Mahr, M. M., Winkelman, L., & Zellner, T. (2024). Treatment of Alcohol Addiction: Combining Rehabilitation Psychology and Acute Hospital Care: Cultural Comparison Between the United States and Germany. *The Rehabilitation Professional*, *32*(2), 87–117. https://doi.org/10.70385/001c.123182

CONTENT EXPERTISE

Treatment of Alcohol Addiction: Combining Rehabilitation Psychology and Acute Hospital Care: Cultural Comparison Between the United States and Germany

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Keywords: alcohol, addiction, rehabilitation, Germany, United States

https://doi.org/10.70385/001c.123182

The Rehabilitation Professional

Vol. 32, Issue 2, 2024

The purpose of this review is to compare the treatment of alcohol addiction from different perspectives: On one hand, the perspective of an American psychotherapist, on the other hand, the perspective of a German acute care and addiction medicine physician. The authors provide an in-depth review comparing various strategies for treating alcohol dependence. This paper focuses on acute care, rehabilitation, psychotherapy, motivational interviewing, harm reduction, and psychopharmacology as the primary therapeutic modalities for treating alcohol addiction. This is investigated in the context of the author's respective healthcare and rehabilitation systems and cultural particularities relevant to alcohol use disorder. Based on the literature review, the authors found that the main treatment modalities were common in both countries, regardless of cultural differences. Germany has an overall lower regulation on alcohol (including a lower drinking age) and a higher alcohol per capita consumption with fewer lifetime abstainers in former drinkers. One major finding between the two countries is that the access to the professional addiction aid system is more accessible in Germany compared to the United

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States. On the contrary, the self-help sector within the United States is much more developed, utilized and accepted by healthcare and rehabilitation professionals. Overall, both countries' healthcare systems are making intentional efforts to address and improve the treatment of alcohol use disorder. Improving research for evidence-based treatment will need to expand in order to stay current with the challenges and trends in alcohol use in both countries.

The use of alcohol is deeply embedded in American and German culture. Although alcohol use can provide social connections, it can also be harmful, cause disease and decrease lifespan (Fairbanks et al., 2020).

One constant that remains, regardless of geographic location, is that the pathologic use of alcohol impacts more than 2 billion people and results in nearly 6% of all deaths worldwide (World Health Organization, 2018). There are unique societal differences within countries on how to cope with alcohol use, ranging from a complete ban on alcohol distribution in strict Muslim countries to a broad tolerance in European and American countries. In the United States, alcohol was banned in the Age of Prohibition (1920-1933), although it was still widely available. Currently, the Western European Countries have the largest alcohol per capita consumption (APC) worldwide, with >12.5 liters of pure alcohol per inhabitant per year (World Health Organization, 2018).

Within the United States, expansive alcohol use is correlated with 88,000 deaths each year. Alcohol is a toxic substance and is currently the fourth leading preventable cause of death in the United States (Stahre et al., 2014). Interestingly, several studies report that alcohol use and related harms are increasing for older individuals as the baby boomer generation (now ages 55 to 75) is aging (White, 2020).

Due to the unique differences in the healthcare systems between the United States and Germany, the approach to treating alcohol use disorder (AUD) varies as a result of psychosocial, political and societal factors. This review investigated each country's specific healthcare infrastructure relevant to AUD and the most commonly used and effective treatment modalities. Furthermore, comparing the research findings related to alcohol addiction treatment in both Germany and the United States may provide a new perspective on how cultural, psychosocial and political factors can impact recovery. Lastly, societal stigma in both countries remains one of the most influential aspects which may deter an individual from seeking alcohol use treatment.

This literature review will be informative for rehabilitation professionals and practitioners working in the field of addiction and substance use. Clinicians and healthcare providers can recognize the numerous benefits of implementing a biopsychosocial model approach when treating individuals with AUD. Furthermore, acknowledging the stigma and cultural considerations regarding negative assumptions pertaining to individuals with AUD may provide practitioners with more awareness on how to demystify the demoralization that ultimately impacts an individual with this condition

to seek treatment. The authors have chosen to compare the United States and Germany because both countries are developed, progressive in addiction medicine, and have high healthcare spending. Nevertheless, AUD is an ongoing concern in both countries. This comparison of how both countries treat individuals with AUD may provide unique perspectives for practitioners in each country to implement during patient care. The statistical information provided supports that despite each country having unique healthcare systems with pros and cons to each, AUD is a global condition and remains an evolving public health concern.

