Conduct Disorders and Substance Use Problems in Rural School Settings

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Kristyn Zajac, Arthur R. Andrews III, and Ashli J. Sheidow

The overarching goal of this chapter is to use current knowledge of best practices in treatments for conduct and substance use problems to inform care in rural school settings. In the first section, we review the prevalence and correlates of conduct and substance use problems in the U.S. Although these problems are often equally common in rural school settings as they are in urban or suburban areas, statistics specific to rural areas are highlighted when available. Next, we review research on effective treatments for conduct and substance use problems. Though few of the existing evidence-based interventions have been developed specifically for rural school settings, it is likely that several of the treatments could be effectively delivered with creative problem solving to overcome barriers to implementation. Of note, there is overwhelming evidence that family involvement is a key component of effective interventions for these types of problems. Barriers and solutions to engaging families in school-based treatments as well as other potential difficulties with service delivery are discussed. Several advantages to school-based delivery of treatments for conduct and substance use are also reviewed. Finally, gaps in the current literature and future directions are specified.

K. Zajac, Ph.D. (✉) • A.R. Andrews III, M.A.
A.J. Sheidow, Ph.D.
Department of Psychiatry and Behavioral Sciences,
Medical University of South Carolina,
Charleston, SC, USA
e-mail: zajac@uchc.edu; andrewsa@musc.edu;
AshliS@oslc.org

Prevalence and Correlates of Conduct and Substance Use Problems

Due to their disruptive nature, conduct disorders and substance use problems have direct relevance to the school setting, and school personnel are often the first to be aware of such problems among youth. For the purposes of the current discussion, conduct problems are defined broadly as disruptive behaviors consistent with diagnoses of oppositional defiant disorder and conduct disorder. These can range from relatively minor problems, including noncompliance and disruptive classroom behavior, to more severe problems, including law-breaking, delinquency, and aggression. We also focus here on a broad definition of substance use, rather than a diagnosis of a substance use disorder per se. This is due to the deleterious effects of problematic substance use during adolescence and its co-occurrence with other significant behavioral problems, even in the absence of a diagnosable substance use disorder. Due to the low rates of substance use problems and serious conduct problems in younger children, this chapter will focus solely on adolescents.

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Conduct and substance use problems are relatively common among U.S. adolescents. Notably, rural areas are similar to urban and suburban areas in the overall prevalence of conduct and substance use disorders as well as rates of adolescent substance use (Angold et al., 2002; Donnermeyer & Scheer, 2001; Levine & Coupey, 2003). In the National Survey on Drug Use and Health (NSDUH), a national longitudinal study, 9.5% of youth aged 12–17 reported use of an illicit drug in 2012, a rate that has remained relatively stable over the past decade (Substance Abuse and Mental Health Services Administration (SAMHSA), 2013). Marijuana use is the most common illicit drug used by this age group, with 7.2% reporting use in 2012 (SAMHSA, 2013). One concerning trend from these data is the recent decrease in youth's perceived risk of substance use, particularly for marijuana. For example, 54.6% of youth perceived smoking marijuana once or twice per week as a "great risk" in 2007, but only 43.6% responded this way in 2012. Though overall rates of adolescent substance use are similar in urban and rural areas, there are some differences in patterns of use. Specifically, there are higher rates of stimulant and methamphetamine use among rural youth and higher rates of Ecstasy use among urban and suburban youth (Gfroerer, Larson, & Colliver, 2007). Further, adolescents living in rural areas report higher rates of underage drinking and tobacco use and lower levels of perceived risk from alcohol use compared to their non-rural peers (Gfroerer et al., 2007; SAMHSA, 2004).

The 2012 NSDUH also assessed conduct problems, including delinquent behavior and fighting, showing somewhat lower rates compared to 2002 (SAMHSA, 2013). In 2012, 18.3% of adolescents reported having a serious fight at work or school, 11.8% took part in a group-against-group fight, 5.6% attacked another person with the intent to seriously harm them, 3.5% carried a handgun, and 2.7% sold drugs. Trends also show decreases in more serious conduct problems over the past decade. In 2010, 1.04 million juveniles were arrested, down 23.5% from 2001 (1.36 million arrested; U.S. Department of Justice, 2011). In terms of diagnoses in a large-scale study of adolescents, 12.6% met criteria for ODD, 6.8% for CD, and 11.4% for a substance use disorder in the National Comorbidity Survey (Merikangas, He, Burstein, et al., 2010a). Crime rates, particularly violent crime, tend to be lower in rural compared to urban or suburban areas (Berg & DeLisi, 2005). Although this means that rural school personnel are less likely to encounter violent crime among youth than their urban counterparts, it is also likely that fewer community resources are available for delinquent rural youth who engage in violent crime.

