Alcoholic Blackouts and Sex Offense Allegations

Nicole Schneider, Ph.D. and Paul Simpson, Ed.D.

Advanced Sexual Assault Litigation Course, Air Force JAG School, Montgomery AL. August 25, 2016

A ***blackout*** is a phenomenon caused by the intake of any substance or medication in which long term memory creation is impaired, therefore causing a complete inability to recall past events. "*Blacking out*" is not to be confused with the mutually exclusive act of *"passing out*", which means loss of consciousness.

Blackouts can generally be divided into 2 categories, "*en bloc*" blackouts and "*fragmentary*" blackouts. *En bloc blackouts* are classified by the inability to later recall any memories from the intoxication period, even when prompted. These blackouts are characterized also by the ability to easily recall things that have occurred within the last 2 minutes, yet inability to recall anything prior to this period. As such, a person experiencing an en bloc blackout may not appear to be doing so, as they can carry on conversations or even manage to accomplish difficult feats. It is difficult to determine the end of this type of blackout as sleep typically occurs before they end.

Fragmentary blackouts are characterized by the ability to recall certain events from an intoxicated period, yet be unaware that other memories are missing until reminded of the existence of these 'gaps' in memory. Research indicates that such fragmentary blackouts, also known as "*brownouts"*, are far more common than en bloc blackouts. Memory impairment during acute intoxication involves dysfunction of episodic memory, a type of memory encoded with spatial and social context. Recent studies have shown that there are multiple memory systems supported by discrete brain regions, and the acute effects of alcohol and learning and memory may result from alteration of the hippocampus and related structures on a cellular level.

A rapid increase in blood alcohol concentration (BAC) is most consistently associated with the likelihood of a blackout. However, not all subjects experience blackouts, which implies that genetic factors play a role in determining CNS vulnerability to the effects of alcohol. The former may predispose an individual to alcoholism, as altered memory function during intoxication may affect an individual's alcohol expectancy, one may perceive positive aspects of intoxication while unintentionally ignoring the negative aspects.

Various studies have also given rise to proof of links between general alcohol consumption and its effects on memory capacity. These studies have shown in particular, how the inebriated or intoxicated individual makes poorer associations between words and objects than does the sober individual. Later blackout-specific studies have indicated that alcohol specifically impairs the brain's ability to take short-term memories and experiences and transfer them to long-term memory.

Blackouts are commonly associated with the consumption of large amounts of alcohol; however, surveys of drinkers experiencing blackouts have indicated that they are not directly related to the amount of alcohol consumed. Respondents reported they frequently recalled having "*drank as much or more without memory loss*," compared to instances of blacking out. Subsequent research has indicated that blackouts are most likely caused by a rapid increase in a person's blood-alcohol concentration. One study, in particular, resulted in subjects being stratified easily into two groups, those who consumed alcohol very quickly, and blacked out, and those who did not black out by drinking alcohol slowly, despite being extremely intoxicated by the end of the study. (acknowledgements to wikipedia for this overview.)

About Dr. Nicole Schneider

Dr. Schneider is a forensic psychologist with specialized fellowship training at the country's foremost law and psychiatry training program. She has conducted hundreds of forensic mental health evaluations, testified more than 50 times in state and federal court, and consulted on dozens of military courts martial. She has presented and published on issues including but not limited to psychiatric diagnosis, mental state at the time of the offense, competence to stand trial, substance use, and mitigation. She lives in Denver with her husband, son, and four cats.

Dr. Schneider's forensic specialties include:

- Confidential consultant for military courts martial
- Criminal Responsibility (e.g., sanity/mental condition), Mitigation, Competence to Proceed, Risk Assessment, Aid to Sentencing
- Personal Injury, Fitness for Duty, Disability, Guardianship, Civil Commitment, Competence
- (to consent or to execute a will), Independent Medical Examinations (in psychology)
- Testamentary Capacity, Undue Influence
- Expert Testimony (substance use, mental health diagnoses and treatment, forensic psychology)
- Consultation for trial preparation, cross examination of opposing mental health experts, and review of opposing experts' reports.

Nicole Schneider, Ph.D.
Colorado Clinical & Forensic Psychology
(860) 810-5817
coloradoforensicpsychology@gmail.com
coloradoforensicpsychology.com