Alcohol Accessibility and Current Status Report

Alcohol is legal in the United States, the national legal minimum age for sales of alcoholic beverages (beer/wine/spirits) is 21, and there is a written national policy and action plan to effectively implement the WHO Global strategy to reduce the harmful use of alcohol as a public health priority. The United States excises a tax on alcoholic beverages. The national maximum legal blood alcohol concentration (BAC) when driving a vehicle is (in %) 0.08. There are no legally binding regulations on alcohol advertising or product placement. Legally binding regulations on alcohol sponsorship and sales promotion are regulated on a sub-national level. There are no legally required health warning labels on alcohol advertisements, however they are on alcohol containers. There is a national government support for community action and a national monitoring system (World Health Organization, 2018).

In Germany, the national legal minimum age for sales of alcoholic beverages is 16 years old (beer and wine) and 18 years old (spirits). Unlike the United States, there is no action plan; however, a national policy is in effect. Germany excises a tax on beer and spirits but not on wine. The national maximum legal BAC when driving a vehicle is (in %) 0.05. Another difference between the two countries is that there are legally binding regulations on alcohol advertising and product placement in Germany. There are no legally required health warning labels on alcohol advertisements or on alcohol containers. A national government support for community action exists, and there is a national monitoring system (World Health Organization, 2018).

The U.S. total population in 2016 was 324.1 million, with 81% aged 15 years and older and 82% in urban areas. The alcohol per capita consumption (APC) in 2016 was 9.8 liters of pure alcohol (47% beer, 18% wine and 35% spirits). The prevalence of alcohol use disorder (AUD) was 17.6% for men and 10.4% for women (13.9% both sexes), the prevalence for alcohol dependence was 9.9% for men and 5.5% for women (7.7% both sexes). Male drinkers drank more alcohol with an APC of 19.0 liters compared with women (6.7 liters), both sexes combined had an APC of 13.7 liters. The prevalence of heavy episodic drinking was 41.5% in men and 11.1% in women (26.1 both sexes). 4.4% of men and 13.8% of women (both sexes 9.2%) were lifetime abstainers, in former drinkers it was 12.6% of men and 25.5% of women (19.2% both sexes) (World Health Organization, 2018).

Age-standardized death rate (ASDR, per 100,000) for cirrhosis of the liver was 19.7 for men and 10.0 for women with 74.1% alcohol-attributable fractions (AAF) in men and 59.2% in women. For road injuries, the ASDR was 20.3 for men and 7.9 for women with an AAF of 42.5% and 25.0% respectively. For cancer, the ASDR was 178.3 for men and 133.9 for women with an AAF of 7.0% and 2.6%. Overall, the years of life lost (YLL) score based on alcohol was 3. Excessive alcohol use is a significant public health concern costing the United States an average of $250 billion per year, being the third leading cause of preventable death (National Institute on Alcohol Abuse and Alcoholism, 2019).

In Germany, the total population in 2016 was 80.7 million with 87% aged 15 years and older and 77% in urban areas. The APC in 2016 was 13.4 liters of pure alcohol (53% beer, 28% wine and 19% spirits). The prevalence of AUD was 9.8% for men and 4.0% for women (6.8% both sexes), the prevalence for alcohol dependence was 5.0% for men and 2.0% for women (3.5% both sexes). Male drinkers drank more alcohol with an APC of 24.0 liters compared with women (8.3 liters), both sexes combined had an APC of 16.9 liters. The prevalence of heavy episodic drinking was 51.9% in men and 17.3% in women (34.2% both sexes). 3.7% of men and 12.0% of women (both sexes 7.9%) were lifetime abstainers, in former drinkers it was 7.8% of men and 17.4% of women (12.7% both sexes).

In Germany, the ASDR for cirrhosis of the liver was 18.9 for men and 7.8 for women with 78.6% AAF in men and 66.4% in women. For road injuries, the ASDR was 6.0 for men and 2.4 for women with an AAF of 48.0% and 33.7%. For cancer, the ASDR was 198.9 for men and 131.0 for women with an AAF of 8.0% and 4.0%. Overall, the YLL score based on alcohol was also 3, similar to the United States (World Health Organization, 2018). All results are summed up in Table 1.