In addition to being relatively common during adolescence, behavioral and substance use problems often co-occur. For example, youth who reported engaging in serious fights were more than twice as likely to have used illicit drugs in the past month compared to youth who had not fought (SAMHSA, 2013). Similarly, youth who tried to steal something worth over $50 in the past year were over five times as likely to have used drugs compared to their peers. In terms of diagnostic overlap, between 25% and 50% of adolescents with substance use or a substance use disorder also meet criteria for conduct disorder (Armstrong & Costello, 2002).

There are notable trends in problem behaviors by gender, race, and age. Males constituted 72% of delinquency cases handled by juvenile courts in 2010. However, the proportion of females involved with the juvenile justice system has grown steadily over the past three decades, with female delinquency cases increasing at an annual rate of 2%, while male cases increased at a rate of less than 1% (Puzzanchera & Hockenberry, 2013). In terms of serious delinquent behaviors, African American adolescents were five times more likely than White adolescents to be arrested for a violent crime in 2008 (Puzzanchera, 2009), though it is unclear if these rates are due to higher rates of actual perpetration by African American teens or disproportionate arrest rates by the juvenile justice system. These racial differences are not present in rates of diagnosable behavioral disorders in community samples of adolescents (Angold et al., 2002; Merikangas, He, Burstein, et al., 2010a). Substance use disorders are slightly more prevalent in males than females, less prevalent among non-Hispanic Black compared to non-Hispanic White adolescents, and increase dramatically with age during adolescence (Merikangas, He, Burstein, et al., 2010a).

Both conduct and substance use problems are multi-determined, predicted by a variety of risk factors in individual, family, peer, school, and neighborhood domains (Loeber, Burke, & Pardini, 2009). Individual risk factors for conduct problems include impulsivity, risk taking, and negative emotionality (Sanson, Hemphill, & Smart, 2004). Family predictors include poor parenting, family stress, low socioeconomic status, parental psychopathology, and insecure attachment (Hoeve et al., 2009; Tobler & Komro, 2010). School risk factors include poor academic performance and low attachment to school (Henry, Knight, & Thornberry, 2011; Valois, MacDonald, Bretous, & Fischer, 2002). Associating with deviant peer groups and living in disadvantaged neighborhoods characterized by poverty also increase risk for conduct and substance use problems (Fergusson, Swain-Campbell, & Horwood, 2002; Stouthamer-Loeber, Loeber, Wei, Farrington, & Wikström, 2002). Further, the three community characteristics that are most highly predictive of crime rates and delinquency in urban settings (i.e., residential instability, ethnic diversity, and family disruption) have been found to be equally predictive in rural areas (Osgood & Chambers, 2003). Specific to rural settings, arrest rates for juvenile populations are the lowest in areas with the lowest population density, but proximity to metropolitan areas does not equate to higher juvenile crime rates (Osgood & Chambers, 2003).

Finally, conduct and substance use problems are highly relevant to school settings. These problems often come to the attention of school personnel, teachers, and counselors due to their association with poor school outcomes, including poor academic performance, low school engagement, and school dropout (e.g., Henry et al., 2011). These problems are also related to high rates of truancy and disruptive behaviors in classrooms, which can lead to suspension or expulsion. Because youth with conduct and substance use problems often struggle to meet the educational and behavioral expectations of the school setting, school personnel are in a unique position to assess and intervene on such behaviors. Further, successful management of conduct problems is directly relevant to ensuring educational success for students.

Review of Evidence-Based Treatments for Conduct and Substance Use Problems

Over the past few decades, there have been substantial advances in research on effective treatments for adolescent conduct and substance use problems, resulting in the identification of multiple evidence-based treatments (EBTs; see Eyberg, Nelson, & Boggs, 2009; Waldron & Turner, 2008 for reviews). There is substantial overlap in interventions for conduct and substance use problems, with some EBTs proven to be effective for both and others sharing similar components. In this review, only EBTs that have been determined to be well-established or probably efficacious based on criteria set by Chambless et al. (1998) and updated by Southam-Gerow and Prinstein (2014) will be highlighted.

