

Drugs and alcoholism

(Narkomania i alkoholizm)

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Abstract – Introduction. Drugs and alcoholism take on a social dimension, which requires taking into account not only the effects of the substance, but also the social circumstances surrounding its adoption. The principles of social coexistence under the influence of alcohol and drugs are increasingly being violated. At the same time, the age of people who use psychoactive drugs and/or drink alcohol is increasingly falling, which often results in conflict with the law.

The aim of the study. The aim of the work was to present selected issues from drug and alcoholism.

Selection of material. The search was conducted in the Scopus database for the period 2006-2019, using the terms *drug addiction*, *alcoholism*, *drug effects*, *alcohol*. From the literature found in the Google Scholar database, studies were selected which, in the opinion of the authors, would be most useful in the preparation of this study.

Conclusions. Today, the causes and forms of drug use and alcohol consumption have changed. This is no longer seen as a form of rebellion against the deception and conformism of the older generation. Now it is becoming a fashion, one of the forms of spending free time, the opportunity to experience strong emotions or escape from stress and frustration. More and more people are beginning to experiment with psychoactive agents and alcohol.

Key words - drug addiction, alcoholism, drug use effects, alcohol.

Streszczenie – Wstęp. Narkomania i alkoholizm przybiera wymiar społeczny, który wymaga nie tylko uwzględnienia efektów działania substancji, ale także okoliczności społecznych związanych z przyjmowaniem środka. Coraz częściej łamane są zasady społecznego współżycia pod wpływem alkoholu oraz narkotyków. Jednocześnie coraz bardziej obniża się wiek osób sięgających po środki psychoaktywne i/lub pijących alkohol, co często skutkuje wchodzeniem w konflikt z prawem.

Cel pracy. Celem pracy było przedstawienie wybranych zagadnień z narkomanii i alkoholizmu.

Dobór materiału. Poszukiwania przeprowadzono w bazie Scopus za okres 2006-2019, używając pojęć *narkomania*, *alkoholizm*, *skutki przyjmowania narkotyków*, *alkoholu*. Ze znalezionego w bazie Google Scholar piśmiennictwa wyselekcjonowano opracowania, które zdaniem autorów byłyby najbardziej użyteczne w przygotowaniu niniejszego opracowania.

Wnioski. Współcześnie zmieniły się przyczyny i formy zażywania narkotyków i picia alkoholu. Nie jest to już postrzegane jako forma buntu przeciwko zakłamanemu i konformizmowi starszego pokolenia. Teraz staje się to modą, jedną z form spędzania czasu wolnego, możliwości przeżywania silnych wrażeń lub ucieczki od stresów i frustracji. Coraz większa liczba ludzi zaczyna eksperymentować ze środkami psychoaktywnymi i alkoholem.

Słowa kluczowe – narkomania, alkoholizm, skutki przyjmowania narkotyków, alkoholu.

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I. DRUGS

Drug addiction is treated as a phenomenon of abuse of various psychoactive agents. Drug use takes on a social dimension, which requires taking into account not only the effects of the substance, but also the social circumstances surrounding its use. The age of people taking psychoactive drugs and entering into conflict with the law is increasingly falling. The principles of social coexistence under the influence of alcohol and drugs are being broken. These drugs are increasingly often used to bring young people to justice for thefts, brawls, burglaries, robberies and sometimes even violent killings. [1-4]

The causes and forms of drug use have now changed. This is no longer seen as a form of rebellion against the deception and conformism of the older generation. It is now becoming a fashion, one of the forms of leisure activities, opportunities to experience strong emotions or escape from stress and frustration. More and more people are beginning to experiment with psychoactive agents. For example, they take amphetamines to remove fatigue or to acquire more knowledge, take ecstasy to stay in motion for hours, LSD to experience 'interesting' visions, or the most common cannabis to improve their mood.

The drug is treated as a substance of natural or synthetic origin, which mainly affects the central nervous system. It is a substance that causes pain, euphoria and stunting. The term mainly refers to opioids, which are called narcotic anaesthetics. However, in general, a drug is defined as any psychoactive agent that leads to addiction after use. The initial symptom of drug use is euphoria. However, after a prolonged period of use, the addicted person develops symptoms indicating impairment of important bodily functions, damage to organs and, ultimately, a life-threatening condition. This term is associated with the term drug addiction, which refers to the continuous or periodic use of psychoactive drugs for non-medical purposes. It leads to or results in addiction.