Healthcare Infrastructure for the United States and Germany

The U.S. healthcare system does not provide universal coverage. It is a mixed system, where publicly financed government Medicare and Medicaid health coverage coexists with privately financed market coverage. It is important that healthcare costs are taken into perspective in public health discussions. The expenses of healthcare impact the economy, the federal budget, and notably the overall wellbeing of individuals (Obama, 2016).

In 2019, approximately 50% of citizens received private insurance coverage through their employer, 6% received private insurance through health insurance marketplaces, 20% of citizens relied on Medicaid, 14% on Medicare, 1% on other public forms of insurance, and 9% of Americans have no health insurance. Public and private hospitals receive payment from public and private financing sources. Private insurers pay hospitals based on diagnosis-related groups (DRGs), case rates, per diems, fee-for-service, and discounted fee-for-service schemes. Overall, in the United States, the substantial healthcare cost for individuals seeking treatment for AUD may be a hindrance to receiving patient care and recovery (International Society for

Table 1. Comparison United States vs. Germany

	United States	Germany
Legal drinking age (years)	21	18 (spirits), 16 (beer and wine)
BAC when driving in %	0.08	0.05
National policy and action plan	Yes	No action plan
Tax on alcohol	Yes	Yes (beer and spirits), no on wine
Regulations on alcohol advertising/product placement	No	Yes
Health warnings on advertisements and containers	On containers	No
Government support for community action and a national monitoring system	Yes	Yes
Alcohol per capita consumption (liters pure alcohol)	9.8	13.4
Prevalence of alcohol use disorder (%) men women both	17.6 10.4 13.9	9.8 4.0 6.8
Prevalence of alcohol dependence (%) men women both	9.9 5.5 7.7	5.0 2.0 3.5
Lifetime abstainers in former drinkers (%) men women both	12.6 25.5 19.2	7.8 17.4 7.9
Age-standardized death rate liver cirrhosis men (with alcohol-attributable fractions) women Age-standardized death rate road injuries men (with alcohol-attributable fractions) women Age-standardized death rate cancer men (with alcohol-attributable fractions) women	19.7 (74.1%) 10.0 (59.2%) 20.3 (42.5%) 7.9 (25.0%) 178.3 (7.0%) 133.9 (2.6%)	18.9 (78.6%) 7.8 (66.4%) 6.0 (48.0%) 2.4 (33.7%) 198.9 (8.0%) 131.0 (4.0%)
Years of life lost due to alcohol	3	3

Pharmacoeconomics and Outcomes Research, 2024). It appears that the role of private healthcare insurance coverage overpowers the level and variety of care for those in lower socio-economic status in the United States, including mental health and substance use treatment. It may be at the discrepancy of the healthcare insurance provider to decide if they will cover the respective treatment. Consequently, the Mental Health Parity and Addiction Equity Act (2008) and the Affordable Care Act (2014) are legislative initiatives to support individuals who are unable to receive private healthcare insurance (Mojtabai et al., 2020).

In Germany, every citizen has access to health insurance. Usually, public health insurance is financed by the employee and employer. For individuals who are unemployed, free health insurance is provided by the government as long as the person is registered as unemployed. Spouses and children can be insured without cost if one person in the household is eligible for public insurance. The public health insurance premium is only based on income and is not influenced by the amount and type of illness, the length of condition, or other demographic factors. Additionally, people with a high salary or freelancers have access to private health insurance. Most healthcare associated costs are paid by the health insurance provider. The rehabilitation associated costs are either covered by the pension insurance or public health insurance. Private health insurances can exclude addiction treatments in their contract.

Acute care

In the United States, acute alcohol and drug overdoses are treated by the Emergency Medical Service (EMS), which is staffed by paramedics. Acute alcohol intoxications constitute a relatively high proportion of Emergency Department (ED) visits in the United States (Mullins et al., 2017). Previous research studies have noted that between 0.8-1.2% of all ED visits are related to acute alcohol intoxication and approximately 12-40% are correlated to individuals engaging in alcohol use (Marshall et al., 2021). Acute care hospitals are divided by level of care, ranging from primary to quaternary care depending on available resources and specialization. After treatment in the ED or intensive care unit (ICU), patients are either discharged or transferred for alcohol withdrawal treatment (AWT). The ED may be the starting point for individuals with substance use disorder, including AUD, to seek services, assistance, and potential referrals with the potential for recovery (Zhang et al., 2021).

