

New diagnostic criteria for alcohol use disorders and novel treatment approaches – 2014 update

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Abstract

The study is aimed at presenting new diagnostic and therapeutic proposals for patients with alcohol use disorders. The revised ICD-11 which is currently being updated is coming closer to American standards in disease classification. The latest update of the American DSM-5 has been a notable step forward as it integrates alcohol abuse and alcohol dependence into a single disorder called alcohol use disorder. Recent developments in research into diagnostic tools have brought changes in the approach to therapy. According to most international guidelines, the form of treatment should be customised to the individual patient, with consideration given to his/her mental and physical condition, personality and natural setting. A significant change is the recommendation of a harm reduction strategy as a useful alternative to total abstinence in alcohol dependence treatment for some patients.

Key words: alcohol use disorder, DSM-5, ICD-11, harm reduction, genetic risk.

Introduction

Moderate alcohol consumption is the acceptable norm across most cultures. However, its abuse leads to alcohol dependence and poses a serious problem both to individuals concerned and to the society at large. The estimated financial burden associated with harmful alcohol drinking in developed countries, mainly in the Northern Hemisphere, amounts to more than 1% of the gross national product (GNP) [1]. The total costs linked to alcohol abuse are indicated to be underestimated owing to unregistered alcohol consumption which can account for even 25% of global alcohol consumption. An upward trend in alcohol consumption per capita has recently been observed, with an estimated 12.5 l in European countries and 8.44 l in the US [2, 3]. According to the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), more than 17 million American citizens have a drinking problem, and 3.8% in the US general population qualify for alcohol dependence (5.4% among males and 2.3% among females) [4–6]. Poland's State Agency for the Prevention of Alcohol-Related Problems (PARPA) reports that 2% of Poles are affected by alcohol dependence while 5–7% are at risk of developing the addiction [7].

To limit alcohol-related harm and to more effectively help those that bear the consequences of alcohol dependence, classifications of illnesses and disorders are constantly improved. Ongoing research is striving to identify more homogeneous groups of patients that can be targeted with more efficient forms of medical intervention. The latest update of the American DSM-5 has been a notable step forward as it integrates alcohol abuse and alcohol dependence into a single disorder called alcohol use disorder (AUD) with mild, moderate, and severe sub-classifications [8]. Revised definitions of alcohol abuse and alcohol-related disorders are also proposed in ICD-11, which is currently being updated [9]. Many countries are changing their attitude to the treatment of alcohol dependence, shifting away from the classical approach assuming total abstinence towards the new harm reduction strategies, mainly through limiting the amount of alcohol use [10].

Proposals for changes of diagnostic criteria in ICD-11

The 11th revision process of the International Classification of Diseases is underway and the final ICD-11 is planned to be released in 2015. The World Psychiatric Association (WPA) and World Health Organization (WHO) have combined their efforts while working on the 5th part on mental disorders, including substance abuse [8]. Topic advisory groups discuss mental health issues including substance abuse disorders. A working group of experts has been set up to review mental disorders. Field trials are being conducted [9–11]. An alpha draft and a beta draft have been developed [12]. The final version is going to be presented in 2014 for WHO approval.

The forthcoming classification is going to include the following alcohol-related disorders: acute alcohol intoxication, harmful use, dependence syndrome, withdrawal, mental disorders and alcohol-induced disorders arising from the use of alcohol. Similar codes are to be found in the current version of ICD-10.

The new coding of alcohol intoxication defines it as a transient state following alcohol consumption resulting in disturbances in level of consciousness, cognition, perception, affect, behaviour or other psycho-physiological functions and responses. Typical symptoms include mood instability, false judgement, impaired social or professional functioning, and improper sexual or aggressive behaviour. Harmful use of alcohol will probably be defined as a pattern of alcohol use that is causing damage to health following repetitive episodes of intoxication, regular intake of large quantities of alcohol or harmful use of alcohol. The damage may be physical or mental, including violence and self-harmful acts of bodily damage requiring medical intervention.