A narcotic is any substance of natural or synthetic origin acting on the central nervous system. These substances are specifically defined in the Law on Counteracting Drug Addiction, Annex 2. These substances are listed in four groups, depending on the possibility of addiction in the case of non-medical use and under medical supervision.

A psychotropic substance is defined as a substance of natural or synthetic origin also acting on the central nervous system. A list of these substances can be found in Appendix No. 3 of the Law on Counteracting Drug Addiction. [3-8]

Drug use by teenagers often results in visible changes in appearance.

External signals include [3,5-8]:

1. Dress change: A rapid change to a new style of dress, the appearance of 'drug elements' in the outfit, such as belts, key rings, subtitles on shirts and hats, and a new hairstyle,
2. Specific scents. Hallucinogenic agents make the smell acidic, while marijuana and Mexican sage make the smell sweet,
3. Rapid growth or weight loss,
4. The skin will be pale after psychostimulants, opiates will be brownish or earthy, and skin lesions such as sebum or pimples may occur,
5. Eyes: heavily enlarged or diminished pupils, reddened proteins and eyelid tips,
6. Punctures on the skin
7. The nose will be red at the inlets, wounds or bleeding may occur
8. Poor personal hygiene.

Any notice of drug use should lead those close to the intervention. Specific tests that do not require blood collection from the suspected drug addict can be used. The PDU and PCU tests stand out. The PDU test, or Problem Drug Use, contains 10 questions about drug use over a 12-month period. Questions are only answered with 'yes' or 'no'. Some of the questions refer to school dysfunction, working with peers or problems with the police. The remaining questions relate to how to take drugs, i.e. to take them alone, the strong need to take a psychoactive agent, to look for stronger 'stimulants' than those taken so far, to buy drugs themselves, and thus to incur expenses.

The PCU test, or Problem Cannabis Use, consists of 8 questions on the use of cannabis products. As in the PUN test, the questions are answered 'yes' or 'no' and also refer to the last 12 months and the daily life of the teenager/child. The results are estimated by summing up all answers.

A score of 10 is possible from the PUN test, while a score of 10 is possible from the PUN test. Interpretation of the results allows to determine how often a teenager/child takes drugs. A score of 0 or 1 indicates occasional use of psychoactive substances, while a score of 2 or more indicates that people take drugs in a problematic way. In the PUM test, those who answered yes to 3 out of 8 questions use cannabis-derived substances problematically. In interpreting the results, attention should be paid to psychological factors, the degree of development of other problem behaviours, and that these are tools that only help to make a diagnosis. [9]

II. SELECTED PHYSICO-CHEMICAL PROPERTIES OF ALCOHOL

The name 'alcohol' comes from Arabic. Originally it was called such a fine powder or paint powder, later it was called an alcoholic beverage. Alcohol belongs to organic compounds, derivatives of hydroxyl hydrocarbons. It is a colourless liquid with a characteristic taste and smell. [4] It is a lighter substance than water, with a lower freezing point (-130) and a low boiling point (+78C). Alcohol is a psychoactive substance, which significantly affects human psychophysical performance. It limits its volitional control and contributes to adverse effects on the functioning of the whole organism. [10,11]

III. EFFECT OF ALCOHOL ON THE BODY

The risk of alcohol abuse is increased, especially among adults, by the fact that most of them feel the pleasant effects even after a small dose, thus blurring the boundaries of safe drinking over time. Loss of control over alcohol consumption in the mildest degree leads to alcohol intoxication and, in the worst case scenario, not to depend on all its worst effects, including death. The human body reacts to a specific dose of alcohol in different ways. Some people get intoxicated after a small dose, others after a much higher one. The most important thing, however, is the concentration of ethanol in human blood, measured in per mille. [11,12]

Depending on the number of per mille, certain reactions occur [12,13]:

- 0.3 - 0.5 ‰ - there is visual impairment of motor coordination, slight imbalance and euphoria and lowered criticism,
- 0.5 - 0.7‰ - motor skills disorders, excessive excitability and talkativeness, lowering self-control, misappraisal of one's own abilities and, consequently, the possibility of misjudging the situation,
- 0.7 - 2.0‰ - imbalance, fitness and coordination of movement, lowering of the pain threshold, deepening as the concentration of ethanol in blood increases, decrease of intellectual fitness, delayed reaction time, clear irritability, aggressive behaviour, sexual stimulation, as well as increase in blood pressure and acceleration of heart rate.
- 2.0 - 3.0‰ - speech disorders, slowing down of movements and imbalance, increased sleepiness and

reduced ability to control one's own behaviour. This condition is called deep intoxication.

