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Smoke and Mirrors: Screening for the Detection of Adolescent Substance Use Disorders—What School Counselors Should Know

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Abstract

Substance abuse remains a perennial problem among adolescents in the school setting, yet largely invisible. The typical response to a substance abusing student is expulsion, yet we know that substance abuse follows a six stage continuum from no interest on one end to harmful involvement and physical/psychological dependence at the other end. Data also indicates that identification and early intervention provides the best prognosis for these students. While numerous prevention programs have proven effective, none is 100% effective, and a certain percentage of students will not respond to prevention efforts. Given the fact that substance use disorders are responsive to treatment, identification, screening, intervention, and referral are all within the domain of the school counselor. All four of these areas will be discussed.

What Are Substance Use Disorders?

The term substance use disorders (SUDs) typically refers to two specific substance related disorders: substance abuse and substance dependence. While a discussion of the diagnostic criteria is beyond the scope of this review, the newly updated *Diagnostic and Statistical Manual* (5th ed.; DSM-5; American Psychiatric Association [APA], 2013) defines substance use disorders as a maladaptive pattern of substance use leading to clinically significant distress or impairment in seven domains: work, school, home, social relationships, legal, use in physically hazardous situations, and physical effects such as tolerance, withdrawal, and craving for the substance. *DSM-5* does not separate the diagnoses of substance abuse and dependence as in *DSM-IV-TR* (4th ed., text rev.; APA, 2000). The *DSM-5* substance use disorder criteria are nearly identical to the *DSM-IV-TR* substance abuse and dependence criteria combined into a single list, with two exceptions. The *DSM-IV-TR*'s recurrent legal problems criterion for substance abuse has been deleted from *DSM-5*, and a new criterion, craving or a strong desire or urge to use a substance, has been added. In addition, the threshold for substance use disorder

diagnosis in *DSM-5* is set at two or more criteria, in contrast to a threshold of one or more criteria for a diagnosis of *DSM-IV-TR* substance abuse and three or more for *DSM-IV-TR* substance dependence. Severity of the *DSM-5* substance use disorders is based on the number of criteria endorsed: 2–3 criteria indicate a mild disorder; 4–5 criteria, a moderate disorder; and 6 or more, a severe disorder. Substances for which the diagnosis of substance use disorders can apply include alcohol, amphetamines, cannabis, cocaine, hallucinogens, inhalants, opioids, and sedative/hypnotic drugs. It is important to point out that substance use alone is not sufficient for a diagnosis of a substance use disorder (Bukstein et al., 2005) and that many adolescents experiment with substances such as alcohol or cannabis (Tjepkema, 2004). Although the average person speaks of “childhood” and “adolescence” as if they were single phases of life, in reality both are made up of sub-stages, each with specific developmental demands for the child as he or she matures. Even if students were to develop problematic use, a high percentage of those students will “mature out” of problematic use as a result of selection effects (Littlefield, Sher, & Wood, 2009).

The transition between late adolescence and early adulthood is filled with a variety of demands which tend to pose to the adolescent the dilemma of having to make a choice between substance use or assuming more adult roles (e.g., living independently, getting married, entering the workforce, or having children; Schulenberg & Maggs, 2002). For those particularly problematic substance users, usually with a moderate or severe substance use disorder, predisposing personality characteristics may mean that they are not as drawn to the more stabilizing choices of marriage and parenthood, or that these milestones do not affect their drinking behavior (Matzger, Delucchi, Weisner, & Ammon, 2004). The younger the student is when he/she is first exposed to substances, however, the higher probability that he/she will progress to develop a diagnosable SUD (Bukstein et al., 2005). And furthermore, it is this subset of the adolescent population that is resistant to the selection process. It is extremely important to identify adolescents that have progressed from experimental use to a diagnosable substance use disorder because of the attendant detrimental behaviors including, but not limited to, risky sexual behavior and accidental deaths (Deas & Thomas, 2001), increased risk for suicide (Esposito-Smythers & Spirito, 2004), and risk of disease such as STDs, HIV, and hepatitis (Gilvarry, 2000).