Alcohol dependence is defined as a cluster of phenomena that typically include difficulties in controlling alcohol use that develop after repeated or continuous use of the substance. It includes a strong desire to consume alcohol, impaired control of its use, a higher priority given to alcohol than other activities, frequently increased tolerance and a physical withdrawal state. The latter may be medicated with alcohol to relieve or avoid withdrawal symptoms.

Alcohol use becomes a focal point in the life of a person and other activities or hobbies are given up or reduced. Continued alcohol use despite its harmful consequences is a frequent trait of the cluster. Table I presents proposals of new criteria of alcohol dependence syndrome [13].

Ongoing harmonisation of ICD-11 and DSM-5 aims at bringing their diagnostic criteria closer together. Similar results of alcohol-related disorders may be used. Moreover, the harmonisation can facilitate communication between specialists and be conducive to more effective education of clinicians [14].

Comparison of diagnostic criteria in DSM-IV and DSM-5

The latest update of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) was

Table I. Proposed criteria of alcohol dependence in ICD-11

Criterion	Description
A	Difficulties in controlling substance-taking behaviour in terms of its onset, termination, or levels of use, often combined with a strong desire or sense of compulsion to take the substance.
B	A higher priority given to alcohol use than to other activities, obligations, personal and health matters. Substance use plays a dominant role in the individual's life.
C	Presence of physiological symptoms (pointing to an adaptation of the nervous system to the substance), such as: tolerance, physical withdrawal state when substance use has ceased or been reduced, as evidenced by: the characteristic withdrawal syndrome for the substance; or use of the same (or a closely related) substance with the intention of relieving or avoiding withdrawal symptoms. Withdrawal symptoms must be characteristic for the withdrawal syndrome of the given substance and not just be symptoms of a hangover.

published by the American Psychiatric Association (APA) on 18th May, 2013 [8]. The most notable change introduced in DSM-5 is that alcohol abuse and alcohol dependence have been integrated into a single disorder called substance use disorder (SUD). The seven criteria of alcohol dependence and four criteria of alcohol abuse have been combined in a unified list of eleven criteria. The importance of craving is emphasised in DSM-5 as a criterion for an SUD diagnosis. Table II presents a comparison between DSM-IV and DSM-5 criteria for alcohol-related disorders [8, 14]. The severity of an SUD – mild, moderate,

or severe – is based on the number of criteria met – 2–3, 4–5, 6 and more, respectively. The change reflects the recent shift in understanding alcohol abuse and addiction as one disorder occurring at a varying level of severity. The SUD is additionally defined in DSM-5 by the presence of craving to use alcohol while the criterion of recurring legal problems has been rejected. DSM-5 differentiates two phases of alcohol dependence remission. Early remission means that within 1 year a patient has not had any symptoms of dependence for at least 3 months. Sustained remission means that within a year a patient has

Table II. Comparison between DSM-IV and DSM-5 alcohol-related disorders

DSM-IV	DSM-5
<p>Dependence criteria: A maladaptive pattern of drinking, leading to clinically significant impairment or distress as manifested by three or more of the following seven symptoms occurring in the same 12-month period:</p> <ol style="list-style-type: none"> 1. Tolerance: need for markedly increased amounts of alcohol to achieve intoxication or desired effect; or markedly diminished effect with continued use of the same amount of alcohol. 2. The characteristic withdrawal syndrome for alcohol (or a closely related substance) or drinking to relieve or avoid withdrawal symptoms. 3. Persistent desire or one or more unsuccessful efforts to cut down or control drinking. 4. Drinking in larger amounts or over a longer period than the person intended. 5. Important social, occupational, or recreational activities given up or reduced because of drinking. 6. A great deal of time spent in activities necessary to obtain, to use or to recover from the effects of drinking. 7. Continued drinking despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to be caused or exacerbated by drinking. <p>Abuse/harmful use criteria: A. Criteria for alcohol dependence have never been met. B. A maladaptive pattern of drinking, leading to clinically significant impairment or distress as manifested by at least one of the following four symptoms occurring within a 12-month period:</p> <ol style="list-style-type: none"> 1. Recurrent use of alcohol resulting in a failure to fulfil major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to alcohol use; alcohol-related absences, suspensions, or expulsions from school; neglect of children or household). 2. Recurrent alcohol use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by alcohol use). 3. Recurrent alcohol-related legal problems (e.g., arrests for alcohol-related disorderly conduct). 4. Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused by or exacerbated by the effects of alcohol (e.g., arguments with spouse about consequences of intoxication). 	<p>A. A maladaptive pattern of drinking, leading to clinically significant impairment or distress as manifested by at least two of the following symptoms occurring in the same 12-month period:</p> <ol style="list-style-type: none"> 1. Alcohol is often taken in larger amounts or over a longer period than was intended. 2. There is a persistent desire or unsuccessful efforts to cut down or control alcohol use. 3. A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects. 4. Craving, or a strong desire or urge to use alcohol. 5. Recurrent alcohol use resulting in a failure to fulfil major role obligations at work, school, or home. 6. Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol. 7. Important social, occupational, or recreational activities are given up or reduced because of alcohol use. 8. Recurrent alcohol use in situations in which it is physically hazardous. 9. Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol. 10. Tolerance, as defined by either of the following: <ol style="list-style-type: none"> a) A need for markedly increased amounts of alcohol to achieve intoxication or the desired effect. b) A markedly diminished effect with continued use of the same amount of alcohol. 11. Withdrawal, as manifested by either of the following: <ol style="list-style-type: none"> a) The characteristic withdrawal syndrome for alcohol. b) Alcohol (or closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms.