- 3.0 - 4.0‰ - there is a decrease in blood pressure and body temperature, the disappearance of physiological reflexes, and a deep dysfunction in consciousness which may lead to a coma. This condition is described as severe alcohol poisoning.
- Above 4‰ - there is a deep coma here, abnormalities on the part of the vascular, motor and respiratory centres, and thus the possibility of alcohol paralysis of these centres. This is a life-threatening condition.

The symptoms presented above depend on the blood alcohol level. Unusual human reactions to alcohol are also mentioned. These include: pathological drinking, complicated drinking, complex form of ordinary drinking and depressive stimulation.

Pathological drunkenness is characterised by a short-term mental illness. It occurs in two forms. One form is epilepsy, while the other is dominated by production symptoms, i.e. delusions, hallucinations and illusions. This condition usually lasts from several to several hours. A person is perceived by his surroundings as a drunken person, even though his whole behaviour is the result of an illness accompanied by strong anxiety. Fury and aggression often dominate in a person's behaviour, and consequently criminal acts. This condition usually subsides after a terminal dream, and a person does not remember the whole incident.

Drinking a complication is not as much of a break with reality as in the case of pathological drinking. Here, however, hidden and unconscious personality traits, such as a tendency to aggression, are revealed in humans.

The complex form of ordinary drinking is characterised by a two-phase process. It occurs when a person in a state of normal drinking is strongly stimulated by a mental or mechanical injury. Such a stimulus may be an unpleasant message or a blow causing severe pain. The state of being drunk can then rapidly worsen, and the behaviour is guided by motor excitement and aggression. It happens that some people develop a strong state of depressive agitation after drinking alcohol. Such a person has a strong need to haggle over his or her own life, often with successful results.

There are many ways to become addicted to alcohol, but biological, psychological and environmental factors must work together in order for an addiction to occur. None of these factors cause addiction, but they affect people to varying degrees and lead to illness. There is no doubt that the development of an addiction is preceded by a period of drinking (longer or shorter). In some cases, it can be observed that specific reactions to alcohol are quite rapid. These reactions accelerate the formation of an addiction

and increase the power of influence on the human body and psyche. These reactions include: a relatively high level of tolerance to alcohol, low intensity of the aversive reaction, high dose of euphoria. Among the internal motivations of drinking alcohol by a human being one can notice a desire to change one's emotional state, content of thinking and desire for a different experience of oneself. [14,15]

There are four factors that influence the development of addiction.

These include [14-16]:

1. *Biological agents - family studies* that have been carried out on adopted siblings born in the same family and among twins suggest that genetic association has a role to play in the possibility of addiction. It follows that addiction occurs in a family where one of the members was an alcoholic. However, people cannot be categorised in this way, as alcoholism occurs relatively often among people who are not related to another addicted person.
2. *Social factors* - there is no doubt that a given culture has a great influence on the formation of addiction. Vice and social attitudes towards alcohol consumption affect the number of addicts. The family environment has a large impact, which, depending on the attitude, may increase or minimize the risk of alcoholism among family members. An important role is attributed to the family inheritance, which consists of applying the norms and customs to which a person has been subjected in the family home. If one or two parents have abused alcohol at home, alcoholism is more likely to occur in that person. However, addicts also come from abstinence families. This can be explained by the fact that such a person did not have a 'model' of social drinking. The availability of alcoholic beverages also has an impact on increasing the number of addicts. The greater the availability and attractive price, the more people drink.
3. *Psychological factors* - human behaviour is closely related to his or her emotional maturity. The maturation process is a result of both internal and external factors. Abnormal course may also lead to emotional immaturity. Such people have significant difficulties in overcoming life's turns and are more likely to use drugs (drugs, narcotics and alcohol). Almost all alcohol-dependent people display destructive and anti-social behaviour. However, when alcohol stops acting, they are acting as father, spouse or employee. The features which, in addition to emotional immaturity, influence the development of addiction include: excessive dependence, low re-

sistance to frustration, difficulties in expressing feelings, high level of anxiety in interpersonal reactions, sense of isolation, low self-esteem, perfectionism, guilt. In the process of alcohol dependence, the denial system plays an important role, that is to say, it weakens all the defence mechanisms to continue drinking. That is why alcoholism, as well as other addictions, is classified as a denial disease (hypocrisy).