Scope of the Problem

Prior to embarking on a discussion of identification, screening, intervention and referral, a review of the scope of the problem is in order. Data from two large studies provides us with the prevalence rates and current usage rates of various substances as well as trends in use. The Methodology for Epidemiology of Mental Disorders in Children and Adolescents (MECA) Study (Shaffer et al., 1996) estimated that substance use disorders affect 2% of children and adolescents age 9–17. What is more alarming, however, is data from the Monitoring the Future Study 2010, sponsored by the National Institute on Drug Abuse (NIDA; Johnston, O’Malley, Bachman, & Schulenberg et al., 2011) and administered by the University of Michigan. Each year, since 1975, this study has surveyed a large, nationally representative sample of public and private secondary schools in the U.S. consisting of students in the 8th, 10th, and 12th grades. The 2010

sample consisted of 46,500 students from 396 secondary schools across the U.S. This study provided some startling statistics regarding current use of substances. *Marijuana use*, which had been rising among teens for the past 2 years, continued to rise in 2010 in all prevalence periods for all three grades. Of particular relevance, *daily marijuana use* increased significantly in all three grades in 2010; and stands at 1.2%, 3.3%, and 6.1% in grades 8, 10, and 12, respectively. There was a significant increase in *heroin use using a needle* among 12th graders in 2010, with annual prevalence rising from 0.3% in 2009 to 0.7% in 2010. After decelerating considerably in recent years, the long-term decline in *cigarette use*, which began in the mid-1990s, came to a halt in the lower grades in 2010. Indeed, both 8th and 10th graders showed evidence of an increase in smoking in 2010, though the increases did not reach statistical significance. The proportion of 12th graders in 2010 reporting use of any prescription drugs without medical supervision in the prior year was 15.0%, up slightly from 14.4% in 2009 but a bit lower than in 2005, when it was 17.1%. Lifetime prevalence for the use of any of these drugs without medical supervision in 2010 was 21.6%. *Alcohol use* remains extremely widespread among today's teenagers. Despite recent declining rates, nearly three-quarters of students (71%) have consumed alcohol (more than just a few sips) by the end of high school, and more than one-third (36%) have done so by 8th grade. In fact, more than half (54%) of 12th graders, and one-sixth (16%) of 8th graders in 2010, reported having been drunk at least once in their life (Johnston, O'Malley, Bachman, & Schulenberg, 2011).

Having established that substance use, misuse, and diagnosable substance use disorders are a problem on campuses of secondary schools across the U.S., what should be the school counselor's response to this problem? When a young person is suspended from school for behavioral problems, substance abuse or truancy, or chooses to drop out of school due to substance abuse, this event frequently leads to long-term psychological adjustment problems, unemployment or underemployment, continued substance abuse or other risk taking behaviors, and frequently, involvement in either the criminal justice or the welfare systems. As an advocate for students, it is incumbent upon the school counselor to provide identification, screening, intervention, and referral for substance related issues.

Identifying Students With Potential Substance Misuse Problems

Identification of a potential substance misuse problem is the first step to which the school counselor should be attuned. There are some well-known risk factors that place adolescents at risk for the development of a substance use disorder. These include, but are not limited to, a family history of alcohol or drug misuse, the presence of a concomitant mental health disorder, being a member of a single parent or blended family, family and/or peer tolerance of deviant behavior, early cigarette use, high levels of engagement with drug using peers, poor impulse control, and the tendency to seek novel experiences or risk taking behavior (Kirisci, Vanyukov, & Tarter, 2005; Kriechbaum & Zernig, 2000; Miller, Davies, & Greenwald, 2000; Simkin, 2002).

With respect to identification of substance misuse, the school counselor is on the front line to detect both behavioral changes associated with substance misuse and physical signs of substance misuse. Behavioral changes associated with substance misuse include, but are not limited to: change in overall attitude/personality with no other

identifiable cause; changes in friends; new hang-outs; sudden avoidance of old crowd; reluctance to talk about new friends; friends who are known drug users; changes in activities or hobbies; drop in grades at school or performance at work; skipping school or being late for school; difficulty in paying attention; forgetfulness; general lack of motivation, energy, self-esteem; an "I don't care" attitude; sudden oversensitivity, temper tantrums, or resentful behavior; moodiness, irritability, or nervousness; silliness or giddiness; paranoia; excessive need for privacy; being unreachable; and secretive or suspicious behavior.