About Dr. Paul Simpson

- Extensive experience assisting military courts-martial through consultation with legal teams (government and defense), assisting with voir dire of potential members, and expert testimony.
- Has provided CLE trainings for Air Force JAG, Marine/Navy JAG, and State Bar of Arizona regarding:
  - *Child Sexual Abuse Allegations: What Every Attorney Should Know*
  - *Daubert Standard and Psychological Evaluations: What Every Attorney Should Know*
  - *Memory in the Courtroom: What Every Attorney Should Know*
  - *Mental Health Evaluations in Homicides and Crimes of Violence: What Every Attorney Should Know*
  - *Anatomy of a Psychosexual Evaluation: What Every Attorney Should Know*
  - *Online Sex Offense: What Every Attorney Should Know*
- Has conducted over 500 mens rea and competency evaluations.
- Has been an instructor for the Arizona Supreme Court in training and certifying competency evaluators.
- A former case manager with Child Protective Services, Dr. Simpson has extensive experience working with victims and perpetrators of sex crimes, including over 600 psychosexual evaluations of adults and juveniles. He is trained and/or certified in the Abel, Affinity 2.5, MEGA, Static 99R/2002R, Stable/Acute 2007, SVR-20, HCR-20, J-SOAP 2, ERASOR, and Monarch plethysmograph.
- A former Arizona officer for the Association for Treatment of Sexual Abusers (ATSA).
- Since 2003 has provided over 300 full-day trainings in all 50 states for professionals on assessing/treating sexual and Internet compulsions.
- Author of *Second Thoughts*, a book that was instrumental in helping expose the false claims and dangers of '*recovered memory therapy*.' Throughout the 1990's Dr. Simpson was a leading national educator on *False Memory Syndrome* and trained thousands of counseling professionals on standards of practice. He also served as an expert consultant to the *Arizona Board of Psychologist Examiners.*
- Dr. Simpson has been a guest on *The Joan Rivers Show*, the *Leeza Gibbons Show*, *Parent Talk Radio*, *Focus on the Family*, *Frontline*, and *Fox News*. He has been a professional consultant to a number of national media, including *20/20*, *60 minutes*, *NBC News*, *Nightline*, *The Oprah Winfrey Show*, the *Chicago Tribune*, *Dateline*, *The Today Show*, *Focus on the Family*, and *Vanity Fair magazine*.

Paul Simpson, Ed.D.
Arizona Forensic Services, LLC
crimeshrink@gmail.com
www.militarytrialexpert.com

(520) 355-1000

Stages of Acute Alcoholic Influence / Intoxication

Kurt M. Dubowski, Ph.D.

Blood-Alcohol Concentration grams/100ml	Stage of Alcoholic Influence	Clinical Signs / Symptoms
0.01-0.05	**Subclinical**	• Influence/effects usually not apparent or obvious • Behavior nearly normal by ordinary observation • Impairment detectable by special tests
0.03-0.12	**Euphoria**	• Mild euphoria, sociability, talkativeness • Increased self-confidence; decreased inhibitions • Diminished attention, judgment and control • Some sensory-motor impairment • Slowed information processing • Loss of efficiency in critical performance tests
0.09-0.25	**Excitement**	• Emotional instability; loss of critical judgment • Impairment of perception, memory and comprehension • Decreased sensatory response; increased reaction time • Reduced visual acuity & peripheral vision; and slow glare recovery • Sensory-motor incoordination; impaired balance; • slurred speech; vomiting; drowsiness
0.18-0.30	**Confusion**	• Disorientation, mental confusion; vertigo; dysphoria • Exaggerated emotional states (fear, rage, grief, etc) • Disturbances of vision (diplopia, etc.) and of perception of color, form, motion, dimensions • Increased pain threshold • Increased muscular incoordination; staggering gait; ataxia • Apathy, lethargy
0.25-0.40	**Stupor**	• General inertia; approaching loss of motor functions • Markedly decreased response to stimuli • Marked muscular incoordination; inability to stand or walk • Vomiting; incontinence of urine and feces • Impaired consciousness; sleep or stupor
0.35-0.50	**Coma**	• Complete unconsciousness; coma; anesthesia • Depressed or abolished reflexes • Subnormal temperature • Impairment of circulation and respiration • Possible death
0.45+	**Death**	• Death from respiratory arrest

KURT M. DUBOWSKI, Ph.D., D.A.B.C.C., D.A.B.F.T.
The University of Oklahoma
Department of Medicine
Oklahoma City, Oklahoma
Copyright © 2006 by Kurt M. Dubowski, Ph.D.
All Rights Reserve

Relevant Research: Alcohol-induced Blackouts

Alcohol-Induced Blackouts: A Review of Recent Clinical Research with Practical Implications and Recommendations for Future Studies

Reagan R. Wetherill and Kim Fromme

Alcoholism: Clinical and Experimental Research (May 2016), Vol. 40, No. 5.

Abstract

Background: Alcohol-induced blackouts, or memory loss for all or portions of events that occurred during a drinking episode, are reported by approximately 50% of drinkers and are associated with a wide range of negative consequences, including injury and death. As such, identifying the factors that contribute to and result from alcohol-induced blackouts is critical in developing effective prevention programs. Here, we provide an updated review (2010 to 2015) of clinical research focused on alcoholinduced blackouts, outline practical and clinical implications, and provide recommendations for future research.