Evidence-Based Treatments for Conduct Problems

Historically, conduct disorder and delinquent behaviors were viewed as intractable problems that were unresponsive to traditional treatment approaches. However, advances in the field's understanding of risk factors and the conceptualization of conduct problems as multi-determined and multisystemic in nature have led to the development of effective treatments, even for the most severe conduct problems. EBTs for conduct problems run the gamut from individual or group approaches to more intensive family-based approaches. Only one of these approaches (i.e., Group Assertiveness Training) was developed specifically for delivery in school settings. Further, the more intensive approaches are reserved for the most severe cases of conduct disorder and often require substantial training, oversight, and institutional commitment to implement. Despite these limitations in applicability to school settings, each EBT will be reviewed briefly, as knowledge of the full range of options will benefit school personnel. Discussion of the viability of implementing these programs in school settings versus partnering with other service systems that are better equipped to provide intensive treatments will follow.

Multisystemic Therapy

Multisystemic Therapy (MST) was developed for adolescents with serious antisocial and delinquent behaviors, including juvenile offenders (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 2009). MST serves as an alternative to juvenile justice placement and is an intensive, family-based treatment with multiple sessions per week in youth's home, school, and other neighborhood settings. Treatment is delivered by MST teams, typically consisting of three to four Master's-level therapists and a doctoral level or advanced master's-level supervisor, with oversight from MST's purveyor organization. Each therapist carries a small caseload of four to six families at a time, allowing for multiple contacts per week with each family, engagement of key community stakeholders (e.g., teachers and school administrators, probation officers), and a relatively brief treatment duration (3–5 months). MST conceptualizes youth as nested within multiple systems (e.g., family, peer, school, neighborhood) that influence their behaviors. MST therapists work with families to specify and target individual, family, peer, and environmental factors that are promoting behavior problems. Interventions include behavioral, cognitive-behavioral, and structural family techniques, among others, and are selected based on an individualized conceptualization of each youth. As each intervention is implemented, improvement in the target behavior is carefully monitored and, when successful resolution is not achieved, reasons for failure are examined and utilized to inform new interventions. MST is one of the most widely studied treatments for conduct problems, with 20 published outcome studies, including several rigorously designed randomized controlled trials demonstrating positive outcomes for family relationships, re-arrests and incarceration (short-term and into adulthood), and psychiatric symptoms (e.g., Henggeler et al., 1986; Schaeffer & Borduin, 2005).

Multidimensional Treatment Foster Care

Similar to MST, Multidimensional Treatment Foster Care (MTFC) was developed for youth with severe conduct problems as an alternative to placement in residential or detention settings. MTFC requires a team of providers for each family. Experienced foster parents are provided with training and support in implementing a daily behavioral plan focused on rewarding positive behaviors and removal of privileges for negative behaviors. Youth have individual placements in foster homes lasting 6–9 months. Youth also receive weekly individual therapy focused on skill building (e.g., problem solving, anger management, educational/vocational), weekly or twice weekly meetings with a behavioral support specialist to increase prosocial behaviors (e.g., getting a part-time job, participating in sports and activities), and regular appointments with a psychiatrist. At the same time, a family therapist works with the biological parents or alternative aftercare placement to prepare them for continued behavior management upon reunification. Successful treatment depends on a well-specified individualized behavioral plan that is implemented across settings (e.g., foster home, aftercare placement, schools). A multitude of studies show positive findings for MTFC, including reductions in criminal charges and behaviors and days spent incarcerated (e.g., Chamberlain, Leve, & DeGarmo, 2007) and, for females, reduced pregnancies (Kerr, Leve, & Chamberlain, 2009). Further, these effects have been shown to be sustained 2 years following placement (Eddy, Whaley, & Chamberlain, 2004; Kerr et al., 2009).

Individual Cognitive-Behavioral Therapy

Cognitive-Behavioral Therapy (CBT) is based on the conceptualization that the way an individual thinks about situations influences their affective and behavioral responses. CBT for conduct problems targets deficits in coping, problem solving, and social skills, while teaching adaptive responses to situations that typically lead to behavioral problems. For example, a CBT therapist might aid a youth in revising perceptions of ambiguous social situations that were previously viewed as hostile by the youth in order to promote positive behavior and discourage aggression. A meta-analysis of intervention studies concluded that CBT is moderately effective for adolescent antisocial behaviors (Bennett & Gibbons, 2000).

