergoes a routine medical examination during the first three days of his stay in prison. Only after this visit can he be assigned to the target residential cell. During the first examination, the prison doctor determines whether the prisoner may be addicted to alcohol or whether he is at risk of having a post withdrawal syndrome during his stay due to abrupt withdrawal of alcohol. Post withdrawal syndrome may endanger the patient’s life. Hyperactivity, hypotension and compensatory tachycardia are one of the possible complications that can be successfully treated with appropriate medications [22]. In Polish prison, a person deprived of liberty is supposed to be provided with medical treatment from the beginning of the illness until healing.

The study analyzed data on the treatment of people diagnosed with alcohol dependence syndrome in prison from 2001 to 2018. In 2001, the number of prisoners treated for alcohol dependence syndrome was 2,495 people and constituted 3.13% of the entire population of prisoners. In 2002, the number of inmates treated for alcohol dependence syndrome dropped dramatically to the value of 539 (0.67% of all prisoners) and in the following years it gradually increased until 2018, in which a number of 2,127 was reached, and the percentage of prisoners treated for alcohol dependence in relation to the total number of prisoners was 2.95%.

Between 2001 and 2002 there was a nearly 5 - fold decrease in the number of prisoners treated for alcohol dependence syndrome - from 2,495 to 539 (from the percentage of 3.13% of all prisoners to 0.67% of all prisoners respectively). This decrease occurred due to a statistically significant decrease in the number of prisoners treated outside the ward-a total decrease of 1,956 prisoners, including a decrease in the number of prisoners treated outside the ward by 1,907 people (decrease by 98% in the respective sub - group). This change was associated with the entry into force of the Regulation of the Minister of Justice on ways of penitentiary interactions in prisons and detention centers [23]. The new legal document assumed that the vast majority of people qualified for the treatment of alcohol dependence syndrome was directed to have therapy in therapeutic departments. As a consequence of this decision, a gradual increase in the number of people waiting for admission to the department in the period 2002 - 2011 was noted. In 2002, 119 prisoners were awaiting transport to the therapeutic department, while in 2011 the number increased to 837 prisoners. As a result, a similar increase in the total number of inmates treated for alcohol dependence syndrome treated in the department was observed. In the years 2002 - 2018, the average number of prisoners treated for alcohol dependence was 1,559 prisoners and increased in the period under review from the number of 539 prisoners treated in 2002 to the number of 2,127 prisoners treated in 2018, which was a statistically significant increase (respectively, 0.67% of all inmates at the end of 2002 and 2.95% at the end of 2018, almost fourfold increase).

In 2012, there was a change in the regulation on conducting penitentiary interactions in prisons and detention centers. According to the new guidelines, the therapeutic team will implement specialist impacts for convicts qualified to the therapeutic system in the therapeutic department. The possibility of intervention outside the therapeutic department by specialized staff has also been introduced. While an inmate qualified to serve a prison sentence in a therapeutic system may be subject to individualized interactions according to a developed individual therapeutic program, group therapeutic interactions in the therapeutic system outside the therapeutic department may additionally be conducted. The possibility of conducting treatment outside the therapeutic department is diagnosed and recommended by the psychologist based on the doctor’s opinion or based on the psycho - penitentiary judgment [24].

The above decisions had an impact on the results of the statistical analysis of the Central Board of Prison Services. According to data, in 2012 a statistically significant decrease was observed in prisoners treated for alcoholism - the percentage of prisoners treated for alcohol dependence fell from 2.27% to 1.78%. The decrease in 2012 was associated with a decrease of 416 people / 49%, the number of prisoners qualified for the group awaiting admission to the department. Then, in 2013 there was a significant increase in the number of prisoners treated for alcohol dependence (an increase of 609 people, from 1.78% of all prisoners to 2.67% of all prisoners) and this was due to the emergence of a subgroup of prisoners treated outside the department, which was a statistically significant number (671 people at the end of 2013 compared to 3 people at the end of 2012, which is a statistically significant increase). In the following years from 2014 to 2018, changes in the percentage ratio of the number of prisoners treated for alcoholism in relation to the total number of prisoners were not statistically significant - they ranged between 2.81% and 2.95%.

Based on the analyzed data, it can be seen that alcohol addiction is a serious health problem among the population of Polish prisoners. Considering the numbers given earlier, despite the fact that the number of prisoners diagnosed with alcohol dependence syndrome is many times higher than that in the general population of the country, still not many people in prison are undergoing therapy. At the same time, the fact that there is a problem of the growing number of people referred for therapy but waiting for the vacancy suggests that there is a lack of staffing or accommodation in the Polish prison system affecting the ever - increasing number of patients in need of therapy. This is not an isolated problem only for the Polish Prison. Research conducted in Australia and Ireland confirms both the greater number of people addicted to alcohol among the prisoners compared to the general population, and the need to expand the health care offer in response to the need for personalized treatment [25,26].

Persons deprived of freedom belong to a group that requires careful analysis in terms of health status, because they often come from dysfunctional environments [27]. Similar data applies to the studied groups with alcohol consumption disorders. Lower education, lower income and lower socioeconomic status of the environment were associated with an increased risk of these disorders [28]. In Poland, there are very few publications investigating the occurrence of chronic diseases among prisoners, which include alcohol dependence syndrome, while those that arose show that the health status of the prison population is unsatisfactory.

Summary

The resulting work is the first study analyzing the ways of conducting therapy among persons deprived of their liberty over the
years using statistical data from the Central Office of the Prison Service Boards carried out in Poland. For this reason, it is advisable to conduct further epidemiological studies, the result of which will be to determine the main health and organizational problems, which will translate into the health policy of the Polish prison.

**Strengths and Limitations of This Study**

- The use of 18-year statistical documentation in the study allowed access to a database of prisoners who were in prison and were qualified for treatment.
- The nature of the data is susceptible to incomplete or incorrect medical records and coding.

**Declaration of Conflicting Interests**

The authors declare that there is no conflict of interest.

**Ethical Approval**

The descriptive study did not require the approval of the bioethics committee.

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