In Germany, overdoses are also treated by EMS, including paramedics and emergency physicians. Acute care hospitals are also divided by level of care. After treatment in the ED or ICU, patients are either discharged or transferred for AWT. Alcohol withdrawal treatment in Germany usually takes place in an internal medicine department or as a qualified AWT in a psychiatric department.

Fortunately, throughout the past 80 years, research has demonstrated the need for both mutual support (Alcoholics Anonymous [AA] and other support groups, such as Self-Management and Recovery Training [SMART] and biological models of treatment for AUD in addition to implementing psychopharmacological and a variety of behavioral treatment modalities) (Witkiewitz et al., 2019). Rehabilitation and healthcare professionals need to address the significance of follow up post- acute care treatment to facilitate patients entering long-term treatment.

Healthcare Professional Training for AUD

Within the United States, there are a variety of credentials, certifications, and licenses that may be obtained for counselors, psychologists, and social workers who are assisting individuals with AUD. As a result of the variety and intensity of each training, the competency and skill set for healthcare professionals assisting individuals with AUD may appear quite broad. A recent study in 2016 conducted by Chasek & Kawata (2016) indicated that there is a lack of consistency in educational training within the United States in addiction counseling and a gap related to skills-based training. The authors suggest that advocacy for the addiction profession related to increased uniformity in training standards is warranted (Chasek & Kawata, 2016).

One recent legislative act that facilitated more attention for the need of competent and credentialed substance abuse professionals in the United States was the Affordable Care Act (Winfield et al., 2016). Another factor to consider in this regard is that counselors adhere to the standards in

addiction counseling accreditation, which has been facilitated by the Council for Accreditation of Counseling and Related Educational Programs (CACREP) and the National Addiction Studies Accreditation Commission (Chasek & Kawata, 2016).

In Germany, physician and psychologist training varies from state to state, however there is a national standard that must be fulfilled in order to receive a license to practice. Medical doctors working in the field of addiction are usually either board certified in internal medicine or in psychiatry or work as general practitioners. Professionals can obtain an additional board certification in addiction medicine; psychiatrists do not need this certification since it is included in their psychiatry training. Psychologists working with individuals diagnosed with AUD must have an academic background in psychology and specialize in clinical psychology. Social workers focusing on addiction treatment must have at least a bachelor's degree, with an option for a master's degree.

Overall, the training and requirements within the field of addiction medicine vary for both the United States and Germany. The credentialing landscape for addiction treatment providers in the United States is designed to maintain high standards of care through rigorous training and certification processes. Regulatory bodies like the International Certification & Reciprocity Consortium (IC&RC), American Society of Addiction Medicine (ASAM), National Association for Alcoholism and Drug Abuse Counselors (NAADAC), and Council for Accreditation of Counseling and Related Educational Programs (CACREP) play crucial roles in overseeing these credentials, ensuring that professionals are well-prepared to help individuals struggling with AUD. However, in Germany, due to the extensive required training, individuals may be deterred from working with individuals with AUD. Moffitt (2018) notes that in the United States, counselors, social workers, nurses, and treatment center staff often face various work stressors such as: resistance from clients, poor treatment outcomes, employee turnover, and work stress to meet company standards. As a result, in both countries recruiting new healthcare professionals in the field of addiction medicine is a challenge. Addiction treatment counselors may have a higher risk of burnout for the previously mentioned factors in comparison to other disciplines (Moffitt, 2018).

Rehabilitation

It is imperative to define recovery with an operational definition in relation to treatment approaches. As such, Hagman et al. (2022) noted that the National Institute on Alcohol Abuse and Alcoholism (NIAAA) definition of recovery has evolved. The new definition prioritizes biopsychosocial functioning and quality of life for individuals seeking treatment and recovery for AUD. This current NIAAA definition of recovery can be applied to increase consistency in recovery measurement, foster more research, and implement the recovery process (Hagman et al., 2022).

