

Stephen A. Maisto · Gerard J. Connors ·  
Ronda L. Dearing

# Alcohol Use Disorders



**Advances in  
Psychotherapy**

Evidence-Based Practice

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## **Alcohol Use Disorders**

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# Alcohol Use Disorders

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# Preface

Alcohol abuse and alcohol dependence are problems that have baffled clinicians, researchers, and policy makers for hundreds of years. Because of the effects of alcohol use disorders (AUDs) on individuals and the societies in which they live, advances in knowledge about them and in ways to ameliorate them have been high research priorities. In the last several decades this international research activity has paid off in the development of different methods of intervention for the AUDs that are effective and available to clinicians.

The purpose of this book is to further the effort to make empirically supported methods of AUD interventions more accessible to clinicians, whose daily patient/client care responsibilities may hinder their keeping up-to-date with the latest developments in clinical research and practice. The assessment and intervention procedures discussed in this book all have undergone extensive scrutiny and evaluation, both in a formal research sense and in actual clinical practice. They have been judged to be the best methods that the field has to offer clinicians in their attempts to improve the lives of those who come to them for help in reducing or stopping their consumption of alcohol. We hope that this book helps to make these methods the standard of clinical practice.

## Acknowledgments

It is difficult to write an acknowledgments section of a book or even a journal article, because they are products of our professional growth over the years driven by what we have learned from many patients, students, teachers, and mentors. It will have to suffice here to express our unending gratitude to all of them. More immediately, we can name several individuals who have helped us and supported us in completing this book. We thank the Series Editor, Danny Wedding, PhD, and Robert Dimpleby of Hogrefe & Huber Publishers for their responsiveness to any and all of the questions we raised while completing this book. In addition, we thank Linda Sobell, PhD, ABPP, Series Associate Editor, for all of her guidance. Our appreciation also goes to Ms. Julie Pawlik, who made our manuscript presentable for public consumption, and to Mr. Mark Duerr for helping us write the test question items. Finally, SAM expresses his personal thanks to his wife Mary Jean, who forever seems to hear him talking about all of the projects sitting on his desk waiting to meet their deadlines. GJC expresses his personal thanks and appreciation to his wife, Lana Michaels Connors, and daughter Marissa for their unflagging love, support, and patience. RLD expresses her gratitude to GJC and SAM for including her on this project and for sharing their collective wisdom.

## Dedication

To Safi  
SAM

To Lana and Marissa  
GJC

To my parents, Ron and Barbara Dearing  
RLD

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# 1

## Description of Alcohol Use Disorders

This book concerns empirically supported methods of assessment and psychotherapy of alcohol use disorders (alcohol abuse and alcohol dependence, in the terminology of the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision (DSM-IV-TR; American Psychiatric Association, 2000). Before proceeding with this chapter, it is important to specify some topics that the book will not cover that are related to its overall contents. First, in DSM-IV-TR terms, this book emphasizes assessment and treatment of the alcohol *use* disorders (AUDs), and not any of the other alcohol-related disorders that might be discussed, such as alcohol withdrawal, alcohol induced disorders, or alcohol intoxication. This is because the behavioral and psychological assessment and intervention methods described in this book were designed to address alcohol abuse and alcohol dependence, but not the other alcohol-related disorders that the latest DSM identifies.

Second, the assessment and treatment methods that this book includes have been evaluated with adults. Therefore, information on adolescents is excluded, because information about assessment and treatment obtained through evaluation of adult samples cannot be assumed to generalize to adolescents (usually defined as ages 12–18 years). Further, space limitations do not allow a full discussion of methods of assessment and psychotherapy with adolescents identified as having an AUD, as a considerable research and clinical literature has been generated on that topic, especially in the last 15 years.

Third, although this book primarily concerns behavioral and psychological interventions, we also discuss pharmacotherapies of AUDs. We have included medications treatment of the AUDs for two reasons. First, there is empirical support for the efficacy of selected pharmacotherapies of AUDs. Second, pharmacotherapies have been evaluated only in the context of their being used in combination with some kind of psychological or behavioral intervention or support, a few of which are among the empirically supported psychotherapies described in this book. Therefore, there is empirical support for the use of medications in combination with psychotherapies that have empirical support as stand-alone treatments. In this context, under specific conditions or in considering certain patient outcomes, a combined medication and psychotherapy intervention may show better patient outcomes than does the psychotherapy intervention alone.