The authors caution that CBT appears to work better when ecological factors, such as parenting, are also targeted and recommend that CBT be used as part of a multimodal treatment approach.

Group Assertiveness Training

Two versions of a school-based group assertiveness training intervention have been found to be effective for youth with disruptive behaviors (Huey & Rank, 1984). Both use the same content and format, but one is led by a counselor while the other is led by a peer. In both cases, group leaders receive training, and group meetings are highly structured. Groups consist of six adolescents, meet twice weekly for 4 weeks, and focus on topics such as anger and rules. Group Assertiveness Training has been found to decrease classroom aggression and increase assertiveness skills among students with disruptive classroom behavior, regardless of the type of group leader (Huey & Rank, 1984). Further, given its brevity and low use of resources relative to other approaches, Group Assertiveness Training is a promising approach for rural school settings. However, unlike MTFC, MST, and CBT, this approach has been evaluated in only one well-designed study with a relatively small sample of eighth- and ninth-grade African American students from an urban school. Thus, additional research on Group Assertiveness Training, particularly with a wider array of settings and study participants, would impart greater confidence in the use of this approach with rural youth.

Problem-Solving Skills Training

Problem-Solving Skills Training (PSST) is a behavioral approach focused on developing problem-solving skills through therapist modeling, role plays, corrective feedback, and the use of reinforcements. Treatment lasts 20–25 sessions, and parents are occasionally involved in treatment. PSST has been evaluated in both inpatient and outpatient treatment settings, but not specifically in schools. Three versions of PSST are considered evidence-based: the initial PSST described here, a version of PSST that includes in vivo practice exercises conducted outside of session (PSST+Practice), and a version that includes 13–16 concurrent sessions of intensive parent management training (PSST+Parent Management). All three have been found to decrease disruptive behaviors (e.g., Kazdin, Bass, Siegel, & Thomas, 1989; Kazdin, Siegel, & Bass, 1992). PSST may be less relevant for adolescents, as its evidence base is for ages 7–13. Nonetheless, PSST can be delivered with cases at lower risk (i.e., disruptive but not delinquent) and as an individual treatment with or without parental involvement, making it a more feasible option for school settings than some other EBTs.

Evidence-Based Treatments for Adolescent Substance Use

Similar to approaches for conduct disorder, EBTs for adolescent substance use are often family-based and have not been developed specifically for school settings. Recent reviews and meta-analyses have concluded that family-based approaches have the strongest evidence for their effectiveness (Tanner-Smith, Wilson, & Lipsey, 2013; Waldron & Turner, 2008), though other approaches have either been shown to be effective (e.g., Group CBT) or are still currently being evaluated (e.g., individual CBT). As reviewed below, some models of family-based treatments are better suited for implementation in school settings, whereas there are substantial barriers (e.g., need for a treatment team) that would make delivery of other programs more difficult.

Multidimensional Family Therapy

Multidimensional Family Therapy (MDFT) is a manualized intervention that incorporates family and individual therapy, while engaging the multiple systems in which the adolescent is involved. MDFT targets four domains: the individual, the parents, the family environment, and the extrafamilial systems that influence the adolescent (e.g., schools, communities, justice system). Treatment sessions are held one to three times per week over 3–6 months. MDFT's effectiveness is supported by over 25 years of research. For example, MDFT has been shown to be superior to individual cognitive-behavioral therapy and a peer

group treatment in decreasing substance use (Liddle, Rowe, Dakof, Henderson, & Greenbaum, 2009; Liddle, Dakof, Turner, Henderson, & Greenbaum, 2008). Though MDFT is delivered by a single therapist and does not require a team, the developers recommend that at least two Master's-level therapists be trained at any site delivering MDFT and that therapists have the capacity to see families both in the home and clinic.