Methods: A comprehensive, systematic literature review was conducted to examine all articles published between January 2010 through August 2015 that focused on vulnerabilities, consequences, and possible mechanisms for alcohol-induced blackouts.

Results: Twenty-six studies reported on alcohol-induced blackouts. Fifteen studies examined prevalence and/or predictors of alcohol-induced blackouts. Six publications described the consequences of alcohol-induced blackouts, and 5 studies explored potential cognitive and neurobiological mechanisms underlying alcohol-induced blackouts.

Conclusions: Recent research on alcohol-induced blackouts suggests that individual differences, not just alcohol consumption, increase the likelihood of experiencing an alcohol-induced blackout, and the consequences of alcohol-induced blackouts extend beyond the consequences related to the drinking episode to include psychiatric symptoms and neurobiological abnormalities. Prospective studies and a standardized assessment of alcohol-induced blackouts are needed to fully characterize factors associated with alcohol-induced blackouts and to improve prevention strategies.

Alcohol-Induced Blackouts as Predictors of Other Drinking Related Harms Among Emerging Young Adults

Ralph Hingson, Wenxing Zha, Bruce Simons-Morton, and Aaron White

Alcoholism: Clinical and Experimental Research (April 2016), Vol. 40, No. 4

Abstract

Background: Alcohol-related blackouts are periods of amnesia that reflect the failure of the brain to record memories of what transpires while drinking. This paper examined the incidence, predictors, and behavioral correlates of blackouts among emerging adults and examined whether questions about blackouts could serve as better markers of risk for other alcohol related harms than questions about levels of consumption.

Methods: In 2012 to 2013, 1,463 (68%) of 2,140 respondents 1-year past high school reported having consumed alcohol. They were asked whether, in the past 6 months because of drinking, they forgot where they were or what they did. The survey also explored demographics, substance use behaviors, and other alcohol-related problems in the past 6 months. Chi-square and logistic regression analyses explored bivariate and multivariate predictors of blackouts and other alcohol-related problems.

Results: Twenty percent of respondents who ever drank alcohol reported a blackout in the past 6 months. Blackouts were more prevalent among females and those who, in the past 30 days, used multiple drugs, more frequently binged, were drunk, smoked, had lower body weight, and lived in college dorms. After controlling for drinking levels, having a blackout was the strongest independent predictor of most other alcohol problems examined, including in the past 6 months because of drinking, missing class or work, getting behind in work or school, doing something respondents later regretted, arguing with friends, experiencing an overdose, and total number of alcohol problems reported. It was also an independent predictor of hangovers, damaging property, getting hurt, and trouble with police.

Conclusions: Because blackouts indicate drinking at levels that result in significant cognitive and behavioral impairment, questions about blackouts could serve as important, simple screeners for the risk of experiencing other alcohol related harms. Additional work on this subject is warranted.

Amnesia for violent offenses: Factors underlying memory loss and recovery.

Pyszora, Natalie M., Fahy, Tom, Kopelman, Michael D.

Journal of the American Academy of Psychiatry and the Law, Vol 42(2), Jun 1, 2014. pp. 202-213.

Abstract:

Amnesia for violent offenses is common, but little is known about underlying causes or whether memory can recover. In this study, 50 violent offenders were interviewed with neuropsychological and psychometric measures, to determine the factors that underlie amnesia and the recovery of memory in these cases. The results showed that amnesia for a violent offense was associated with crimes of passion and dissociative symptoms at the time, but not with impaired neuropsychological functioning. Long amnesic gaps were associated with a state of dissociation surrounding the offense and with previous blackouts (whether alcoholic or dissociative). Memory often recovered, either partially or completely, especially where there was a history of blackouts or a lengthy amnesic gap. Brief amnesic gaps were likely to persist, perhaps as a consequence of faulty encoding during a period of extreme emotional arousal (or red-out).

Alcohol-induced blackout as a criminal defense or mitigating factor: An evidence-based review and admissibility as scientific evidence.

Pressman, Mark R., Caudill, David S.

Journal of Forensic Sciences, Vol 58(4), Jul, 2013. pp. 932-940.

Abstract:

Alcohol-related amnesia—alcohol blackout—is a common claim of criminal defendants. The generally held belief is that during an alcohol blackout, other cognitive functioning is severely impaired or absent. The presentation of alcohol blackout as scientific evidence in court requires that the science meets legal reliability standards (*Frye*, FRE702/*Daubert*). To determine whether "alcohol blackout" meets these standards, an evidence-based analysis of published scientific studies was conducted. A total of 26 empirical studies were identified including nine in which an alcohol blackout was induced and directly observed. No objective or scientific method to verify the presence of an alcoholic blackout while it is occurring or to confirm its presence retrospectively was identified. Only short-term memory is impaired and other cognitive functions—planning, attention, and social skills—are not impaired. Alcoholic blackouts would not appear to meet standards for scientific evidence and should not be admissible.