With these preliminary comments done, we now proceed with description of the AUDs.

## 1.1 Terminology

The term “alcohol use disorders” denotes alcohol-related negative consequences, broadly defined

Most widely-used classification systems are the DSM and the ICD

*Alcohol use disorders* is a generic term used to represent alcohol-related negative consequences or dysfunction, broadly defined. Over the past two centuries, efforts have been taken to define and classify such alcohol misuse, and particularly excessive consumption. Among the terms applied were delirium tremens, insanity caused by intemperance, inebriety, dipsomania (or drink seeking), and, in the mid-1800s, alcoholism (Grant & Dawson, 1999).

The classification of misuse of alcohol today falls under the umbrella term of alcohol use disorders. The two most widely-used classification systems for alcohol-use disorders are the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision (DSM-IV-TR; American Psychiatric Association, 2000) and the tenth revision of the World Health Organization *International Classification of Diseases* (ICD-10; WHO, 1992). Both are categorical approaches to the assessment of AUDs, and both draw heavily from the concept of the alcohol dependence syndrome (Edwards & Gross, 1976).

## 1.2 Definition

Two categories of alcohol use disorders: alcohol dependence and alcohol abuse/harmful use

There are two broad categories of alcohol use disorders within both the DSM and ICD classification systems. The first is *alcohol dependence*, and the second is *alcohol abuse* (in DSM) or *harmful use* (in ICD).

The DSM criteria for alcohol dependence are presented in Table 1. (They have been modified from their proposed use in the diagnosis of substance use disorders to reflect alcohol use and its consequences.) As evident in Table 1, a diagnosis of alcohol dependence is warranted when there is presentation of at least three indicants of impairment over the previous 12 months. Noteworthy is that indications of tolerance and/or withdrawal, two criteria closely associated with the concept of physical dependence on alcohol, do not need to be present in order to make a diagnosis of alcohol dependence. Thus, as noted in Table 1, there is the opportunity to subtype the diagnosis of alcohol dependence as being with physiological dependence (i.e., there is evidence of tolerance or withdrawal) or without physiological dependence (i.e., no evidence of tolerance or withdrawal).

The ICD criteria for alcohol dependence are outlined in Table 2. Similar to the DSM criteria, a diagnosis of alcohol dependence is warranted when a cluster of at least three relevant criteria have been documented at some time in the past 12 months.

The DSM and ICD nomenclatures offer provisions for an AUD that does not achieve the criteria associated with alcohol dependence. The criteria for such a disorder (called alcohol abuse in DSM and harmful use in ICD) are shown in Tables 3 and 4, respectively. As can be seen, the ICD harmful use category is focused on physical and psychological health damage. The DSM alcohol abuse category, in contrast, focuses as well on situations where social, legal, or vocational consequences have been documented. Nevertheless, their availability for use in assessment and diagnostic activities is valuable, as

**Table 1**  
**DSM-IV Criteria for Alcohol Dependence**

A maladaptive pattern of alcohol use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:

1. Tolerance, as defined by either of the following:
  - (a) A need for markedly increased amounts of alcohol to achieve intoxication or desired effect.
  - (b) Markedly diminished effect with continued use of the same amount of alcohol.
2. Withdrawal, as manifested by either of the following:
  - (a) The characteristic withdrawal syndrome for alcohol.
  - (b) Alcohol (or a closely related substance) is taken to relieve or avoid withdrawal symptoms.
3. Alcohol is often taken in larger amounts or over a longer period than was intended.
4. There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.
5. A great deal of time is spent in activities necessary to obtain alcohol, use the substance, or recover from its effects.
6. Important social, occupational, or recreational activities are given up or reduced because of alcohol use.
7. The 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 (e.g., continued drinking despite recognition that an ulcer was made worse by alcohol consumption).