Functional Family Therapy

Functional Family Therapy (FFT) integrates systemic and cognitive-behavioral strategies over three phases of treatment: Engagement and Motivation; Behavior Change; and Generalization. In the first phase, the therapist takes a non-confrontational approach and uses reframing of the adolescent's behavior problem to engender hope in family members and engage them in treatment. The second phase draws from a variety of EBTs (e.g., behavioral, cognitive-behavioral) to help the family change dysfunctional relational patterns and subsequently decrease adolescent problem behaviors. Finally, in the third phase, the therapist aids the family in generalizing treatment gains across settings, frequently through interacting with other professionals (e.g., schools, juvenile justice). Although delivered by a single therapist, agencies typically have a group of trained FFT therapists and must participate in a three-phase training process prior to delivery. The purpose of this process is to ensure high-treatment fidelity through intensive training of supervisors and therapists and ongoing consultation with FFT's purveyor organization. Substantial research supports FFT's efficacy in reducing marijuana, alcohol, and other drug use (e.g., Waldron, Slesnick, Turner, Brody, & Peterson, 2001).

Group Cognitive-Behavioral Therapy (CBT)

Group CBT adapts the CBT principles described above for delivery in group settings. Most versions are manualized and specify a treatment lasting 12 or more weekly sessions. Group sessions are highly structured and focus on helping adolescents identify and manage situations in which they are at risk for substance use. Topics include refusal skills and relapse prevention using techniques such as role plays, modeling, and didactics. Group CBT has been shown to produce significant decreases in substance use (e.g., Kaminer, Burleson, & Goldberger, 2002). Further, despite concerns that group-based treatments for delinquent adolescents may have negative effects due to the potential for "deviancy training" among participants (Dishion, McCord, & Poulin, 1999), there has been no empirical evidence of a negative influence on adolescents participating in group CBT for substance use when groups are highly monitored and structured (Burleson & Kaminer, 2005).

Brief Strategic Family Therapy

Brief Strategic Family Therapy (BSFT) aims to prevent or treat adolescent substance use and other behavior problems, increase prosocial behaviors, and improve family functioning. BSFT is delivered over 12–16 family sessions either in a clinic or a place convenient to the family, such as their home. BSFT conceptualizes behavioral problems as products of maladaptive family interactions and aims to decrease such problems by improving family functioning. BSFT consists of three intervention approaches: joining with each family member and the family system, diagnosing interactional patterns that lead to problem behaviors, and restructuring family interactions through reframing, coaching, and assigning tasks. The BSFT manual is widely available; however, the developers emphasize the importance of therapist training and supervision to achieve a high level of treatment fidelity (Szapocznik, Hervis, & Schwartz, 2003). The research evidence for BSFT suggests that it is effective in reducing substance use problems (e.g., Santisteban et al., 2003), but effects have not been as consistent and robust as other evidence-based family approaches (Robbins et al., 2011).

Family Behavior Therapy

Family Behavior Therapy (FBT) is a 15-session manualized treatment based on behavioral principles and strategies. Behavioral strategies include behavior contracts, stimulus control, urge control, and communication training, each of which is modeled by the therapist, rehearsed by the

adolescent and/or family, and monitored between sessions. Behavioral contracting establishes clear rules about the adolescent's behaviors, rewards for compliance, and removal of rewards for noncompliance. This step also teaches parents how to monitor their child's behavior and implement effective rewards and consequences. Stimulus control helps adolescents to decrease their exposure to situations in which they are likely to use drugs or alcohol, and urge control aims to decrease desires to use substances through thought stopping and replacement. Finally, communication skills training targets maladaptive family communication patterns through therapist modeling as well as family practice of positive communication and strategies to cope with anger. Studies of FBT have supported its effectiveness in decreasing substance use and improving school performance and psychiatric symptoms (e.g., Azrin et al., 2001). FBT can be delivered by individual therapists. It is recommended that therapists received formal FBT training and ongoing telephone-based training sessions for the first few months of implementation to facilitate high treatment fidelity.

Multisystemic Therapy

MST (described above) has also been found to be effective for treating substance use problems. Studies have found that MST reduces adolescent marijuana use with sustained reductions 4 years post-treatment (Henggeler, Clingempeel, Borduin, & Pickrel, 2002; Henggeler, Pickrel, & Brondino, 1999).