not had any symptoms except a strong desire or urge to drink alcohol.

Alcohol dependence is defined in all DSM versions, including the latest, as a cluster of behavioural and physical symptoms in people taking large quantities of alcohol, including alcohol withdrawal syndrome, tolerance and alcohol craving [8, 15].

Risk factors for alcohol dependence

Alcohol dependence is triggered by both environmental (political, social, cultural, economic) and genetic factors [16–19]. Biological processes that underlie susceptibility to dependence have been the focus of intense research efforts [20–23]. Long-term trials can determine risk factors in alcoholism. Genetic factors account for 50–60% of alcohol dependence susceptibility, regardless of gender [24–27]. Nevertheless, the magnitude of genetic influence on mental diseases, including alcoholism, remains inconclusive [28, 29].

A substantial body of evidence indicates that genetic susceptibility to addiction is linked to multigenic inheritance. It is characterised by the presence of many candidate gene polymorphisms and their interactions with the influence of environmental factors on their expression [30–32]. Our understanding of the aetiology of alcoholism is limited due to the complex clinical picture of alcohol-related disorders, e.g. frequent comorbidity with other addictions, mental disorders and behavioural disorders [32–34].

Significant environmental predictors of alcoholism include: peer pressure, alcohol availability, age of first use of alcohol, and marital status [35–38]. A maladaptive drinking pattern is thought to affect alcohol dependence, i.e. the more often one becomes intoxicated, the higher the risk. Some reports demonstrate that the drinking pattern can be modulated by both environmental and genetic factors [39].

Harm reduction strategy in alcohol dependence

In the face of unsatisfactory efficacy of alcohol dependence treatment methods, a harm reduction strategy is more frequently being recommended as a therapy of choice [9]. The approach was used for the first time in treatment of drug addicts and HIV-positive patients [40, 41]. More recently, the method has been applied for treating alcohol-dependent patients. The strategy focuses on minimising the negative consequences of substance use and on reducing the amount of consumed alcohol [42]. Whereas the notion of abstinence has not been totally rejected, the approach leaves room for customised treatment and focuses on the individual patient's needs and current condition [43]. The harm reduction strategy

emphasises the need for better access to medical care, e.g. by mitigation of requirements that must be met as a prerequisite condition of access to the health care system. The method attempts to prevent stigmatisation and puts forward treatment facilities that are available in the patient's social settings [44, 45].

The strategy perceives alcohol use in two dimensions. First, alcohol use is of primary character and is linked to development of dependence. Second, substance use is a secondary problem and is a method of coping with low mood or a difficult situation [44]. A reduction in alcohol consumption can, therefore, be an aim in itself. There is a growing body of evidence to demonstrate that not only total abstinence, but also any reduction of consumed alcohol brings health benefits, particularly when the amount of alcohol falls below the standard drink limit per day [46].