Physical signs for the school counselor to be alert for include, but are not limited to: change in personal grooming habits; loss of appetite, increase in appetite, any changes in eating habits, unexplained weight loss or gain; slowed or staggering walk; poor physical coordination; inability to sleep, awakening at unusual times, unusual laziness including falling asleep in class; red, watery eyes; pupils larger or smaller than usual; blank stare; cold, sweaty palms; shaking hands; puffy face, blushing or paleness; smell of substance on breath, body, or clothes; extreme hyperactivity; excessive talkativeness; runny nose; hacking cough; needle marks on lower arm, leg, or top of feet; nausea, vomiting or excessive sweating; tremors or shakes of hands, feet, or head; and irregular heartbeat.

If any of the above behavioral changes or physical signs are detected, consideration should be given for screening the student. Attention should be paid to the number of signs and symptoms detected, and a good rule of thumb is if the student has three behavioral and three physical signs then suspicion of a substance use disorder should be entertained. The first approach taken by the school counselor should be one of expressing care and concern for the student, keeping in mind that substance use disorders are disease processes that are steeped in denial. For the purposes of this paper, a mild substance use disorder is defined as use of psychoactive substances that increases risk of harmful and hazardous consequences; a moderate or severe substance use disorder is defined as a pattern of compulsive seeking and using of substances despite the presence of severe interpersonal problems and negative consequences.

Some General Comments About Screening

Screening determines the need for a comprehensive assessment; it does not establish definitive information about diagnosis and possible treatment needs. The process should take no longer than 30 minutes and ideally will be shorter. According to the Substance Abuse and Mental Health Services Administration (SAMHSA), the hallmarks of a screening program are (1) its ability to be administered in about 10-15 minutes and (2) its broad applicability across diverse populations (SAMHSA, 1994). When screening turns up "red flags" that indicate that the adolescent may have a substance use disorder, the youth should be referred for a comprehensive assessment (Winters, 1994). For adolescents at high risk for substance use disorders, a negative screening result should be followed up with a re-evaluation, perhaps after 6 months. In recognition of the importance of early detection and intervention, it is appropriate to be inclusive when screening youth for substance use problems. The goal of screening is to accurately identify youth who will benefit from a full and complete assessment, at which time a determination of a substance use disorder can be made and recommendations for

intervention developed. A screen should be simple enough that a school counselor can administer it. It should focus on the adolescent's substance use severity (primarily consumption patterns) and a core group of associated factors such as legal problems, mental health status, educational functioning, and living situation. The client's awareness of their problem, his/her thoughts on it, and his/her motivation for changing the behavior should also be elicited.

As outlined above, there are multiple important reasons to screen for adolescent alcohol and substance use. These include, but are not limited to: alcohol and substance use is associated with deaths, injuries, and health problems among adolescents; alcohol and substance use is common among adolescents; misuse of alcohol and drugs is found among all demographic subgroups; and lastly, early age at first use is a risk factor for the development of a substance use disorder later in life (DeWit, Adlaf, Offord, & Ogborne, 2000).

All school counselors should be familiar with and be comfortable in administering a substance misuse screen. During a 30-minute screening, there may be enough time to gather information from both the adolescent and a parent or guardian and to administer a brief standardized screening questionnaire to supplement the interview. A 10-15 minute screening process would involve the adolescent and one method of data collection (either brief questionnaire or structured interview). The shorter screening procedure may be the only feasible strategy in the school setting. Given the high correlation between psychological difficulty and substance use disorders, all teens receiving mental health assessment should also be systematically screened. Adolescents who present with substantial behavioral changes or emergency medical services for trauma, or who suddenly begin experiencing medical problems such as accidents, injury, or gastrointestinal disturbance should also be screened. In addition, the school counselor should screen youth who show increased oppositional behavior, significant changes in grade point average, and a great number of unexcused school absences. The screening procedure focuses on empirically verified "red flags," or indicators of serious substance-related problems among adolescents, and these indicators tend to fall into two broad categories: those that indicate substance use problem severity and those that are psychosocial factors.