Adapted from American Psychiatric Association (2000)

**Table 2**  
**ICD-10 Criteria for Alcohol Dependence**

A diagnosis of alcohol dependence should usually be made only if three or more of the following have been experienced or exhibited at some time during the previous year:

1. A strong desire or sense of compulsion to consume alcohol.
2. Difficulties in controlling alcohol consumption in terms of its onset, termination, or levels of use.
3. A physiological withdrawal state when alcohol use has ceased or been reduced, as evidenced by: the characteristic withdrawal syndrome for alcohol; or use of alcohol (or a closely related substance) with the intention of relieving or avoiding withdrawal symptoms.
4. Evidence of tolerance, such that increased doses of alcohol are required in order to achieve effects originally produced by lower doses.
5. Progressive neglect of alternative pleasures or interests because of alcohol use, increased amount of time necessary to obtain or drink alcohol or to recover from its effects.
6. Persisting with alcohol use despite clear evidence of overtly harmful consequences, such as harm to the liver through excessive drinking, depressive mood states consequent to periods of heavy drinking, or alcohol-related impairment of cognitive functioning; efforts should be made to determine that the user was actually, or could be expected to be, aware of the nature and extent of the harm.

Adapted from World Health Organization (1992)

**Table 3**  
**DSM-IV Criteria for Alcohol Abuse**

- A. A maladaptive pattern of alcohol use leading to clinically significant impairment or distress, as manifested by one (or more) of the following, occurring within a 12-month period:
1. Recurrent alcohol use resulting in a failure to fulfill 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 or exacerbated by the effects of alcohol (e.g., arguments with spouse about consequences of intoxication, physical fights).
- B. The symptoms have never met the criteria for alcohol dependence.

Adapted from American Psychiatric Association (2000)

**Table 4**  
**ICD-10 Criteria for Harmful Use**

The ICD diagnosis of harmful use requires a pattern of alcohol use that is causing damage to health. The diagnosis requires evidence of actual damage to the mental or physical health of the user. The harmful use diagnosis should not be used if alcohol dependence is present.

Adapted from World Health Organization (1992)

they permit identification of at-risk or harmful uses of alcohol, regardless of whether the criteria for alcohol dependence have been achieved.

### 1.2.1 Implications for Clinical Practice

#### Implications of the alcohol abuse/harmful use diagnosis for clinical practice

The concepts of alcohol abuse (in DSM) and harmful use (in ICD) have significant implications for clinical practice. Implicit in these concepts is the appreciation that *alcohol consumption falls on a continuum*, ranging from limited consumption to very heavy consumption. Further, a variety of alcohol-related consequences are possible at any level of alcohol consumption. In this regard, alcohol consequences, like alcohol consumption, fall on a continuum, ranging from no consequences to very serious consequences, whether they be physical, social, family, legal, or occupational. While there is a general linear relationship between consumption and problems (with greater consumption being associated with more negative consequences), it cannot be assumed that lower levels of alcohol use will result in only trivial problems. There are many cases where infrequent and generally not heavy drinkers will experience severe negative consequences associated with their drinking, and many cases where heavier drinkers might experience relatively fewer negative consequences. As such, alcohol consumption and associated consequences both need to be assessed.

### 1.3 Epidemiology

Approximately 2 billion people worldwide consume alcoholic beverages, among whom 76.3 million (3.8%) are estimated to have a diagnosable alcohol use disorder (WHO, 2004). The personal and societal costs associated with problematic drinking are considerable, in terms of both morbidity and mortality, in almost all parts of the world. According to the World Health Organization (2004), alcohol use is linked annually to 1.8 million deaths (3.2% of total deaths worldwide) and a loss of over 58 million (4% of the total) disability-adjusted “life years.”

**3.8% of people worldwide have an alcohol use disorder**

Alcohol consumption, alcohol use disorders, and negative consequences are not distributed uniformly from country to country. Per capita consumption, for example, is highest in Europe (between 10 and 11 liters of pure alcohol annually), followed by the Americas (between 6 and 7 liters) (WHO, 2004). The lowest per capita rates of consumption were reported for Southeast Asia and in regions heavily populated by Muslims. Estimates calculated by the World Health Organization (2004) also reveal variations in the prevalence of alcohol dependence among adults in different countries. Highest rates of alcohol dependence were estimated for Poland, Brazil, and Peru (all between 10–12% of adults).

