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Clinical considerations for adolescents with eating disorders who use nicotine

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Introduction

Adolescence is a developmental period in which individuals demonstrate increased likelihood of engaging in disordered eating and risk-taking behaviors, such as substance use. Nicotine use, in particular, (e.g. via vaping, combustible cigarettes, smokeless tobacco) is pervasive among middle and high school students. In 2022, 17.4% of middle school and high school students reported current nicotine vaping. Daily use of nicotine was reported among 27.6% of current users (Cooper et al., 2022). Research posits that eating disorders and nicotine use are highly comorbid. A recent study by Ganson and Nagata (2021) found that nearly 20% of participating adolescents with an eating disorder also used nicotine within the past 30 days. This is problematic, as nicotine use increases the mortality rate for eating disorders, which already has the second highest rate of all mental health disorders. Nicotine use may also exacerbate many of the medical complications associated with eating disorders (e.g. neuroendocrinal, dental, nutritional and negatively impact eating disorder recovery (Ganson & Nagata, 2021).

Disordered eating and substance use in adolescence have been linked to persistence into adulthood and both benefit from early intervention. Beyond developmental risk factors, research suggests that comorbid eating disorders and nicotine use is likely explained by shared genetic, psychological, and sociocultural risk factors. From a behavioral perspective, substance use in individuals with eating disorders may serve as a maladaptive coping mechanism for unwanted emotions. Nicotine use, specifically, might be used as an appetite suppressant and a normalized, concealable method of weight control.

Despite the high rates of nicotine use in adolescents with eating disorders as well as the increased medical and psychological risks associated with the comorbidity, there is a dearth of research and clinical guidance on substance use screening, assessment, and treatment in the context of adolescent eating disorder treatment. The goal of this article is to increase awareness of nicotine use amongst adolescents with eating disorders and provide clinical

recommendations for identifying nicotine use, as well as addressing nicotine use in eating disorder treatment.

Identifying Nicotine Use

Early detection and intervention for both eating disorders and substance use has a significant impact on treatment trajectory.). The American Academy of Pediatrics recommends universal screening for substance use in all pediatric routine, perioperative, and acute care settings. Before engaging in screening, it's essential that the limits of confidentiality (based on your state and hospital's policies), including parental involvement, are clearly reviewed with youth.

Screening Tools

The National Institute on Drug Abuse (NIDA) offers two brief, free, online validated adolescent substance use screening tools: the Screening to Brief Intervention (S2BI; Levy et al., 2014) and the Brief Screener for Tobacco, Alcohol, and other Drugs (BSTAD; Kelly et al., 2014). Both screeners ask teens to report their frequency of use over the past year and provide clinicians with feedback about the associated risk level of their use, as well as relevant treatment recommendations. Another validated, free screening tool for substance use in adolescents and young adults (ages 12-21) is the CRAFFT-2.1N (Knight, 2020). Of particular relevance, the CRAFFT2.1N includes an expanded assessment of vaping and nicotine use. Importantly, some youth feel more comfortable disclosing substance use self-report questionnaires compared to provider interview. Providers can facilitate a follow up conversation to review results on the screener, reinforce abstinence behaviors (when applicable), and explore motivation to change nicotine use, including incorporating nicotine-use related goals into their treatment plan.

Clinician interview is another method to screen and assess for nicotine use in adolescents with eating disorders. Interviews allow for follow-up questions about relations between nicotine use and eating disorder behaviors (i.e., related to motives and consequences of nicotine use in this context) and create more room for clinical judgment/intuition in screening and assessment, although can be more subject to provider bias and take more time.The interview method also provides an opportunity for conversation related to nicotine use motives that could inform treatment planning. Shame, embarrassment, fear of consequences, and breach of confidentiality are common feelings and concerns among youth with eating disorders as well as youth who engage in substance use. Regardless of the screening method chosen, conversations with adolescents about substance use behaviors must be facilitated with sensitivity, compassion, and non-judgment.

Clinical Considerations for Substance Use Screening Among Adolescents with Eating Disorders

Youth with eating disorders often lack insight into the severity of their illness, however. This might also influence patient perception of severity and impairment related to nicotine use). Cognitive functioning might also be negatively affected by starvation and sleep impairment, which can be experienced by youth with eating disorders who use nicotine. In order to

protect youth's privacy, parental involvement in substance use *screening* is not typically recommended for teens; however, parent proxy report may be needed for some youth with eating disorders. In this case, providers should discuss the limits of confidentiality with their patient and parent/caregiver(s) upfront.

Considerations for Addressing Nicotine Use in Context of Eating Disorder Treatment

Treatment/Therapeutic Interventions—More research is needed to evaluate transdiagnostic approaches to treatment with this comorbid presentation but leveraging shared principles of evidence-based treatment for each condition is a reasonable starting point. Integrated treatment for comorbid eating disorders and nicotine use could focus on the following goals: 1) weight restoration/nutritional rehabilitation 2) smoking cessation/ nicotine abstinence 3) increase use of adaptive coping strategies. As outlined below, principles of treatment for eating disorders can be applied to address nicotine use.