The strategy provides an alternative method that can be used primarily to work with patients starting therapy. Moreover, offering alcohol dependent patients more than just one method of treatment may give them a better sense of control and can make them feel more responsible for the outcome. It is not to be disregarded in the therapeutic process [47, 48]. Controlled drinking can also be easier for patients to accept [9].

Diversification of the clinical picture and course of the disease would necessarily require personalised patient care that is tailored to each individual patient. A typology proposed by Lesch [49] provides a useful tool in formulation of treatment recommendations and objectives. Some researchers think that type I alcoholics (i.e. those who experience acute withdrawal syndrome) require total abstinence. For type II (with comorbid anxiety symptoms) and type III (with comorbid depressive syndrome and sleep disorders) alcoholics who use alcohol as a dysfunctional method of coping with stress, a harm reduction strategy is recommended as the primary form of intervention [50].

International guidelines in treatment of alcohol-related disorders

Compared to other countries, Poland does not have formal algorithms of medical intervention with specifically defined objectives and methods of their achievement. There are only general recommendations for alcohol rehabilitation therapies, involving inter-disciplinary teams that should consist of a psychiatrist, a clinical psychologist and a therapist/addiction counsellor [51].

The Polish Society of Addiction Research has proposed and formulated its guidelines based on international multisite clinical trials and algorithms [52]. The objective of a long-term pharmacological therapy of alcohol dependence should

consider a diagnosis of the individual patient's mental and physical condition, his/her personality traits, and the patient's social setting [53, 54]. Abstinence is recommended for most patients, particularly for those with comorbid mental and physical disorders. Reduction of alcohol use is a preferable option for patients reluctant to maintain total abstinence or those who have repeatedly failed to achieve it previously. Acamprostate, naltrexone and nalmefene are proposed in long-term pharmacological treatment. Long-term pharmacotherapy should be combined with psychotherapeutic intervention, according to the rule of maximising benefits and minimising losses, accounting for the patient's preferences and therapy accessibility, regardless of its type.

American guidelines set out a number of possible interventions. Total abstinence with pharmacological support is recommended for patients with the DSM-IV diagnosis of alcohol dependence. Patients with a milder form of dependence are advised to apply a harm reduction strategy involving a reduction of alcohol use. Patients who fail to meet their objectives should be provided with support in their further efforts, including successive attempts at maintaining total abstinence. Patients who have managed to attain their targets, though, i.e. have reduced the amount of alcohol they use, should be further assisted and not encouraged to implement total abstinence [55].

The British standards have been established in consideration of mild, moderate and severe alcohol dependence, with comorbid mental and physical disorders and the individual patient's stance on therapy goals [56, 57]. Total abstinence is recommended for hazardous and harmful drinkers, with comorbid mental and physical disorders. A harm reduction strategy is offered for those abusing alcohol, without other comorbid disorders, and for those with a mild form of dependence.

Other European countries have also managed to set out their specific standards of alcohol dependence treatment. Total abstinence is the most commonly formulated treatment goal. However, a harm reduction strategy is considered to be an acceptable option for patients who have failed to reach the primary goal and those with milder forms of alcohol dependence.

Summary

The aetiopathogenesis of alcohol-related disorders is complex, with a varied spectrum of clinical manifestations [58, 59]. Chronic abuse of alcohol leads to serious effects on physical and mental health [60–64]. The biochemistry of the brain, personality, social, professional and family functioning are inevitably affected [53]. Both the various

aspects of alcohol-related disorders and ongoing research have been instrumental in formulating new definitions and diagnostic criteria for DSM-5 and ICD-11.

The widespread prevalence of alcohol dependence and alcohol-related mental and physical disorders poses a major global health, social and economic challenge. New forms of prevention and treatment are implemented to address the new threats [65, 66]. The efficacy of traditional therapeutic strategies has not been fully satisfactory for all patients. According to new guidelines, both international and Polish, the form of treatment should be customised to the individual patient, with consideration given to his/her mental and physical condition, personality and natural setting. Ongoing research has demonstrated that a harm reduction strategy provides a useful alternative in alcohol dependence treatment that might prove effective in a great number of patients.

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