Reconstructing alcohol-induced memory blackouts

Nash, Robert, Takarangi, Melanie

Journal of Memory,Sept. 15, 2011. Vol. 19, Issue 6, pp 566-573.

Abstract

Many people who drink alcohol have experienced a blackout; whereby they are unable to recall events that occurred during a period of intoxication. Following these blackout episodes individuals may attempt to reconstruct what happened to them. Blackouts therefore afford an excellent opportunity to study the strategies people use to reconstruct forgotten experiences. We conducted a survey of university students to explore how people choose to reconstruct blackouts, and the likely accuracy of these reconstructions. Our findings add to the growing research literature on people's strategies for validating their past experiences, and highlight the important role of external sources in the reconstruction process. The data show that people's desire to "fill in the blanks" can lead them to rely on rather unreliable sources, and may also encourage them to adopt weaker source-monitoring criteria. Indeed, in at least some cases reconstructing blackouts appears to lead to the development of false beliefs or memories.

Alcohol-Induced Blackout: Phenomenology, Biological Basis, and Gender Differences

Rose, Mark E. BS, MA; Grant, Jon E. MD, JD

Journal of Addiction Medicine, June 2010. Volume 4(2), pp 61-73

Abstract

Blackouts from acute alcohol ingestion are defined as the inability to recall events that occurred during a drinking episode and are highly prevalent in both alcoholic and nonalcoholic populations. This article reviews the clinical manifestations, epidemiology, risk factors, cognitive impairment, and neurobiology associated with alcohol-induced blackout, with special emphasis on the neurochemical and neurophysiological basis, and gender differences. Two types of blackout have been identified: en bloc, or complete inability to recall events during a time period, and fragmentary, where memory loss is incomplete. The rapidity of rise in blood alcohol concentration is the most robust predictor of blackout. Alcohol impairs different brain functions at different rates, and cognitive and memory performance are differentially impaired by ascending versus descending blood alcohol concentration. Cognitive and memory impairment occurs before motor impairment, possibly explaining how a drinker appearing fully functional can have little subsequent memory. Blackouts are caused by breakdown in the transfer of short-term memory into long-term storage and subsequent retrieval primarily through dose-dependent disruption of hippocampal CA1 pyramidal cell activity. The exact mechanism is believed to involve potentiation of gamma-aminobutyric acid-alpha-mediated inhibition and interference with excitatory hippocampal *N*-methyl-d-aspartate receptor activation, resulting in decreased long-term potentiation. Another possible mechanism involves disrupted septohippocampal theta rhythm activity because of enhanced medial septal area gamma-aminobutyric acid-ergic neurotransmission. Women are more susceptible to blackouts and undergo a slower recovery from cognitive impairment than men, due in part to the effect of gender differences in pharmacokinetics and body composition on alcohol bioavailability.

Evidence-based survey of the elimination rates of ethanol from blood with applications in forensic casework

Alan Wayne Jones

Forensic Science International 200 (2010), pp 1-20.

Abstract

Reliable information about the elimination rate of alcohol (ethanol) from blood is often needed in forensic science and legal medicine when alcohol-related crimes, such as drunken driving or drug-related sexual assault are investigated. A blood sample for forensic analysis might not be taken until several hours after an offence was committed. The courts usually want to know the suspect's blood-alcohol concentration (BAC) at some earlier time, such as the time of driving. Making these back calculations or retrograde extrapolations of BAC in criminal cases has many proponents and critics. Ethanol is eliminated from the body mainly by oxidative metabolism in the liver by Class I isoenzymes of alcohol dehydrogenase (ADH). Ethanol is an example of a drug for which the Michaelis–Menten pharmacokinetic model applies and the Michaelis constant (k_m) for Class I ADH is at a BAC of 2–10 mg/100 mL. This means that the enzyme is saturated with substrate after the first few drinks and that zero-order kinetics is adequate to describe the declining phase of the BAC profile in most forensic situations (BAC > 20 mg/100 mL). After drinking on an empty stomach, the elimination rate of ethanol from blood falls within the range 10–15 mg/100 mL/h. In non-fasted subjects the rate of elimination tends to be in the range 15–20 mg/100 mL/h. In alcoholics during detoxification, because activity of microsomal enzyme (CYP2E1) is boosted, the ethanol elimination rate might be 25–35 mg/100 mL/h. The slope of the BAC declining phase is slightly steeper in women compared with men, which seems to be related to gender differences in liver weight in relation to lean body mass. The present evidence-based review suggests that the physiological range of ethanol elimination rates from blood is from 10 to 35 mg/100 mL/h. In moderate drinkers 15 mg/100 mL/h remains a good average value for the population, whereas in apprehended drivers 19 mg/100 mL/h is more appropriate, since many of these individuals are binge drinkers or alcoholics. In preparing this article, a large number of peer-reviewed publications were scrutinized. Only those meeting certain standards in experimental design, dose of alcohol and blood-sampling protocol were used. The results

presented can hopefully serve as best-practice guidelines when questions arise in criminal and civil litigation about the elimination rate of ethanol from blood in humans.