Common Features of Treatments for Conduct and Substance Use Problems

There is a relatively wide selection of EBTs for adolescent conduct and substance use problems, which is a testament to the substantial research attention given to these approaches over the past few decades. Despite this variety, there are a few core features common to all or most of these approaches. First, they all involve behavioral or cognitive-behavioral interventions, and most include both. Second, they are all highly structured and time-limited. Third, most of them require highly trained therapists and emphasize the importance of treatment fidelity, usually through ongoing supervision and expert consultation. Fourth, most require some family involvement. There are some notable exceptions (e.g., Group CBT for substance use, Individual CBT for conduct problems), but comparison studies have found greater efficacy for family-based treatments at least in the case of substance use (Tanner-Smith et al., 2013). Many of these approaches also intervene on multiple systems (e.g., home, school, neighborhoods) to address the multiple risk factors that often account for adolescent problem behavior, which is informed by research on the ecological determinants of behavior problems in youth (e.g., Loeber et al., 2009). Notably, a significant number require a team-based approach, ongoing specialized supervision, and substantial organizational support. These approaches include MDFT, MST, and FFT and are unlikely to be implemented successfully in school settings. However, school personnel are in an ideal position to advocate for these treatments as well as link at-risk youth with these programs in their communities. Importantly, school personnel are uniquely equipped to serve as important collaborators with community-based treatment teams in implementing EBTs.

Prevention Programs

Although a comprehensive review of the literature on prevention programs for conduct and substance use problems is beyond the scope of this chapter, it should be noted that a substantial amount of research has been devoted to developing and evaluating such programs. Further, many of the primary and secondary prevention efforts have been specifically evaluated in school settings. More detailed information can be found in the following resources for prevention programs focused on substance use (Cuijpers, 2002; Faggiano et al., 2008; Gottfredson & Wilson, 2003; Tobler et al., 2000) and conduct problems (Greenwood, 2008; Park-Higgerson, Perumean-Chaney, Bartolucci, Grimley, & Singh, 2008; Webster-Stratton & Taylor, 2001; Wilson & Lipsey, 2007).

Implementation Issues Specific to Rural Settings

Several studies have highlighted the failures in meeting treatment needs of rural youth (e.g., Anderson & Gittler, 2005; Mohatt, Adams, Bradley, & Morris, 2005). As described above, very few EBTs for conduct and substance use problems have been developed and tested specifically in rural areas. A limited number have been conducted with samples of rural youth, such as the first trials of MST (Borduin et al., 1995; Henggeler, Melton, Brondino, Scherer, & Hanley, 1997). Some of the EBTs have been delivered in rural communities as part of larger research studies (e.g., Dennis et al., 2004; Glisson et al., 2010; Robbins et al., 2011), but the results of those studies have been less definitive than other studies of these EBTs. In addition, rurality has not been evaluated as a specific variable in these trials. In clinical practice, however, the EBTs reviewed here have been delivered in rural settings. At the very least, then, one can hypothesize that so long as the EBT can be delivered with high fidelity, similar outcomes across rural and urban settings can be expected.

The ability to implement EBTs with high levels of fidelity may be compromised in rural settings, however. While this does not mean that EBTs should be avoided, it highlights the need to proceed with caution and thoughtfulness in rural settings. Barriers to mental health treatment implementation in rural settings have been summarized by various sources that inform the domains discussed below (e.g., Boydell, Stasiulis, Barwick, Greenberg, & Pong, 2008; Glisson & Schoenwald, 2005; U. S. Department of Health and Human Services, 2011).

A primary domain of implementation barriers in rural settings is transportation. For example, public transportation for families to get to treatment facilities is often not available. Even if families or communities have transportation, the long distances families must often travel present a barrier. This barrier can be overcome by home-based treatment approaches. However, this solution produces a greater financial burden to programs for travel costs, and the time that therapists spend traveling equates to less time available for direct delivery of clinical services. Barriers in flexibility also exist, for example, when a rural family is not available (i.e., "no-shows"). In urban areas, the therapist can more quickly travel to another family's home or to their clinical site to proceed with work. Thus, workload expectations must be lowered for therapists delivering home-based services in rural areas, adding to the cost of services.

Rural communities may also lack resources relevant to adolescent treatments. In particular, many EBTs for adolescent conduct problems rely upon increasing the youth's exposure to prosocial activities, which can include extracurricular activities, mentored experiences, and part-time employment. Rural communities often lack many of these opportunities and, when opportunities are available, transportation barriers are often an issue.

Infrastructure barriers to implementation include the poor connectivity between systems frequently observed in rural communities, as well as the low availability of some services. Rural communities also frequently lack healthcare facilities, crisis response, and the availability of higher or lower levels of care for transitioning youth. For instance, the closest inpatient treatment facility may be hours away. Thus, the full continuum of care is compromised.