Current Use of Screening Instruments in the School Setting

In spite of the recognition of and acknowledgement that substance use represents a major problem among adolescents and the ready availability of substance use screening instruments in the public domain, and after an exhaustive literature search, the authors conclude that there have been no systematic studies with reference to the use of substance use screening instruments in the school setting. In other words, data is sorely lacking as to who uses these screens, how many are administered on an annual basis, and if school counselors are even aware of their existence. Thus, the purpose of this article is to bring to light both the problem and solution for school counselors by acquainting them with several instruments from which to choose to perform screening for substance use among the adolescent population.

Screening Instruments for Substance Use Available to the School Counselor

The discussion will now turn toward several instruments, all available in the public domain, that meet the above listed SAMHSA criteria for a screening instrument. All of the listed instruments require no special training, with the caveat being that a positive screen should prompt a referral for a comprehensive assessment. Also keep in mind that these are face-valid (i.e., the person knows that you are asking about the use of alcohol and drugs) and self-reporting instruments; therefore, they are subject to “impression management” and the defense mechanisms attendant with substance misuse. This means that students either unintentionally or intentionally underestimate or self-report their use or are using attempts at manipulation for “impression management.”

The simplest screen is the oral CRAFFT screen published by the Center for Adolescent Substance Abuse Research (CeSAR) from Boston Children’s Hospital in 2001 (Knight et al., 1999). It is a simple pneumonic device and 1 point is assigned for a “yes” answer to each of the five CRAFFT questions. The questions are as follows: **C**—Have you ever ridden in a **CAR** driven by someone, including yourself, who has been “high” on alcohol or drugs? **R**—do you ever use alcohol or drugs to **RELAX**, feel better about yourself or fit in? **A**—Do you ever use alcohol or drugs when you are by yourself, **ALONE**? **F**—Do you ever **FORGET** things you did while using alcohol or drugs? **F**—Do your family or **FRIENDS** ever tell you that you should cut down on your alcohol or drug use? **T**—Have you ever gotten in **TROUBLE** when using alcohol or drugs? The CRAFFT is an excellent screening tool. A CRAFFT score of 2 or higher was optimal for identifying any problem (sensitivity, 0.76; specificity, 0.94; positive predictive value, 0.83; and negative predictive value, 0.91), any disorder (sensitivity, 0.80; specificity, 0.86; positive predictive value, 0.53; and negative predictive value, 0.96), and dependence (sensitivity, 0.92; specificity, 0.80; positive predictive value, 0.25; and negative predictive value 0.99). Approximately one-fourth of participants had a CRAFFT score of 2 or higher. Validity was not significantly affected by age, sex, or race. This instrument was chosen for its high sensitivity, specificity, and positive predictive value. At a cut-off score of 2, 45% of those screened had a mild substance use disorder. At scores of 3, the percentage increased to 65%, whereas scores of 4, 5, and 6 resulted in the diagnosis of moderate to severe substance use disorders in 80, 95, and 100% of adolescents screened, respectively (Knight, Sherritt, Shrier, Harris, & Chang, 2002). These factors make this a highly effective screening instrument.

A second screening tool is the Adolescent Drug Involvement Scale (Moberg & Hahn, 1991). This is a 12-item research and evaluation tool developed as a brief measure of the level of drug involvement in adolescents. The scale is an adaptation of Mayer and Filstead's Adolescent Alcohol Involvement Scale (AAIS; Mayer & Filstead, 1979). The purpose of this instrument is to provide a brief paper and pencil screen which assesses the level of adolescent use of drugs other than alcohol. Higher scale scores represent higher levels of drug involvement. Intended as a research instrument and/or a screening tool, it has not been validated as a clinical measure. Positive results when used for screening should be followed with an independent clinical assessment process. It can be used in groups or individually. While there are nominally 12 items, the “check all that apply” nature of many of the questions in fact yields answers to 53 discrete questions. As scored, ADIS should be interpreted as a uni-dimensional operational measure of drug