Prevalence and Correlates of Alcohol-Induced Blackouts Among College Students: Results of an E-Mail Survey

Aaron M. White, PhD; David W. Jamieson-Drake, PhD; H. Scott Swartzwelder, PhD

Journal of American College Health (2010), 51:3, 117-131

Abstract.

The authors conducted an e-mail survey of 772 college students to learn more about their experiences with blackouts. Approximately half (5 1 %) of those who had ever consumed alcohol reported they had experienced a blackout at some point in their lives, and 40% had experienced 1 in the year before the survey. Among those who drank in the 2 weeks before the survey, nearly 1 in 10 (9.4%) had experienced a blackout during that period. Many later learned that, during the blackout, they had vandalized property, driven an automobile, had sexual intercourse, or engaged in other risky behaviors. Experiencing 3 or more blackouts was associated with a variety of other experiences, including heavier drinking, lower grades, an earlier age of drinking onset, and having others express concerns about their drinking. The female students who reported blackouts during the 2 weeks before the survey drank far less than male students did during this time period, supporting the use of gender-specific definitions of risky drinking.

Effects of alcohol and blood alcohol concentration limb on sexual risk-taking intentions

Kelly Cue Davis, William H. George, Jeanette Norris, Rebecca L. Schacht, Susan A. Stoner and Christian S. Hendershot

Journal of Studies on Alcohol and Drugs. 70.4 (July 2009): p499.

Abstract:

Objective: Although there have been numerous investigations of alcohol's relationship to sexual risk taking, the vast majority of these studies have not examined whether the biphasic nature of alcohol intoxication differentially influences risky sexual decisions. Thus, a laboratory study was conducted to investigate the effects of alcohol consumption and blood alcohol concentration (BAC) limb on sexual risk-taking intentions. Method: Participants (N = 150; 51.3% male) were randomly assigned to consume alcoholic drinks (target peak BAC = .08%) or nonalcoholic drinks and then completed a hypothetical sexual risk assessment involving an opposite-gender new partner while on either the ascending BAC limb or descending BAC limb. Results: Alcohol intoxication resulted in increased sexual risk-taking intentions indirectly through its influence on perceived intoxication and, subsequently, sexual arousal. An interaction of beverage condition and BAC limb condition indicated that alcohol's effects on perceived intoxication varied significantly by limb, with those on the ascending limb reporting greater perceived intoxication than those on the descending limb. Conclusions: Findings suggest that future research and prevention efforts would be better informed through a more comprehensive consideration of BAC limb effects on sexual risk behaviors. Moreover, results indicate that prevention programs should address in-the-moment states, such as perceived intoxication and sexual arousal, in interventions targeting risky sexual decision-making processes.

Ethanol elimination rates in men and women in consideration of the calculated liver weight

Andrea Dettling, Florian Fischer, Svenja Böhler, Fee Ulrichs, Gisela Skopp, Matthias Graw, Hans-Thomas Haffner

Journal of Alcohol. Sept. 2007. Volume 41, Issue 6, pages 415–420.

Abstract

The purpose of the study was to examine gender differences on the pharmacokinetics of ethanol. Sixty-eight healthy men and 64 healthy women with normal body mass indexes received between 0.79 and 0.95 g ethanol/kg body weight in the form of their choice after they had eaten a “typical” breakfast. The aimed concentration for both genders was a blood alcohol concentration C_0 of 0.104 g/dl. Blood samples in the elimination phase were taken in 10- to 20-min intervals beginning after completion of absorption. The maximum blood ethanol concentration was 0.0819 ± 0.0184 g/dl for women and 0.0841 ± 0.0155 g/dl for men. The hourly ethanol

elimination rate, calculated over a linear function, in blood of 0.0179 ± 0.0030 g/dl/h in women was significantly higher than the 0.0159 ± 0.0029 g/dl/h for men ($P < .0001$). In relation to the liver weight, the hourly elimination rates were 5.008 ± 0.678 g/kg liver/h for women and 4.854 ± 0.659 g/kg liver/h for men, and were not statistically significant. The different liver masses as calculated in relation to the distribution volume account for the differing ethanol elimination rates between men and women.

The estimation of blood alcohol concentration: Widmark Revisited

Posey, Douglas, Mozayani, Ashraf

Forensic Science, Medicine, and Pathology. March 2007, Vol. 3, Issue 1, pp 33-39.