In the United States, there are a variety of treatment approaches originally developed for substance abuse which can be advantageous for those challenged with excessive alcohol use. From an individualistic perspective, these treatment modalities satisfy their objectives by having clients engage in specific services or behavioral change techniques (Prendergast et al., 2002). For individuals with a 12-month or a lifetime diagnosis of AUD, only 7.7% or 19.8 %, respectively, engaged in treatment. Within this small population, the most accessed treatment modalities included 12-step groups, healthcare practitioners, and outpatient and inpatient rehabilitation facilities (Grant et al., 2015). Many healthcare professionals outside the specific areas of alcohol specialization are not competent about the guidelines for preventing, identifying, and treating excessive drinking or AUD, which is problematic for rehabilitation in the United States (Knox et al., 2019). Perhaps this is why only 8% of individuals received treatment for AUD in the past year (Kranzler & Soyka, 2018). Although treatment occurs during the rehabilitation process, it is suggested that clinicians recognize that organic recovery is part of the journey of AUD, specifically for individuals in the mild range of the condition (Ray et al., 2019). One aspect within the rehabilitation discipline is that there is not one single treatment approach for individuals with AUD. However, there is a highlighted focus within providers and patients that "more is better" and that providing patients with a variety of evidence-based resources for behavioral and pharmacological treatment of AUD may increase each individual's recovery process (Ray et al., 2019).

In Germany, the Institut für Therapieforschung (IFT, Institute for Therapy Research, Munich, Germany) publishes yearly statistics about rehabilitation in addiction medicine. The most recent report was published in 2021 and encompasses 878 outpatient and 152 inpatient treatment facilities, with 321,769 outpatient and 35,677 inpatient treatments. It also includes outpatient medical rehabilitation, (rehabilitation) aftercare, outpatient residential care, outpatient discharge and low-threshold services. The primary substance treated is alcohol (81% of patients), followed by cannabis (7%). Most clients are men (81%) between 37 to 45 years. Treatment typically occurs within 3-19 months and 73% of all clients successfully finish their program with 82% of clients reporting an improvement of their addiction problem. Unlike the United States, only 3% of clients visit self-help programs in Germany (Institut für Therapieforschung München, 2022).

In 2021, 19,405 clients were treated for alcohol addiction as inpatients in Germany. These were the demographics of the patients: 71% were men; the average age was 47 years; 55% were also addicted to tobacco; and 17% to cannabis. On average, treatment lasted 84 days with 85% of patients finishing the program successfully and 87% reporting an improvement. In the same year, 68,740 clients were treated for alcohol addiction as outpatients in Germany. For these patients, the demographics were the following: 69% were men; the average age was 46 years; 20% were also addicted to tobacco; and

9% to cannabis. On average, treatment lasted 234 days with 67% of patients finishing the program successfully and 67% reporting an improvement (Institut für Therapieforschung München, 2022).

In both countries, one common factor remains true: individuals with substance abuse and AUD face public and self-stigma, which may impact an individual to seek rehabilitation treatment. For example, Gutirrez et al. (2020) note that the typical negative perception of seeking help for mental health concerns and substance use is rampant and individuals experience fear of isolation from others (e.g., job loss or a decrease in social opportunities) as a result of seeking help for AUD issues (Gutierrez et al., 2020). Overall, both countries have the resources of rehabilitation facilities to assist patients with AUD; however, the stigma, financial burden and high relapse rate often impedes the individual from seeking treatment. Further facilitating patients entering rehabilitation programs should be a public health effort and initiative for both countries.

Self-Help Groups

Individuals seeking treatment for alcohol addiction may choose self-help groups as an option. Tucker et al. (2020) note that specific treatment programs are often addiction-oriented and not alcohol-focused, which typically include collaborative group participation as a program requirement. Alcoholics Anonymous (AA) is one of the original and most recognized AUD recovery self-help groups in the United States (Kelly et al., 2020). The comprehensive integration of psychological, medical, and other evidence-based best practices that deliver outcomes congruent with personal recovery should be considered best practice (Peterson, 2022). Individuals who engage in 12-step programs may be in alignment with professional counseling and other recovery-oriented strategies ultimately to increase overall wellness and employment (Peterson, 2022).

However, due to the anonymity guideline, the utilization rates of these groups may be misleading or inaccurate (Tucker et al., 2020). That said, the approximate membership for AA (2.1 million members worldwide, including 1.3 million U.S. residents) indicates that AA participation is a feasible option for individuals seeking treatment (Tucker et al., 2020). It is important to note that members are not necessarily individuals struggling with AUD. In a study conducted by Maina et al. (2021), authors interviewed caregivers of individuals with AUD and found some participants did not know about self-help groups such as AA or Al Anon; however, for those who did, they found them to be an effective and supportive resource that assisted caregivers and family members to deal with fatigue related to caretaking (Maina et al., 2021).