The prevalence of alcohol abuse and alcohol dependence has been studied in depth in the United States. Based on national survey data gathered in 2001–2002, the 12-month prevalence rates for alcohol abuse and alcohol dependence were 4.65% and 3.81%, respectively (Grant, Dawson, Stinson, Chou, Dufour, & Pickering, 2004). Supplemental analyses reported by Grant et al. provided several indications about prevalence rates by sex, race-ethnicity, and age. With regard to alcohol abuse, the 12-month prevalence was greater among men (6.93%) than women (2.55%). This pronounced gender difference was statistically significant among Whites, Blacks, and Hispanics. While the same pattern was evident among Native Americans and Asians, it was not statistically significant. The gender difference was statistically significant within all age groups among Whites, Blacks, and Hispanics (except among Hispanics aged 65 and older, where the pattern was evident but not statistically significant). In terms of race-ethnicity, alcohol abuse was more prevalent among Whites (5.10%) relative to Blacks (3.29%), Asians (2.13%), and Hispanics (3.97%). Further, the rate of alcohol abuse was significantly greater among Native Americans (5.75%) and Hispanics (3.97%) when compared to Asians (2.13%). Finally, in terms of age, the prevalence of alcohol abuse decreased with the advancement of age.

In terms of alcohol dependence, the 12-month prevalence overall was significantly greater among men (5.42%) than among women (2.32%). While this pattern was evident for all race-ethnicity groups, the gender difference was statistically significant among Whites, Blacks, and Hispanics only. Further, Whites (3.83%), Native Americans (6.35%), and Hispanics (3.95%) had higher rates of alcohol dependence relative to Asians (2.41%). Finally, in terms of age, rates of alcohol dependence decreased as age increased. This pattern was evident for the population as a whole and also among men and women separately.

## 1.4 Course and Prognosis

**The course and prognosis varies considerably from person to person**

The course and prognosis for persons with an alcohol use disorder will vary from person to person, with considerable variability present among treatment seekers and nontreatment seekers. Several studies described below provide insights on the outcomes for each of these populations.

Based on general population surveys, the incidence of initial alcohol use begins to rise steeply at around 14 years of age. Alcohol misuse initially occurs most often in adolescence through the early 30s, and individuals who experience few adverse consequences of drinking by age 35 generally are unlikely to develop alcohol dependence (Grant, 1997). The initial presentation for treatment of alcohol dependence by both men and women is often in the early 40s, following many years of alcohol-related dysfunction (Schuckit, Anthenelli, Bucholz, Hesselbrock, & Tipp, 1995; Schuckit, Daepfen, Tipp, Hesselbrock, & Bucholz, 1998).

**Alcohol dependence typically is characterized by remissions and relapses, and not by continuous drinking**

Alcohol dependence typically is characterized by remissions and relapses, and not by continuous daily drinking. A significant proportion of alcohol dependent individuals, estimated at minimum to be 25%, will experience long-term or permanent remission without utilization of treatment (Dawson, Grant, Stinson, Chou, Huang, & Juan, 2005; Sobell, Cunningham, & Sobell, 1996). Others will seek treatment in specialty settings or attend self-help groups, with a 40% to 60% probability of long-term remission (American Psychiatric Association, 1994; Schuckit, Smith, Danko, Bucholz, Reich, & Bierut, 2001). A substantial proportion of individuals will experience persistent dependence with or without treatment.

**Alcohol abusers do not exhibit an inevitable progression from abuse to full-blown alcohol dependence**

A pair of recent reports provide some insights into the clinical course of alcohol use disorders. In the first report, Schuckit et al. (2001) conducted assessments on 1,346 predominantly blue-collar men and women, and then reassessed them 5 years later. Of the 298 identified as alcohol dependent at baseline, 36.9% continued to be so diagnosed at the 5-year follow-up (based on continuing to meet at least three of the seven DSM-IV criteria for alcohol dependence). Approximately two-thirds of the 298 continued to experience at least one or more of the 11 DSM-IV abuse or dependence criteria over the 5-year follow-up period. Of the 288 individuals who at baseline met the criteria for alcohol abuse, 36.1% continued to achieve the criteria five years later; 54.9% reported at least one of the 11 alcohol abuse/dependence criteria during the follow-up period. Only 3.5% of the alcohol abuse population at baseline met the alcohol dependence criteria 5 years later, suggesting that alcohol abusers do not exhibit an inevitable progression from abuse to full-blown alcohol dependence. Finally, among the 760 individuals who at baseline had no alcohol diagnosis, only 2.5% subsequently met the criteria for alcohol dependence, and 12.8% met the criteria for alcohol abuse. Taken together, these findings suggest a stability of alcohol-related dysfunction over time among individuals with a diagnosis of alcohol dependence. A diagnosis of alcohol abuse predicted a milder, less persistent disorder over time, with infrequent progression to alcohol dependence.