Abstract

Expert witnesses and others involved in toxicology are frequently asked to perform retrograde extrapolation of blood alcohol concentration (BAC) or to estimate BAC based on a proposed drinking scenario. Although many individuals are reluctant to perform these calculations and some jurisdictions expressly prohibit them, a significant number of practitioners routinely estimate BAC based on this type of calculation, using as a basis the fundamental work of Widmark. Although improvements to the Widmark formula and other data pertaining to the pharmacology of alcohol have been published, these improvements are frequently ignored when estimating BAC. This article summarizes five published models for the estimation of BAC and proposes a sixth model that incorporates recent data on the rate of absorption of alcohol from the GI tract into the existing five models. The five improved models can be computerized and used to construct comparative snapshots of the BACs calculated by the different algorithms. This will allow practitioners to provide a more balanced picture of the variability in BAC calculations.

Alcoholic blackout for criminally relevant behavior.

van Oorsouw, Kim, Merckelbach, Harald, Ravelli, Dick, Nijman, Henk, Mekking-Pompen, Ingrid

Journal of the American Academy of Psychiatry and the Law, Vol 32(4), 2004. pp. 364-370.

Abstract:

Some criminal suspects claim to have had an alcohol-induced blackout during crimes they have committed. Are alcoholic blackouts a frequently occurring phenomenon, or are they merely used as an excuse to minimize responsibility? Frequency and type of blackout were surveyed retrospectively in two healthy samples (n = 256 and n = 100). Also, a comparison of blood alcohol concentrations was made between people who did and those who did not claim a blackout when stopped in a traffic-control study (n = 100). In the two survey studies, blackouts were reported frequently by the person himself (or herself) and others (67% and 76%, respectively) in contrast to the traffic-control study (14%), in which blackouts were reported only when persons were involved in an accident These results indicate that although blackouts during serious misbehavior are reported outside the court, both the denial and the claim of alcoholic blackout may serve a strategic function.

Commentary: Alcoholic Blackout and Allegation of Amnesia During Criminal Acts.

Granacher, Robert P. Jr.

Journal of the American Academy of Psychiatry and the Law, Vol 32(4), 2004. pp. 371-374.

Abstract:

Comments on the study by K. Oorsouw et al. (see record 2005-00174-003), which explored the question of whether alcohol blackouts occur frequently or are used primarily as an excuse to minimize legal responsibility. Most researchers in the area of alcohol abuse and alcohol-induced cognitive disorders point out the individual differences noted among those who do and do not experience blackouts. Recent genetic studies have added substantially to the understanding of individual differences among those who abuse alcohol and report blackouts. The question for forensic psychiatry is: what difference does it make if a person reports amnesia during a criminal act due to alcohol consumption? Most legal statutes in the United States do not allow voluntary intoxication as a defense for committing a crime. Moreover, most of the evidence of a blackout is provided by subjective recall from the accused and so may be of questionable veracity.

Commentary: Alcoholic Blackout-Does It Remove Mens Rea?

James Merikangas, MD

J Am Acad Psychiatry Law 32:375–7, 2004

Excerpt

Disorders of impulse control are commonly induced by alcohol. As Lady Macbeth said, "That which hath made them drunk hath made me bold; What hath quenched them hath given me fire" (Ref. 1, p 1231). The report by van Oorsouw et al. from The Netherlands re-emphasizes the prevalence of alcohol-induced blackouts in a community sample and suggests that the claim of amnesia during a criminal event may serve a "strategic purpose" in court. This raises questions that are of importance to the legal system in general and to the forensic psychiatrist in particular. . . . Blackouts during alcohol intake are phenomena similar to episodes of "transient global amnesia," a neurological syndrome that closely resembles a blackout, except that it occurs in the absence of alcohol, perhaps because of basilar cerebrovascular insufficiency (or during a migraine-equivalent episode).

These episodes are not accompanied by drowsiness, inattentiveness, or impairment of consciousness, and speech and behavior may appear normal to an outside observer. White has described the mechanism for alcoholic blackouts as involving disruption of activity in the hippocampus. Ethanol inhibits NMDA (N-methyl-D-aspartate type of glutamate receptor), a receptor involved in synaptic plasticity and longterm potentiation (LTP).

Experiential Aspects of Alcohol-Induced Blackouts Among College Students

Aaron M. White, Matthew L. Signer, Courtney L. Kraus, and H. Scott Swartzwelder.

American Journal Of Drug and Alcohol Abuse. Vol. 30, No. 1, pp. 205–224, 2004

Abstract

Our current understanding of alcohol-induced memory blackouts is derived largely from research with middle-aged, hospitalized, male alcoholics. In the present study, 50 undergraduate students (34 female and 16 male) with a history of at least one blackout were interviewed to gain insight into their experiences. Fragmentary blackouts, in which memory for events is fragmented, were far more common than blackouts of the en bloc type, in which a period of time is simply missing from memory. Most students recalled bits and pieces of events without cueing from others, yet still relied on friends, most also intoxicated themselves during the blackout period, to tell them what transpired. Thinking about the fragments triggered further recall in the majority of cases. Half of all subjects, more females than males, reported having been frightened by their last blackout experience. Being frightened typically led to more careful drinking for several weeks or longer. Characteristics of blackouts among college students in the present study are compared to the standard model of blackouts based on reports from alcoholics.