Self-help groups like AA exist in Germany, however, compared to the United States, they have a lower significance in the rehabilitation system (Institut für Therapieforschung München, 2022). Similar to the United States, individuals who join AA as a member do not necessarily have AUD. It is estimated that approximately 2 million people visit AA groups per year across 1,650 local groups. It is estimated that half of all initial attendees

discontinue attending after a few meetings. It is assumed that two-thirds of the attendees who continue visiting the meetings remain abstinent. Due to the focus on spirituality, AA is viewed negatively by many physicians in Germany (Nelson, 2009).

Treatment Approaches

Harm Reduction and Contingency Management

Reducing the amount of alcohol consumption per individual in both countries resonates with the harm reduction model and treatment modality and surveillance programs. For example, Esser et al. (2020) describe surveillance as an approach that may be viable to decrease excessive alcohol consumption and reduce harmful consequences.

The progression of implementing evidence-based strategies for preventing excessive drinking, such as those recommended by the Community Preventive Services Task Force (e.g., increasing alcohol taxes and regulating alcohol outlet density), could also impact overindulgence of alcohol drinking and secondary harm (The Community Guide, 2016). One main difference between the United States and Germany is the regulation of alcohol sales. In the United States, regulations vary from state to state where some states only allow liquor sales in regulated liquor stores. Furthermore, day and time restrictions are applicable in a variety of states. In Germany, alcohol sales are not regulated nor monitored, which may contribute to excessive alcohol use.

The concept of harm reduction (also known as contingency management) first appeared in the context of AIDS and illicit drug use in the 1990s. Strang and Stimson (1990) suggested handing out clean needles and syringes to drug users instead of following a strict zero-tolerance policy. Most harm reduction programs were developed in the United Kingdom and the Netherlands and have spread to the rest of Europe and the United States. In the context of alcohol, the most common harm reduction program is controlled drinking, where the main approach is "drinking less is better" but also "avoid problems when you drink." (Single & Storm, 1985).

Controlled drinking was first described by Pattison et al. (1977) as a treatment option for patients with AUD. It immediately triggered the controversy whether abstinent AUD treatments or non-abstinent AUD treatments should be preferred. Controlled drinking is taught in specialized programs and includes teaching patients the understanding of alcohol use patterns and effects. Individuals will explore past difficulties in managing alcohol drinking and recognize drinking as a coping mechanism. They will learn craving management techniques, develop treatment goals and behavioral targets. Coping and understanding family conflict and dynamics while developing and setting healthy boundaries is a component of the program. Furthermore, there is a strong focus on reinforcing the motivation for change and discussing recovery beyond abstinence or controlled drinking. Lastly, the facilitator and client will collaborate in a working relationship to develop an individualized treatment plan with goals to implement a better

life balance post treatment. A recent meta-analysis showed that abstinence should not be seen as the only approach in the treatment of AUD. However, controlled drinking supported by specific psychotherapy appears to be a viable option when an abstinence-oriented approach is not applicable (Henssler et al., 2021).

In the United States, harm reduction policies and attitudes have progressed immensely in recent years but still lag behind some European countries (citation). However, there are many differences between states and cities regarding harm reduction policies (Nadelmann & LaSalle, 2017). Within Europe, Germany is not one of the progressive countries concerning harm reduction. Abstinence is still the main focus of AUD treatment and is usually prioritized in professional healthcare. That said, controlled drinking is an option for treatment, however, mostly as a last resort when abstinence is no longer a realistic goal.

Cognitive Behavioral Therapy

Cognitive behavioral therapy (CBT) is one of the most recognized evidence-based psychological treatment modalities when working with individuals with a variety of psychiatric disorders including depression, anxiety, somatoform, and substance use disorder (Gautam et al., 2020). Magill et al. (2023) define CBT for treatment of AUD as a domain of interventions that are time-limited, targeted, and based on guidelines and tenets of both cognitive (i.e., an emphasis on the role of thoughts in shaping emotions and behaviors) and behavioral (i.e., an emphasis on the role of behaviors in shaping emotions and thoughts) therapies. Research shows that the relapse rate of individuals treated with CBT is lower than the rate for individuals who were treated with solo pharmacotherapy (American Psychiatric Association, 2010). Specifically, CBT for substance use disorders encompasses a variety of unique interventions, either combined or solely applied in isolation, several of which can be implemented in both individual and group formats (McHugh et al., 2010). Cognitive behavioral therapy for assisting individuals with addiction is becoming a common term for interventions that comprise a range of cognitive and behavioral techniques (Magill et al., 2023).