- 4.4 *Clerical factors* - alcoholism is a spiritual disease, because as it develops, alcohol becomes the most important thing in a person's life, to which the whole day is attributed. Under the influence of alcohol, a person tries to control existential anxiety, satisfy the feeling of friendship and euphoria, the need to feel the meaning of the purpose of life. People under the influence of alcohol do not notice that it displaces valuables, does not allow to develop talents and abilities, and that the temporary state of strength, friendship and euphoria lasts for a short period of time and passes with the cessation of the effect of alcohol on the body.

According to the World Health Organisation, alcoholism is considered a disease. It is a toxicology and disorder, the symptoms of which are forced drinking, a tendency to increase doses, physical and mental addiction with symptoms of abstinence syndrome when alcohol is suddenly stopped. Addiction is typically manifested in a typical way, but it may show some variation. The break-up may be cultural or individual in nature. [17]

here are several types of alcoholism, with particular emphasis on cultural specificity [17-20]:

- *Alpha* - this type is characterised by the control of the amount of alcohol consumed and does not allow for alcoholic intoxication, which results in severe poisoning. For such a person, alcohol is a means of relaxing, relieving stress and relieving physical pain. Drinking here is psychologically motivated, escaping and the harmfulness is only visible in the worsening of interpersonal relations, that is, in conflicts. According to psychologists, this type of drinking is called problematic.
- *Beta* - this is the complete opposite of alpha drinking. Alcohol here is consumed irregularly, but in large quantities, with simultaneous malnutrition. For this reason, health problems often occur, such as: inflammation of the oesophageal mucosa, stomach, cirrhosis of the liver, inflammation of the kidneys and bladder, damage to the pancreas, problems with the nervous system. Drinking is also psychological, but can also lead to physical addiction.

- *Gamma* - there are full-scale physical and mental addictions here, the symptoms of which are loss of control over drinking, increased tolerance to alcohol, abstinence syndrome and alcoholic hunger. Alcohol is consumed in increasing quantities, which leads to metabolic changes in the body, personality changes and begins to affect the social environment of the drinker.
- *Delta* - systematic drinking while controlling the volume of alcohol is characteristic here. There is physical and mental addiction, with abstinence syndrome and failed attempts to stop drinking completely. This type of drinking subsequently leads to serious health problems.
- *Epsilon* - a distinction is made here between alcoholic strings, longer or shorter, interrupted by abstinence periods of several days. Social events or family gatherings are a pretext for drinking here.

Alcohol dependency, as with other addictions, is a phase that is characterised by specific symptoms in each phase. It is assumed that there are four specific phases leading to alcohol dependence: initial, warning, critical and chronic. The transition from one phase to another is preceded by specific symptoms. One treatment can begin in any phase of the disease. [18-20]

Initial phase

It is a phase of learning by trial and error and checking what effect drinking alcohol has. Drinking here is mainly at occasional events, and playing against expectations is explained by the individual that I have not had enough to drink more. Then drinking does not only appear at social gatherings, but also to relieve tension, stress and improve the mood. The drinker looks for an excuse to drink, does not get drunk and still has control over the amount of alcohol consumed. Some people remain in this phase, or completely give up drinking if the unpleasant experiences outweigh the pleasant events and there is no pressure from the environment. [19]

Alert phase

Drinkers in this phase are becoming more and more skilled in the use of alcohol to improve their well-being. Such a person is convinced that alcohol helps and makes his life easier, so he reaches for it more and more often. The alcoholic is looking for more and more frequent opportunities to drink and during social gatherings he or she turns the drink into a blunt drink to adapt the amount of alcohol to his or her growing needs. Alcohol is a relief and

a means to relax. An alcoholic cannot refuse to drink, he often loses control over the amount of alcohol he drinks, he looks for a company that can provide him with the right amount, and if not, he drinks before the party or drinks after the party. This is a person in a state where his or her film breaks, he or she does not quite know what he or she is saying and doing. Alcohol becomes the main means of wellbeing and relaxation.