What Happened? Alcohol, Memory Blackouts, and the Brain

Aaron M. White, Ph.D.

Alcohol Research & Health. 2003 Vol 27(2) 186-196

Abstract:

Alcohol primarily interferes with the ability to form new long-term memories, leaving intact previously established long-term memories and the ability to keep new information active in memory for brief periods. As the amount of alcohol consumed increases, so does the magnitude of the memory impairments. Large amounts of alcohol, particularly if consumed rapidly, can produce partial (i.e., fragmentary) or complete (i.e., en bloc) blackouts, which are periods of memory loss for events that transpired while a person was drinking. Blackouts are much more common among social drinkers--including college drinkers--than was previously assumed, and have been found to encompass events ranging from conversations to intercourse. Mechanisms underlying alcohol-induced memory impairments include disruption of activity in the hippocampus, a brain region that plays a central role in the formation of new autobiographical memories

Effect of food and food composition on alcohol elimination rates in healthy men and women

Ramchandani, Vijay A., Kwo, Paul Y., Li, Ting-Kai

Journal of Clinical Pharmacology, 2001. Vol. 41, Issue 12, pp 1345-1350

Abstract

Several studies have evaluated the effect of food on alcohol pharmacokinetics; however, most studies have used oral alcohol administration, which cannot separate the influence of food on absorption from its influence on alcohol elimination. Alcohol clamping uses intravenous alcohol and provides a direct measure of the alcohol elimination rate (AER). Two studies, using alcohol clamping at 50 mg %, were conducted to investigate the effect of food and food composition on AER (g/h) in healthy men and women. In the first study, 20 subjects underwent two clamping sessions, one after a 12-hour fast and another 1 hour after consuming a 530-calorie breakfast. In the second study, 8 subjects underwent four clamping sessions: one after a 12-hour fast and, in each of three "fed" sessions, 1 hour after a 550-calorie high-fat, high-protein, or high-carbohydrate breakfast. Comparison of AERs from the first study showed an average 25% increase following food compared to that following fasting. Men showed significantly higher AERs compared to women; however, the food effect was similar in both genders. In the second study, the AER showed a significant average 45% increase following the meal, regardless of composition, compared with that following fasting. These findings indicate that food intake results in increased alcohol elimination rates. The increase was similar for meals of different compositions, suggesting that the food effect is not due to specific interactions with meal constituents. Probable mechanisms for the increased alcohol elimination include food-induced increases in hepatic blood flow and in the activity of alcohol-metabolizing enzymes.

False allegations of rape revisited: a replication of the kanin study

Kennedy, Daniel..

Journal of Security Administration; June 2000; 23, 1; pg. 41

Abstract

Behavioral scientists interested in the "dark figure" of unreported crime can claim with empirical support that only 30% of rapes are made known to the police (Rand, 1998). There is far less agreement on the extent to which certain rapes may be "overreported." Do false allegations of rape occur with sufficient frequency to constitute an appreciable threat to the administration of justice? If so, are there any patterns which may be identified and motivations which may be uncovered?

False allegations of wrongdoing can have severe consequences for the American justice system. Several studies have documented the extent to which suspects have been wrongfully convicted for crimes they did not commit (Huff, Rattner, & Sagarin, 1996). Allegations of child molestation are often leveled between waning spouses in an attempt to win custody of their children (Robin,1992). Finally, to the extent that investigative authorities understand the nature of false reports of victimization, true victims of rape will not be confused with dissemblers and denied appropriate system support (McDowell & Hibler,1993).

False Rape Allegations

Kanin, Eugene.

Archives of Sexual Behavior, Feb. 1994, v23, n1, p81(12)

Abstract

With the cooperation of the police agency of a small metropolitan community, 45 consecutive, disposed, false rape allegations covering a 9 year period were studied. These false rape allegations constitute 41% the total forcible rape cases (n = 109) reported during this period. These false allegations appear to serve three major functions for the complainants: providing an alibi, seeking revenge, and obtaining sympathy and attention. False rape allegations are not the consequence of a gender-linked aberration, as frequently claimed, but reflect impulsive and desperate efforts to cope with personal and social stress situations.

A Case Report-Alcohol-Induced Blackouts during Sexual Intercourse: Legal Responsibility?