A more recent study provides additional insights. Dawson et al. (2005) used data from a large epidemiological study focusing on recovery from DSM-IV-defined alcohol dependence. Specifically, they examined the past year status

of 4,422 individuals who had met the criteria for alcohol dependence prior to the past year (PPY). Among those classified as PPY alcohol dependent, 25% remained classified as dependent in the past year, 27.3% were in partial remission, 11.8% were asymptomatic risk drinkers whose drinking pattern indicated a risk of relapse, 17.7% were low-risk drinkers, and 18.2% were abstainers.

One quarter of the PPY alcohol dependent participants in the Dawson et al. (2005) study reported ever having sought help (e.g., outpatient treatment, Alcoholics Anonymous) for their drinking. Among the 1,205 who ever received treatment, 35.1% were abstinent in the past year, compared to 12.4% in the never treated group. If one were to consider the asymptomatic risk drinkers, the low-risk drinkers, and those abstinent as in “full remission” in the past year, the rate of full remission was higher in the ever treated group (51.2%) than in the never treated group (46.5%). Although conclusions about the direct effects of treatment on these past year outcomes cannot confidently be drawn from these data, they do indicate a substantial degree of recovery from alcohol dependence.

The prognosis for treatment of an alcohol use disorder has been addressed in the context of both shorter-term (12 months) and longer-term (up to decades) treatment. The shorter-term category was assessed by Miller, Walters, and Bennett (2001), who studied the outcomes for over 8,000 patients who participated in seven large multisite AUD treatment projects. They found that during the year after treatment, around 25% of the patients were continuously abstinent and another 10% used alcohol moderately without problems. As such, one third had fully positive outcomes. Even among those who consumed alcohol during the follow-up year (this includes the previously-mentioned 10% who used alcohol moderately without problems), substantial improvements were noted. In this regard, patients who drank at all during the follow-up year nevertheless were abstinent, on average, three out of every four days, representing an average increase in abstinent days, from before to after treatment, of 128%. As a group, their overall alcohol consumption dropped 87% from before to after treatment. Finally, alcohol-related problems across all participants studied decreased by 60%. Taken together, these data provide a foundation for optimism regarding 12-month outcomes following treatment for alcohol problems.

The issue of long-term outcomes was reviewed by Finney, Moos, & Timko (1999). They summarized the findings of 12 studies published in the 1980s and 1990s that provided data on remission rates. Remission was defined as abstinence, nonproblem drinking, or “substantially improved drinking,” and the follow-up periods ranged from 8 to 20 years. Across these studies, remission rates ranged from 21% to 83%. These rates need to be considered with caution because it is not possible to draw a causal inference relating treatment to the long-term remission rates reported.

**Research provides a strong foundation for optimism in the treatment of alcohol use disorders, based on 12-month outcomes following alcoholism treatment**

## 1.5 Differential Diagnosis

The AUDs may be confused with either “normal” or “nonpathological” drinking, such as in “social drinking.” Nonpathological use of alcohol does not feature symptoms like high tolerance to alcohol, alcohol withdrawal symp-



**Differentiating AUDs from “normal” or “nonpathological” drinking**

toms with a drop in the blood alcohol level, compulsive alcohol use, or recurrent negative consequences of alcohol use that characterize alcohol abuse or alcohol dependence. As noted in DSM-IV-TR, frequent alcohol intoxication invariably is part of alcohol abuse or alcohol dependence, but incidents of intoxication alone do not meet criteria for an AUD diagnosis.

However, individuals who drink beyond certain quantities of alcohol at a particular frequency may be identified as “at risk” (for incurring alcohol problems, or an AUD). These individuals, also identified as “hazardous drinkers,” have become highly visible to the field as clinicians have become aware of their larger numbers in the population than the prevalence of individuals with an AUD. Furthermore, as we will show later in this book, in the last 20 years a segment of clinical research and practice has been devoted to methods of identifying hazardous drinkers and of intervening to modify their patterns of alcohol use toward primary prevention of the development of alcohol abuse or dependence.