Critical phase

In this phase, alcohol is the cause of family, social and professional problems. There is a vicious circle here, that is to say, drinking alcohol causes these problems, but a person reaches for an ever-increasing dose of alcohol to drown out feelings of guilt and problems, and new ones arise as a result. It is characteristic of this phase to be forced to drink a large amount even after a small amount has been consumed. This is often felt as physical pain. A complete lack of control over drinking is developing, such reactions are becoming more frequent, drinking time and the amount of alcohol is increasing. The problem is increasingly visible to the environment and the family isolates itself, mainly out of shame. The alcoholic begins to lose self-esteem, aggression, dissatisfaction and depression appear. The whole environment is to blame. Sometimes I take abstinence under pressure, but there is a return to drinking.

Chronic phase

At this stage, the alcohol problem is already at such a stage that, in the opinion of the drinker, the solution to every problem is alcohol. This is the phase of the last development of addiction. Drinking is continuous, sometimes the person gets drunk several times in one day. Alcohol consumption starts already in the morning. The shame of an alcoholic dies completely. It is not the place that matters, the drinking is important. This condition lasts until it is completely exhausted. The symptoms of abstinence syndrome such as: headaches, weakness, tremor, nausea, vomiting, mood disorders and dreams, eating disorders, diarrhoea, heart palpitations, sweat and anxieties are increased. These symptoms disappear after drinking alcohol, so the alcoholic reaches for it more and more often. The tolerance to alcohol is decreasing. Sometimes a small dose is enough for a person to get drunk. Such a long-term condition causes a weakening of thinking processes, a disorder of sexual drive and changes in character. At this stage, the alcoholic reaches for non-food products. The only respite from this state of mind is a visit to the Chamber of Exercise or a

psychiatric hospital. The alcoholic drinks to this state until he dies. The only salvation is abstinence and treatment, but the drinker should decide for himself. [18] Co-addiction is a term that has recently appeared in the literature. It comes from the word co-alcoholic, which refers to the same personality traits that occur with alcoholic husbands and wives. It assumes that co-dependence is a specific form of addiction to another person or their problem. [18,20,21] The behaviour of a person who is related to an alcoholic can be explained as follows [22,23]:

1. concentration of thought, teaching and behaviour around the drinker,
2. feeling of being forced to pull an alcoholic away from alcohol,
3. stiffening and limiting the diversity of drinking behaviour,
4. taking up and losing with attempts to refrain from typical behaviour towards the drinker,
- 5 Hope to get control of the alcoholic's drinking, or to reduce it to a safe size,
- 6 Changes in the response to drinking over time,
7. experiencing unpleasant conditions such as irritation, anxiety when an alcoholic does not drink,
- (8) Decrease in these conditions when the alcoholic starts drinking,
9. feeling of not being able to walk away from the drinker, despite previous considerations.

The human body reacts to alcohol in different ways, however, the impact of alcohol on the body is very extensive (Table 1).

Table 1. Impact of alcohol on the human body [24]

The impact of alcohol on	How?
Liver	Steatosis, inflammation, cirrhosis, susceptibility to other toxins, drugs, more frequent hepatitis B infections and liver cancer.
Gastrointestinal tract	Esophageal inflammation, varicose veins, peptic ulcer, malabsorption, oesophageal, gastric and oral cancer.
Pancreas	Inflammation, necrosis, absorption disorders, cysts, diabetes
Cardiovascular system	Rhythm disturbance, myocardial infirmity, hypertension, ischemic disease, infarction, atherosclerosis
Endocrine system	Lowering testosterone levels, disruption of menstruation, acceleration of menopause.
Immunity system	Loss of resistance to bacterial, fungal and viral infections, colds, pneumonia.
The fetus	Foetal alcohol syndrome, causes growth impairment, nervous system disorders, developmental changes, congenital defects.
Nervous system	Polyneuritis, cortical and cerebellar atrophy, haemorrhagic lesions, more frequent skull injuries and strokes
Leather	Discolouration and spiders especially on the face skin, facial congestion with conjunctivitis and swelling, generalised itching, venereal diseases.
Psychiatric complications	Alcohol delirium, alcohol hallucinosis, paranoia, Wernicki-Korsakov syndrome, alcohol dementia
Sexual functions	Weakening of sexual performance, in men: erection disorders, ejaculation delays, body weakness, in women: weakening of sex drive, reduction of vaginal mucus secretion, menstrual cycle disorders.

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