Workforce issues also present barriers for implementing EBTs in rural settings. There are few professionals in rural areas trained in EBTs, and advanced training and continuing education opportunities are lacking. Further, informal and formal professional networks often become the means for dissemination of useful information, strategies, and resources for providers. With rural communities having fewer providers and sometimes no providers in the same field, providers can become isolated and not privy to the latest tools.

Although cost barriers are present for all communities, they may be particularly difficult for rural communities. The population density in rural settings means that the subpopulation available for specialized programs is very small. Thus, supporting a highly specialized treatment program or practitioner to focus on a

single subpopulation may be impossible, as the subpopulation may not be large enough to fill caseloads. In particular, team-based EBTs (e.g., MST, MTFC) may be impractical without creative planning such as multiple towns or counties banding together to support such services. Relative to more populated areas, the cost effectiveness of programs in rural settings is lower due to these utilization issues.

Even if the aforementioned barriers are overcome, stigma related to mental health problems and treatment may prevent family engagement. Although not limited to rural settings, mistrust of service providers may be stronger in rural settings than in urban settings. In a smaller community, there is also a greater risk of providers having role conflicts and confidentiality issues with families who need services. Training organizations for ESTs generally have more experience with technical assistance for urban areas as well, so rural providers may not have as much support in addressing and overcoming the impact of these barriers.

Thus, careful planning and decision-making is needed to ensure adequate implementation of EBTs in rural settings. There are concerted efforts to address some of these barriers. For example, the National Health Service Corps provides scholarships and student loan repayment for certain providers to practice in some rural areas. Likewise, some Medicaid programs offer enhanced rates in rural areas (Mohatt et al., 2005). However, additional resources are clearly needed to improve access to EBTs for conduct and substance use problems in rural settings.

Application of Research on EBTs in Rural School Settings

Although few programs for conduct or substance use problems have been studied in rural schools, some of the EBTs lend themselves well to this setting. For example, individual CBT for conduct problems and group-based CBT for substance use problems could likely be implemented with high fidelity. Similarly, some of the family therapies could be used in school settings. Effective family approaches, however, may be limited to those that do not require a team-based approach, as schools usually do not have access to the resources needed to implement such programs. Specifically, MDFT, FBT, and BSFT may be readily implemented in rural school settings, whereas MST, MTFC, and FFT would be more difficult. The advantages and disadvantages of implementing these EBTs in rural schools settings are discussed below.

Advantages of School-Based Treatments for Conduct and Substance Use Problems

In addition to barriers faced by all rural adolescents seeking mental health treatment reviewed above, adolescents with conduct and substance use disorders may face even greater barriers to treatment. Specifically, the majority of youth with conduct problems across geographical settings do not receive treatment, and they are less likely to receive services when compared to youth diagnosed with other mental health problems (Merikangas, He, Brody, et al., 2010b; Merikangas et al., 2011). Similarly, only 10% of adolescents who require specialized substance use disorder treatment receive it (SAMHSA, 2013). Myriad factors may account for the disparities in service utilization for conduct and substance use disorders. For example, many factors associated with lower service utilization, such as parental psychopathology or substance abuse, poverty, and lack of parental engagement, are also risk factors for both conduct and substance use problems (Cornelius, Pringle, Jernigan, Kirisci, & Clark, 2001; Merikangas et al., 2011). In other words, adolescents diagnosed with substance use and conduct disorders may be at particular risk for many of the barriers likely to impede service access.

As a result of disparities in service utilization, reducing barriers and increasing access to services is of particular importance for effective treatment of conduct disorder and substance use problems. Implementation of EBTs in school settings may represent an effective strategy for improving access to treatment. Similar to services

for other disorders, school-based services reduce many of the poverty-associated barriers (e.g., lack of transportation) to services for conduct and substance use disorders. While school-based services cannot necessarily eliminate some of the more salient barriers for conduct and substance abuse disorders (e.g., lack of parent engagement), the delivery model may diminish the impact of many of these variables. For example, although parental engagement is highly desirable for most EBTs for conduct and substance use problems, the EBTs that do not require parents to participate in treatment serve as viable alternatives when parents are unable or unwilling to attend sessions. Delivery of such EBTs in school settings allows providers to work with youth without their parents being engaged in transporting them to sessions.