## 1.6 Comorbidities

**Several psychiatric disorders have a high rate of co-occurrence with AUDs**

Besides the medical complications that may be associated with chronic, heavy alcohol consumption, the following psychiatric disorders have a disproportionately high rate of cooccurrence with the AUDs (APA, 2000): mood disorders, anxiety disorders, schizophrenia, and antisocial personality disorder.

## 1.7 Diagnostic Procedures and Documentation

Research has been extremely productive in helping to develop psychometrically-sound methods designed to provide DSM- (and ICD) based AUD (and other substance use and psychiatric) diagnoses, as well as measures that reflect the criteria that constitute an AUD diagnosis. As we described earlier, the content of the criteria for alcohol abuse and alcohol dependence in the DSM was heavily influenced by the alcohol dependence syndrome construct, and this is apparent in the content of the measures that we include here.

**Several psychometrically sound methods are available for determining the presence of an AUD diagnosis**

Table 5 lists psychometrically sound methods of determining an AUD diagnosis that reflect several of the criteria that constitute a diagnosis of alcohol abuse or dependence. We also include methods of measuring alcohol consumption, which are important for monitoring patients’ clinical course but that are not directly relevant to making an AUD diagnosis according to DSM criteria. The information in Table 5 is adapted from chapters by Maisto, McKay, and Tiffany (2003) and by Sobell and Sobell (2003), and it can be extremely valuable to clinicians in their efforts to derive case formulations of their patients’ alcohol problem severity and to monitor its course over time. Source references and full descriptive information for all of the measures listed in Table 5 are included in the Maisto et al. and Sobell and Sobell chapters, and in the book where the chapters are published (Allen & Wilson, 2003). It also is important to note that the measures listed in Table 5 are not the only ones

available to measure the variables represented in Table 5. However, they were included because of their good psychometric properties and their widespread use in the field.

**Table 5**  
**Measures to Diagnose AUDs and that Reflect AUD Diagnostic Criteria**

<b>Measure</b>	<b>Purpose</b>
Diagnostic Interview Schedule for DSM-IV	To provide a structured measure of DSM-IV AUD Criteria
Substance Abuse Module, Version 4.1	More detailed substance abuse section of the Composite International Diagnostic Interview, a semi-structured interview for assessment of DSM-IV and ICD-10 diagnostic criteria
Alcohol Dependence Scale	To measure the severity of alcohol dependence based on the alcohol dependence syndrome construct
Ethanol Dependence Scale	To measure elements of the alcohol dependence syndrome
Substance Dependence Severity Scale	To provide a measure of dependence that is free of cultural bias
Drinker Inventory of Consequences	To provide a measure of consequences of alcohol use
Drinking Problems Index	To provide a measure of alcohol-related problems in adults aged 55 years and older
Impaired Control Scale	To provide a measure of actual and perceived control over alcohol consumption
Temptation and Restraint Inventory	To provide a measure of preoccupation with control over drinking
Alcohol Craving Questionnaire	To provide a measure of acute alcohol craving
Quantity-Frequency Scales	To provide quickly-obtained information on number of days drinking and amount of alcohol consumption
Timeline Follow-Back Interview, Form 90	To provide measures of daily drinking

## Theories and Models of Alcohol Use Disorders

The definitions and descriptions of alcohol use disorders (AUDs) presented in Chapter 1 give the basis for our describing current ways that clinicians and researchers *understand* AUDs. By “understand,” we mean perception of factors that affect the development of a disorder, its maintenance, and its modification. Such information is critical for this book, because how clinicians think about and understand a problem may directly affect how they assess its manifestations and intervene to change it.

### 2.1 Traditional Theories of AUDs

**A number of theories have been proposed to explain AUDs**

Until recently, researchers and clinicians alike usually sought a single-factor explanation of what causes and maintains alcohol problems. Miller and Hester (2003) provided an excellent review of these models/theories. They summarized 12 single-factor models by describing each one, identifying its major emphasis about the cause and maintenance of AUDs, and citing an example of an intervention to modify AUD-related behavior that follows from the model. These 12 models span the biological, psychological, and social/environmental domains, and the etiological factors include individual characteristics (e.g., genetics, personality characteristics, lack of knowledge, motivation), environmental effects (e.g., cultural norms), and the interaction between the individual and their environment (e.g., family dynamics, social learning). Due to the wide variety of causal factors, AUD assessment and intervention differ considerably for each model. Treatment approaches vary widely also, and include interventions such as moral suasion, spiritual growth, restriction of alcohol supply, confrontation, coping skills training, and family therapy. It is here that we see why awareness of how the clinician understands AUDs is so important: If it guides what clinicians do with their patients, then the content, process, and outcomes could differ in major ways.