Dan E. Neal, Edward M. Scott and Raymond A. Grimsbo

Int J Offender Ther Comp Criminol 1993; 37; 325

Abstract:

Analyzed a criminal rape trial in which neither the man nor the woman claimed any memory of the sex act. Afterward, the woman and the prosecution contended that under such circumstances, a rape had occurred on the theory that the woman was unconscious. The man denied any memory of the sex act, even under hypnosis, and was found not guilty. The acquittal was apparently based on the jury's belief that both the woman and the man were conscious during intercourse but were unable to recall the sex act due to alcohol-induced blackouts.

Amnesia for criminal offences.

Taylor, Pamela J., Kopelman, Michael D.

Psychological Medicine, Vol 14(3), Aug, 1984. pp. 581-588.

Abstract:

A study of 203 males on custodial remand for violent and nonviolent offenses examined the relationship between mental state and criminal behavior. The Ss were interviewed in depth about their criminal behavior, social background, and mental state at the time of the interview and of the offense itself. Self-rating scales, including the Beck Depression Inventory, were completed by the majority of the Ss. Ss' psychiatric histories and police records were examined. Results indicate that 19 Ss claimed amnesia for their offense. The amnesia occurred only among those who had committed violence and was most frequent following homicide. All the amnesiacs had a psychiatric disorder: Four Ss had a primary depressive illness, and the remaining 15 Ss were almost equally divided between schizophrenia and alcohol abuse. None of the amnesias had any legal implications. The circumstances of the offenses suggested a variety of mechanisms to account for the amnesia, including repression, dissociation, and alcoholic blackouts. Psychological defense mechanisms were probably of some importance, even when alcohol was an important factor.

Alcohol-Induced Blackouts as Predictors of Other Drinking Related Harms Among Emerging Young Adults

Ralph Hingson, Wenxing Zha, Bruce Simons-Morton, and Aaron White

Background:

Alcohol-related blackouts are periods of amnesia that reflect the failure of the brain to record memories of what transpires while drinking. This paper examined the incidence, predictors, and behavioral correlates of blackouts among emerging adults and examined whether questions about blackouts could serve as better markers of risk for other alcohol related harms than questions about levels of consumption.

Methods: In 2012 to 2013, 1,463 (68%) of 2,140 respondents 1-year past high school reported having consumed alcohol. They were asked whether, in the past 6 months because of drinking, they forgot where they were or what they did. The survey also explored demographics, substance use behaviors, and other alcohol-related problems in the past 6 months. Chi-square and logistic regression analyses explored bivariate and multivariate predictors of blackouts and other alcohol-related problems.

Results: Twenty percent of respondents who ever drank alcohol reported a blackout in the past 6 months. Blackouts were more prevalent among females and those who, in the past 30 days, used multiple drugs, more frequently binged, were drunk, smoked, had lower body weight, and lived in college dorms. After controlling for drinking levels, having a blackout was the strongest independent predictor of most other alcohol problems examined, including in the past 6 months because of drinking, missing class or work, getting behind in work or school, doing something respondents later regretted, arguing with friends, experiencing an overdose, and total number of

alcohol problems reported. It was also an independent predictor of hangovers, damaging property, getting hurt, and trouble with police.

Conclusions: Because blackouts indicate drinking at levels that result in significant cognitive and behavioral impairment, questions about blackouts could serve as important, simple screeners for the risk of experiencing other alcohol related harms. Additional work on this subject is warranted.

Alcohol-Induced Blackouts: A Review of Recent Clinical Research with Practical Implications and Recommendations for Future Studies

Reagan R. Wetherill and Kim Fromme

Alcoholism: Clinical and Experimental Research. Vol. 40, No.5, pp922-935. May 2016

Background:

Alcohol-induced blackouts, or memory loss for all or portions of events that occurred during a drinking episode, are reported by approximately 50% of drinkers and are associated with a wide range of negative consequences, including injury and death. As such, identifying the factors that contribute to and result from alcohol-induced blackouts is critical in developing effective prevention programs. Here, we provide an updated review (2010 to 2015) of clinical research focused on alcohol induced blackouts, outline practical and clinical implications, and provide recommendations for future research.

Methods: A comprehensive, systematic literature review was conducted to examine all articles published between January 2010 through August 2015 that focused on vulnerabilities, consequences, and possible mechanisms for alcohol-induced blackouts.

Results: Twenty-six studies reported on alcohol-induced blackouts. Fifteen studies examined prevalence and/or predictors of alcohol-induced blackouts. Six publications described the consequences of alcohol-induced blackouts, and 5 studies explored potential cognitive and neurobiological mechanisms underlying alcohol-induced blackouts.

Conclusions: Recent research on alcohol-induced blackouts suggests that individual differences, not just alcohol consumption, increase the likelihood of experiencing an alcohol-induced blackout, and the consequences of alcohol-induced blackouts extend beyond the consequences related to the drinking episode to include psychiatric symptoms and neurobiological abnormalities. Prospective studies and a standardized assessment of alcohol-induced blackouts are needed to fully characterize factors associated with alcohol-induced blackouts and to improve prevention strategies.