involvement. The items making up the scale cover drug use frequency and most recent use, perceived reasons for use, social context of use, effects of use in multiple life areas, and self- and others' appraisal of the subject's drug use. It takes 4-5 minutes to complete. It is available on the Web (http://www.emcdda.europa.eu/attachements.cfm/att_4364_EN_itadis%5B1%5D.html) and instructions for scoring the instrument are included. Psychometric results indicate acceptable internal consistency ($\alpha = .85$) and provide preliminary evidence of validity. ADIS scores correlated highly (e.g., $r = .72$) with self-reported levels of drug use, with subjects' perceptions of the severity of their own drug use problem ($r = .79$), and with clinical assessments ($r = .75$; Moberg & Hahn, 1991). This instrument is offered because of its ease of administration as well as its assessment of the level of involvement with substance use.

A third, readily accessible screening instrument is the Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989). RAPI is a 23-item self-administered screening tool for assessing adolescent problem drinking. It was developed to create a conceptually sound, uni-dimensional, relatively brief, and easily administered instrument to assess problem drinking in adolescence. Its empirical development involved factor analyses conducted of test-retest data on frequencies of a total of 53 symptoms and/or consequences of alcohol use, as reported by a nonclinical sample of 1,308 males and females. The resulting 23-item scale has a reliability of .92 and a 3-year stability coefficient of .40 for the total sample (White & Labouvie, 1999). The advantages of this short, self-administered screening tool are its ease of administration and its standardization, which make it possible to compare problem drinking scores across groups.

The last instrument that the authors will discuss is the Problem Oriented Screening Instrument for Teenagers (POSIT; Rahdert & Czechowicz, 1995). POSIT was developed by a panel of expert clinicians as part of a more extensive assessment and referral system for use with adolescents ages 12-19 (Rahdert, 1991). POSIT was designed to identify problems and potential treatment or service needs in 10 areas, including substance abuse, mental and physical health, and social relations. Related is the POSIT follow-up questionnaire that was derived from items on POSIT to screen for potential change in 7 out of the 10 problem areas represented on POSIT. POSIT is a screening tool designed to identify potential problem areas that require further in-depth assessment. Depending on the results of the in-depth assessment, early therapeutic intervention or treatment and related services may be necessary. POSIT can be utilized by school counselors as well as juvenile and family court personnel, medical and mental health care providers, and staff in substance use disorder treatment programs. When used in conjunction with POSIT, the POSIT follow-up questionnaire can be used as a measure of change or an outcome measure. The POSIT is a 139 item "yes/no" measure that takes 20-30 minutes to complete and screens for the following life/problem areas: substance use and misuse, physical and mental health, family relations, peer relations, vocational status, social skills, leisure/recreational activities, and aggressive behavior and/or delinquency.

No special qualifications are necessary to administer POSIT and POSIT follow-up questionnaires as their formats are very clear and straightforward. Two scoring systems are available; the original system presented in the Adolescent Assessment-Referral System (AARS) manual and the newer scoring system available from National Institute for Drug Abuse (NIDA). The original scoring system includes "red flag" items and one

expert-based cut-off score that indicates either a high or low risk for each of the 10 problem areas. In contrast, the newer scoring system does not consider red flag items but includes two empirically based cut-off scores that indicate low, medium, or high risk for each of the 10 problem areas. In the newer system, the total raw score for each problem determines the level of risk for that area. It takes two seconds for computerized scoring; 2-5 minutes when using the scoring templates placed over the paper and pencil versions of the POSIT and POSIT follow-up questionnaires. POSIT and POSIT follow-up questionnaires are brief, easy to use, and specific to the problems and concerns of adolescents. They are not diagnostic instruments and require additional tests for full assessment. Some literacy is required (5th grade reading level). To obtain a copy of the POSIT and manuals, see the bibliography.