Cognitive behavioral therapy has also been designed to specifically address substance use for individuals. For example, CBT-SUD (cognitive behavioral therapy - substance use disorder) can be implemented when treating individuals with AUD (Demarce et al., 2014). This intervention includes 12 weekly, individual meetings that are 45–60 minutes in length (Norona et al., 2024). The CBT-SUD implementation entails teaching refusal skills and how to cope with urges, in addition to highlighting on how to maintain and facilitate healthy relationships with social supports such as family and peers (Norona et al., 2024).

It is important to note that as healthcare professionals implement a CBT model, it can impact the treatment process when individuals are also participating in other treatment modalities. This can be especially challenging

when combining treatment information for individuals who also participate, for example, in the AA 12-step program if the therapist is lacking knowledge regarding the AA model (Breuninger et al., 2020). Cognitive behavioral therapy is widely recognized in the United States and Germany as an effective treatment option when working with individuals affected with AUD. However, one difference between the countries is that in Germany, psychiatrists and psychotherapists are required to learn one form of psychotherapy during their training and most choose CBT.

Motivational Interviewing

Motivational interviewing (MI) is a counseling approach developed by William R. Miller and Stephen Rollnick (Miller & Rollnick, 1991). It is a focused and goal-directed person-centered strategy used to elicit patient motivation to change harmful behaviors like addiction. Witkiewitz et al. (2019) note that several meta-analyses and systematic reviews have suggested that brief interventions, particularly those based on the concepts of MI, are effective when treating individuals with AUD. Interventions within MI include self-monitoring of alcohol use, heightened awareness of high-risk situations, and learning cognitive and behavioral techniques. These techniques can help clients manage potential drinking situations and training in life, communication, and coping skills. Motivational interviewing combines a variety of evidence-based approaches from cognitive psychology and social psychology. This treatment modality suggests that individuals may be at various levels of intrinsic motivation regarding readiness for change of their concerning behaviors (e.g., smoking, high-risk alcohol consumption, unhealthy diet, lack of medication adherence, insufficient exercise) (Gillam & Yusuf, 2019).

In Germany, MI is a technique taught during training for medical doctors to obtain the board certification "addiction medicine" and during psychiatrist training. In the United States, MI is often implemented in substance use treatment in a variety of settings. Motivational interviewing, which originated in the field of addiction treatment, is a robust therapy to facilitate motivation to change in clients who are currently either unwilling or ambivalent to change, and can be implemented even when time is limited for treatment (Bischof et al., 2021).

Psychopharmacology

Currently, there are only three medications that have been approved by the US Food and Drug Administration (FDA) for the treatment of alcohol dependence syndrome: acamprosate, disulfiram, and naltrexone (Stoklosa et al., 2023). Disulfiram blocks aldehyde dehydrogenase 2, which leads to elevated acetaldehyde levels after alcohol consumption causing nausea, vomiting, headache, and flushing. Therefore, it works as negative reinforcement. One meta-analysis reported an increase in total abstinence, percentage of abstinent days, mean days without alcohol, time to first drink, and a decreased likelihood of relapse while a follow-up meta-analysis only

showed the effect in open-label studies (Fairbanks et al., 2020). Acamprosate is a $GABA_A$ receptor agonist and weak N-methyl-D-aspartate receptor and metabotropic glutamate receptor 5 antagonist. Acamprosate primarily supports abstinence with a number needed to treat between 9 and 12 according to 2 different systematic reviews (Fairbanks et al., 2020). Naltrexone is accessible for individuals in an immediate-release oral taken daily and an extended-release injectable option taken monthly (extended-release naltrexone) (Garbutt et al., 2005). This medication is different from the others as it may help to decrease excessive drinking and may sustain efficacy for individuals who are actively drinking (Murphy et al., 2023).

Psychopharmacological treatment may be conducted either in an outpatient or inpatient setting (Witkiewitz et al., 2019). In certain situations, clinical monitoring may be warranted, usually with additional medical support for adequate hydration, electrolyte, and thiamine supplementation (Witkiewitz et al., 2019). Regardless of effective pharmacotherapies, fewer than 9% of individuals who receive any form of AUD treatment receive pharmacotherapy (Fairbanks et al., 2020). Further research regarding psychopharmacology may be warranted based on this treatment gap.