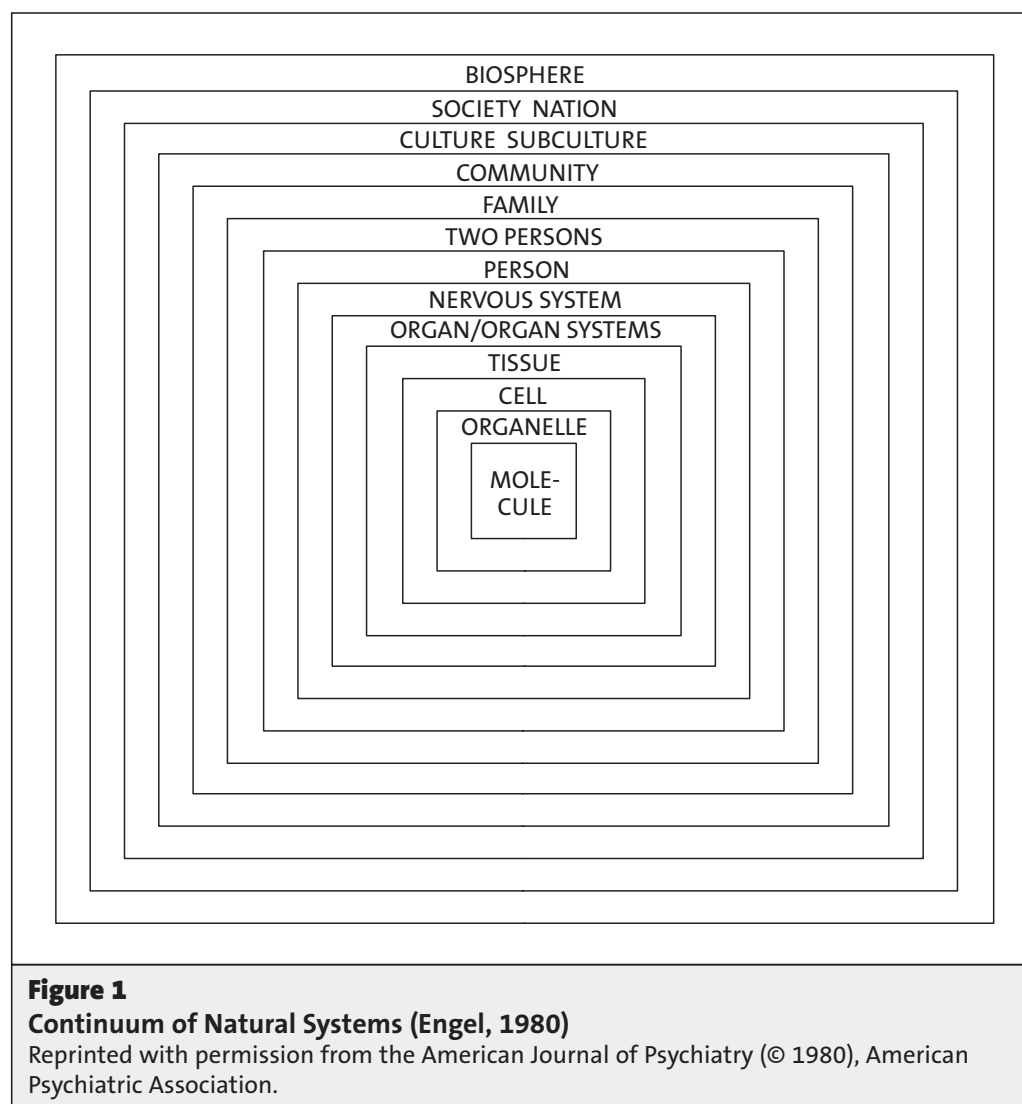
Through about the first three-quarters of the twentieth century, AUD theories frequently outpaced the data necessary to evaluate them. More recently, the quality of research in each of these domains has improved considerably, and each of these “single-factor” theories has been found to have some merit. Nevertheless, each set of factors alone, biological, psychological, or social/environmental, has been found lacking in its attempt to provide a satisfactory explanation of the AUDs.