Specifically, for school counselors, these instruments are offered for several reasons. First and foremost, they have been offered in a format which provides ease of use, from most simple (CRAFFT) to most complex (POSIT). Secondly, all of these instruments are free and in the public domain with no cost associated with them, a consideration given in times of budget crisis in most school districts. Thirdly, depending on the individual screening situation, an instrument can be chosen from the list to fit that situation, thus tailoring screening to the individual adolescent's needs. Fourth, these instruments have been utilized by the authors in a variety of situations, and all have been shown to have acceptable psychometric properties as a screening instrument for the detection of adolescent substance use disorders. Lastly, given the enormity of the problem of substance use in the adolescent population and the deleterious consequences of moderate and severe substance use disorders, it is imperative that school counselors adequately screen and refer any adolescent suspected of having a substance use disorder.

Negative or Positive Screens—Ethical and Legal Issues

Negative screens; in and of themselves, do not necessarily indicate that the screened individual does not have a substance use disorder, especially in light of the face-validity of these instruments and attempts at impression management by individuals using substances. In general, however, some steps should be taken with negative screens. In adolescents who are abstinent, positive reinforcement should be provided. Individuals that admit to using substances but are below cut-off levels of the screen are most likely in the stages of experimentation and non-problematic use, and efforts should be made to focus on harm reduction. An example would be having a discussion about the serious risks of drinking and driving or riding with an intoxicated driver and suggesting strategies for safe transportation home following events where drugs or alcohol are present.

Since policies and procedures vary not only from state to state but also from school district to school district, it is beyond the scope of this paper to discuss the nuances of these situations. In general, however, some recommendation guidelines for what to do with a positive screen are warranted. Many state and federal laws allow students with substance use disorders to seek help on a confidential basis. There are several tasks that school counselors must perform regardless of the state or local laws. The first is that they should be open, honest, and frank with the student and disclose to the student that he/she has a positive screen. Next, they should reassure the student of their care and concern for the student's health and well-being and let the student know

that he/she is being referred for a full assessment. Many of these can be performed by school psychologists; however, many will defer to local substance abuse treatment agencies. What the authors would like to underscore, however, is the biggest ethical and legal concern arises if the school counselor gets a positive screen and fails to act on that through the use of an appropriate referral. Once a comprehensive assessment is completed, an intervention plan can be devised. Depending on the severity of the disease, this may be anything from early intervention of the psychoeducational variety to full in-patient treatment.

Conclusion

The use and misuse of substance by adolescents presents a unique and challenging opportunity for school counselors. Given the spectrum of use that is inherent with substance use disorders it is critical that school counselors possess a knowledge base for the identification, screening, intervention, and referral of substance use disorders in the adolescent population. These issues have been discussed and several easy to use screening instruments, all available in the public domain, have been provided. Since detection and early intervention provide the best prognosis for adolescents with substance use disorders it is incumbent upon school counselors to become familiar with this topic.

References

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Bukstein, O. G., Bernet, W., Arnold, V., Beitchman, J., Shaw, J., Benson, R. S.,... Ptakowski, K. K. (2005). Practice parameter for the assessment and treatment of children and adolescents with substance use disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 44(6), 609-621.
- Deas, D., & Thomas, S. E., (2001). An overview of controlled studies of adolescent substance abuse treatment. *American Journal of Addictions*, 10(2), 178-189.
- DeWit, D. J., Adlaf, E. M., Offord, D. R., & Ogborne, A. C. (2000). Age at first alcohol use: A risk factor for the development of alcohol disorders. *American Journal of Psychiatry* 157(5), 145-150.
- Esposito-Smythers, C., & Spirito, A., (2004). Adolescent substance use and suicidal behavior: A review with implications for treatment research. *Alcoholism: Clinical and Experimental Research* 28(5 Suppl.), 775-785.
- Gilvarry, E. (2000). Substance abuse in young people. *Journal of Child Psychology and Psychiatry*, 41(1), 55-80.
- Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2011). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2010*. Ann Arbor, MI: Institute for Social Research, The University of Michigan.