Family-Focused Interventions: Treatment studies often exclude patients with comorbid psychiatric diagnoses (Levy et al., 2016), making it difficult for providers to determine which interventions are efficacious for the treatment of eating disorders and substance use. What we do know is that there is strong evidence for family-focused interventions in the treatment of eating disorders and nicotine use. (Hogue et al., 2017). Family Based Treatment (FBT) is the gold standard of treatment of eating disorders in adolescents (Couturier, Kimber, & Szatmari, 2013). In FBT, parents are empowered to take the lead as well as join with their teen in the battle against their eating disorder. FBT also focuses on increasing support, reducing negativity, and problem-solving around unhelpful family patterns. Family-focused intervention is also the most evidence-based approach for addressing substance use in adolescents. Much like FBT, family interventions for substance use focus on increasing parental monitoring, improving family communication, and reinforcing their teen's engagement in healthy behaviors (Hogue et al., 2017). Therefore, providers can likely leverage family support within the context of FBT for eating disorders to also address youth nicotine use.

Other Evidence-Based Treatment Interventions: Other interventions are often integrated into the FBT treatment framework, such as Cognitive Behavioral Therapy (CBT) and Dialectical Behavior Therapy (Vogel, Singh, & Accurso, 2021) to improve coping and distress tolerance. Moreover, substantial evidence exists for Motivational Interviewing (MI) to increase treatment engagement (Brown et al., 2013;) and CBT (Cavallo & Krishnan-Sarin, 2019) to increase coping in the context of eating disorder treatment and substance use treatment. Providers can practice flexibility within fidelity, implementing evidence-based treatments for eating disorders and substance use, while addressing thoughts, feelings, and behaviors associated with comorbid psychopathology.

Monitoring Nicotine Use: Providers should monitor their patient's nicotine use throughout treatment and regularly re-screen for substance use, as use behaviors may change in the context of eating disorder recovery. This is important for a variety of reasons. If abstaining from nicotine use is a treatment goal, providers should assess for use at each session/ appointment with their patient to assess progress towards that goal. It is critical to monitor

nicotine use in patients participating in eating disorder treatment, particularly if the patient endorses nicotine use as a coping strategy. In eating disorder treatment, patients are no longer permitted to restrict food or over exercise. These eating disorder behaviors are also often used as maladaptive coping strategies. Therefore, patients might turn to nicotine use to cope if other maladaptive strategies are no longer accessible to them. Nicotine testing may also be used to monitor use throughout treatment. However, as previously mentioned, drug testing is best used as a supplement to other methods of assessment as opposed to a replacement. Lastly, some youth find it motivating to track their own progress with changing nicotine use, via the myriad of freely available phone and web applications.

Biographies

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References

Brown RA, Abrantes AM, Minami H, Prince MA, Bloom EL, Apodaca TR, … & Hunt JI (2015). Motivational interviewing to reduce substance use in adolescents with psychiatric comorbidity. Journal of Substance Abuse Treatment, 59, 20–29. [PubMed: 26362000]

Cavallo DA, & Krishnan-Sarin S (2019). Nicotine use disorders in adolescents. Pediatric Clinics, 66(6), 1053–1062. [PubMed: 31679596]

Cooper M, Park-Lee E, Ren C, Cornelius M, Jamal A, & Cullen KA (2022). Notes from the field: E-cigarette use among middle and high school students — United States. Morbidity and Mortality Weekly Report, 71, 1283–1285. [PubMed: 36201370]

Couturier J, Kimber M, & Szatmari P (2013). Efficacy of family-based treatment for adolescents with eating disorders: A systematic review and meta-analysis. International *Journal of Eating Disorders*, 46(1), 3–11. [PubMed: 22821753]

Ganson KT, Nagata JM, Lavender JM, Rodgers RF, L Cunningham M, Murray SB, & Hammond D (2021). Prevalence and correlates of weight gain attempts across five countries. International Journal of Eating Disorders, 54(10), 1829–1842. [PubMed: 34415082]

Hogue A, Bobek M, Dauber S, Henderson CE, McLeod BD, & Southam-Gerow MA (2017). Distilling the core elements of family therapy for adolescent substance use: Conceptual and empirical solutions. Journal of Child & Adolescent Substance Abuse, 26(6), 437–453. [PubMed: 30705581]

Kelly SM, Gryczynski J, Mitchell SG, Kirk A, O'Grady KE, & Schwartz RP (2014). Validity of brief screening instrument for adolescent tobacco, alcohol, and drug use. Pediatrics, 133(5), 819–826. [PubMed: 24753528]

Levy S, Weiss R, Sherritt L, Ziemnik R, Spalding A, Van Hook S, & Shrier LA (2014). An electronic screen for triaging adolescent substance use by risk levels. JAMA Pediatrics, 168(9), 822–828. [PubMed: 25070067]

Vogel EN, Singh S, & Accurso EC (2021). A systematic review of cognitive behavior therapy and dialectical behavior therapy for adolescent eating disorders. Journal of Eating Disorders, 9(1), 1–38. [PubMed: 33407855]