In Germany, historically, acamprosate, naltrexone, nalmefene and disulfiram were certified and approved for AUD. The German S3 guideline for AUD recommends that "after consideration of and education about potential risks, pharmacotherapeutic treatment with acamprosate or naltrexone should be offered as part of an overall treatment plan for post-acute alcohol dependence outside of inpatient weaning" (DGPPN & DG-SUCHT, 2020). Disulfiram could only be prescribed with accompanying psychotherapy and with close monitoring. It lost its approval in Germany in 2011 but can still be imported with an off-label prescription. Nalmefene is especially recommended for supporting controlled drinking since it reduces drinking amounts. Currently, Nalmefene is not approved for treating AUD in the United States.

Overall, there is sufficient evidence for effectively treating individuals with AUD when treating with acamprosate and naltrexone. However, it is important to note that the effect of these medications is relatively small. The effect of nalmefene in reducing the amount of drinking has been shown but is also small. Insufficient knowledge is available for disulfiram, which is still used in the United States. In general, it is largely unclear which treatment approach and medication should be implemented due to the variance in frequency and duration of drinking, which warrants further research (Palpacuer et al., 2018).

Conclusion

In conclusion, AUD causes many YLLs and results in negative psychosocial factors and secondary conditions due to addiction in both the United States and Germany. Alcohol is widely available in both countries, although it is strictly regulated in the United States with variations across

states. This availability and accessibility to purchase alcohol may impact and complicate the treatment and rehabilitation process for individuals with AUD. Practitioners need to be aware of the repercussions of AUD while also recognizing the person-centered approach of individualism during treatment.

The United States and Germany both have sufficient healthcare system for treating alcohol related conditions and intoxications. Despite the healthcare systems, AUD is increasing. The main distinction between these two countries in treating alcohol addiction is the difference in healthcare insurance processes and the financial means to receive adequate rehabilitation treatment. As a result of healthcare insurance being mandatory in Germany, alcohol addiction is usually treated in outpatient or inpatient rehabilitation facilities with a structured follow-up. In the United States, the focus is more on self-help groups and out-patient rehabilitation, since in-patient rehabilitation is more expensive and not every insurance covers the treatment costs. The rehabilitation and treatment modalities are similar in both countries with CBT and MI as the primary techniques in psychotherapy. Furthermore, harm reduction and contingency management is viewed more critically in Germany in comparison to the United States. Psychopharmacology is an option in both countries; however, it is rarely prescribed for treatment either in the United States or Germany.

Recommendations

Currently, the incidence and prevalence of alcohol use and alcohol-related health consequences remain an ongoing concern for addiction professionals and practitioners both in the United States and in Germany. Moreover, both healthcare systems have their advantages and specific challenges. Based on this literature review, it would be advantageous for rehabilitation practitioners and researchers working with individuals with AUD to examine the effectiveness of specific treatment interventions within each country. In order to improve treatment and rehabilitation for individuals with AUD, it is essential for practitioners to consider the following in both countries: alcohol is widely available and accessible; drinking alcohol is culturally embedded and promoted; and there is both self and social stigma correlated for individuals with AUD. In conclusion, it is highly recommended that practitioners, researchers, and rehabilitation professionals continue to examine, implement, and collaborate internationally to refine and execute the most current evidence-based treatment modalities for AUD.

List of abbreviations

AA = Alcoholics Anonymous
AAF = Alcohol-attributable fractions
APC = Alcohol per capita consumption
ASDR = Age-standardized death rates
AUD = Alcohol use disorder

AWT = Alcohol withdrawal treatment
BAC = Blood alcohol concentration
CACREP = Council for Accreditation of Counseling and Related Educational Programs
CBT = Cognitive behavioral therapy
CBT-SUD = Cognitive behavioral therapy - substance use disorder
ED = Emergency department
EMS = Emergency Medical Service
ICU = Intensive care unit
MI = Motivational Interviewing
NIAAA = National Institute on Alcohol Abuse and Alcoholism
U.S. = United States
YLL = Years of life lost

Conflicts of interest

The authors have no conflict of interest to disclose

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Submitted: August 28, 2024 CST, Accepted: August 28, 2024 CST

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