- Kirisci, L., Vanyukov, M., & Tarter, R. (2005). Detection of youth at high risk for substance use disorders: A longitudinal study. *Psychology of Addictive Behaviors* 19, 243-252.
- Knight, J. R., Sherritt, L., Shrier, L. A., Harris, S. C., & Chang, G. (2002). Validity of the CRAFFT substance abuse screening test among adolescent clinic patients. *Archives of Pediatric and Adolescent Medicine*, 156(6), 607-614.
- Knight, J. R., Shrier, L. A., Bravender, T. D., Farrel, M., Vander Bilty, J., & Shaffer, H. J. (1999). A new brief screen for adolescent substance abuse. *Archives of Pediatric and Adolescent Medicine*, 153(6), 591-596.
- Kriechbaum, N., & Zernig, G. (2000). Adolescent patients. In G. Zernig, A. Saria, M. Kurz, & S. S. Malley (Eds.), *Handbook of alcoholism* (pp. 129-137). New York, NY: CRC Press.
- Littlefield, A. K., Sher, K. J., & Wood, P. K. (2009). Is "maturing out" of problematic alcohol involvement related to personality change? *Journal of Abnormal Psychology*, 118(2), 360-374.
- Matzger, H., Delucchi, K., Weisner, C., & Ammon, L. (2004). Does marital status predict long term drinking? Five year observations of dependent and problem drinkers. *Journal of Studies on Alcohol*, 65, 255-265.
- Mayer, J., & Filstead, W. J. (1979). The adolescent alcohol involvement scale; an instrument for measuring adolescent's use and misuse of alcohol. *Journal of Studies on Alcohol* 40(3), 30-42.
- Miller, L., Davies, M., & Greenwald, S. (2000). Religiosity and substance use and abuse among adolescents in the National Comorbidity Survey. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 1190-1197.
- Moberg, P.D., & Hahn, L. (1991). The adolescent drug involvement scale. *Journal of Adolescent Chemical Dependency*, 2(1), 75-88.
- Problem Oriented Screening Instrument for Teens (POSIT). Adolescent Assessment Referral System Manual, Stock #BKD-59, National Clearinghouse for Alcohol and Drug Information P.O. Box 2345 Rockville, MD 20847-2345 (800) 729-6686.
- Rahdert, E. R. (Ed.). (1991). *The Adolescent Assessment/Referral System Manual*. (DHHS Publication No. ADM 91-1735). Rockville, MD: U.S. Department of Health and Human Services, ADAMHA, National Institute on Drug Abuse.
- Rahdert, E., & Czechowicz, D. (Eds.). (1995). *Adolescent drug abuse: Clinical assessment and therapeutic interventions* [NIDA Research Monograph 156] (DHHS Publication No. 95-3908). Rockville, MD: National Institute on Drug Abuse.
- Rutgers Alcohol Problem Index (RAPI). (1986). RAPI available from H. White, Center of Alcohol Studies, Rutgers University, Piscataway, NJ 08854-0969.
- Schulenberg, J. E., & Maggs, J. L. (2002). A developmental perspective on alcohol use and heavy drinking during adolescence and the transition to young adulthood. *Journal of Studies on Alcohol and Drugs*, Supplement 14, 54-70.
- Shaffer, D., Fisher, P., Dulcan, M., Davies, M., Piacentini, Schwab-Stone, M.E.,... Regier, D. A. (1996). The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): Description, Acceptability, Prevalence Rates, and

- Performance in the MECA Study. *Journal of the American Academy of Child & Adolescent Psychiatry* 35(7), 805-877.
- Simkin, D. R. (2002). Adolescent substance use disorders and comorbidity. *Pediatric Clinics of North America*, 49, 463-477.
- Substance Abuse and Mental Health Services Administration [SAMHSA]. (1994). *Treatment for alcohol and other drug abuse: Opportunities for coordination*. (DHHS Publication No. SMA 94-2075). Rockville MD: Substance Abuse and Mental Health Services Administration.
- Tjepkema, M. (2004). Alcohol and illicit drug dependence. *Health Reports*, 15 (Annual Report), 9-19.
- White, H. R., & Labouvie, E. W. (1989). Toward the assessment of adolescent problem drinking. *Journal of Studies on Alcohol*, 50, 30-37.
- Winters, K. C. (1994). *Assessment of adolescent alcohol and other drug abuse: A handbook*. Los Angeles, CA: Western Psychological Services.

Note: This paper is part of the annual VISTAS project sponsored by the American Counseling Association. Find more information on the project at: http://counselingoutfitters.com/vistas/VISTAS_Home.htm