## 2.2 Biopsychosocial Model of AUDs

Empirical evidence and a newer way of conceptualizing health and illness merged in the latter twentieth century to lead to the generation and broad influence of a “*biopsychosocial*” model of AUDs. Besides dissatisfaction with the account of AUDs that single factor theories provided, there were several other manifestations of alcohol problems that have been influential. In this regard, in the important report by the Institute of Medicine (IOM, 1990), three main features of alcohol problems were highlighted that led the authors of that report to the conclusion that there is no one “alcoholism” that is a unitary “disease.” Instead, alcohol problems are heterogeneous in their manifestation and etiology. Specifically, the IOM report argues that research conducted primarily since the early 1970s had shown that alcohol problems are, first, heterogeneous in their presentation, that is, they might be thought of as a syndrome with a variety of symptoms (Shaffer, LaPlante, LaBrie, Kidman, Donato, & Stanton, 2004; Vaillant, 1983). Second, alcohol problems are heterogeneous in their course. This conclusion is in contrast to more traditional ideas of alcoholism as a unitary, progressive disease. In fact, the course of alcohol problems can vary significantly, as shown by many longitudinal studies, and may or may not be characterized by “progressivity.” Third, alcohol problems are heterogeneous in etiology. This conclusion rests on the findings that no single cause or set of causes of alcohol problems has been identified. Rather, individuals who are identified as having alcohol problems present with diverse developmental trajectories of AUDs that are likely the result of the confluence of biological, psychological, and social factors. No single factor, set of factors, or factor domain has etiological priority of importance over another, none is necessary or sufficient in any case, and the influence of any factor or set of factors in AUD development varies across individuals.

The strength of the research and clinical evidence behind these conclusions along with newer conceptions of illness and health that rose to prominence in the 1970s have led to the current wide-spread influence of the “biopsychosocial” (BPS) model of AUDs. Engel (1977, 1980) presented the BPS model first to psychiatry and the rest of medicine and argued its superiority to the prevailing “biomedical” model in the treatment of patients presenting with medical or psychiatric disorders. Similar to conclusions that the IOM (1990) articulated about alcohol problems, Engel (1977) argued that to view a patient presenting to physicians with some medical or psychiatric disorder in one dimension (whether it be purely biological, psychological, or social) results in the likely result of missing significant aspects of the patient’s problem and thus its amelioration. Engel argued that health, and thus illness, is best viewed as the outcome of nonrecursive (bidirectional causality, such that change in “A” causes change in “B,” which in turn causes change in “A”) interactions among the hierarchical components of biological, individual, family, and community systems, and of components within those systems. Moreover, “lower order” components (biological) are subsumed by “higher order” (e.g., community) systems. Engel argued that this level of complexity is essential to understanding illness and its manifestations. Figure 1, from Engel (1980), illustrates this thinking.

**The biopsychosocial model is the approach most widely endorsed today**



In 1988, Donovan discussed the “emerging” acceptance of a BPS model among alcohol clinical practitioners and researchers. In 2005, Donovan expressed the tenor of the field by noting that the BPS model of alcohol problems is no longer emerging but has emerged. This raises the question of what variables must actually be considered in understanding any instance of presentation of AUDs. O’Brien (2001) provided a summary in response to this question in his listing of important BPS factors in the “onset” and continuation of not only AUDs, but of other substance use disorders as well. O’Brien’s list of variables is divided into three classes: agent (drugs), host (user), and environment.

The variables included in the *agent* category include *substance availability* (especially important in illicit substances), *cost of the substance*, *substance purity or potency*, and *mode of substance administration*, such as oral, nasal, or intravenous. The *host* variables include factors such as *innate tolerance to a substance*, i.e., the tolerance that an individual shows to a substance the first time that he or she uses it. Other tolerance-related factors include *speed of acquiring tolerance to a substance* and the *likelihood of experiencing pleasure when using a substance*. Another host factor is the speed and efficiency with which an individual *metabolizes a substance*. An individual’s *psychiatric symptoms* also may affect the onset and continuation of substance use, as might *prior experiences with a substance and expectations* about the conse-