There are also other advantages related to client access. Specifically, conduct and substance use problems often present themselves in the school setting (e.g., fighting and aggressive behavior at school; use or possession of drugs on school campus). Thus, school-based clinicians are in an ideal position to assess these problematic behaviors directly. For example, clinicians are better equipped to conduct functional analyses that are used as part of many of the EBTs to identify triggers for a youth's problem behaviors. In fact, educators routinely implement functional analyses for behavior problems outside the confines of EBTs (see Crone & Horner, 2003 and Steege & Watson, 2009 for practical examples of functional analyses in schools).

Direct collaboration with school personnel also allows clinicians to develop specific goals, ensure that behavior plans utilized in many EBTs are implemented consistently across settings, and aid school personnel in modifying plans based on observed effectiveness in reducing problematic behaviors. For example, clinicians in school settings can more easily coordinate with teachers, coaches, and school administrators to assure that behavior plans are maximally implemented in each setting (e.g., classroom, after school activities). Again, educators have been creatively implementing behavior plans and token economies in the school context (see Cihak & Bowlin, 2010 and Colvin, 2009 for guides to these strategies).

School-based clinicians can also provide other school personnel with the type of hands-on training that is often not feasible in office-based settings. Collaborating to improve assessment (e.g., through school-based screenings) is particularly important, as lower-level behavioral problems often go undetected in school settings, with only the most severe cases being referred to services (Bradshaw, Buckley, & Ialongo, 2008). Early detection and prevention is advantageous given the high level of care often required when behavioral problems become severe. With regard to intervention, school consultation models in which mental health professionals provide training and support to school personnel are effective in reducing disruptive behavior and increasing classroom compliance (see Erchul & Martens, 2010 for a review).

Limitations of School-Based Interventions for Conduct Disorder and Substance Abuse

Unfortunately, rural school settings can also pose significant barriers, making implementation of some EBTs challenging. As described previously, many EBTs require a full team of professionals (e.g., MST, MDFT, FFT), which is not feasible in the vast majority of school settings. For example, MST requires that clinicians be available "24/7" to provide families with whatever support necessary. MST and similar treatment approaches may require too many adaptations to suit school-based settings. Instead, other approaches that do not require such time- and personnel-intensive services (e.g., individual CBT, BSFT) are more appropriate. In addition, school personnel should identify EBTs for conduct and substance use problems provided by community partners to ensure successful linkage of youth who cannot be successfully treated in the school setting to more intensive interventions. When no such services exist, schools may be in the position to advocate for the increased availability of EBTs for youth in their community.

Many of the EBTs for conduct and substance use problems are family-based and require significant caregiver involvement for successful implementation. As a result, special attention must be afforded to caregiver engagement. Strategies for engaging parents in school-based mental health treatments have been specified (see Chap. 20 of this volume for specific suggestions and programs). As noted above, there are EBTs for conduct and substance use problems that do not require parental involvement; however, parental involvement is often critical for sustained improvement, particularly in the case of more severe behavioral problems.

Finally, school disciplinary actions can interfere with treatment of conduct disorder and substance abuse. Current policies in many schools are at odds with effective treatment (e.g., expulsion for minor substance use possession and conduct-related offenses). In rural settings with few alternative school placements, these sanctions can lead to complete disengagement from the educational system for such youth, a risk factor for poor long-term outcomes (e.g., continued substance use, worse conduct problems, arrest and legal involvement; Henry et al., 2011). On the other hand, formal involvement with law enforcement and the court system may be the only viable avenue for youth to access more intensive services in rural communities. Though such policies may not be readily amended, clinicians should work with school administrators to minimize the impact of school disciplinary action, while balancing the safety and educational goals of school settings. Whenever possible, collaborative efforts should be made to develop alternative discipline plans that align with treatment goals.

Limitations of the Existing Literature and Future Directions

Unfortunately, few of the EBTs for conduct and substance use problems have been specifically studied in rural settings. As reviewed above, some aspects of rural settings are likely to impact the efficacy of these treatments. Thus, more research is needed both to determine the efficacy of these treatments in rural settings and to explore potential modifications to optimize their effectiveness. Another limitation is the lack of EBTs for conduct and substance use problems developed specifically for school settings, with the exception of Group Assertiveness Training. It is likely that the approaches developed for delivery with individual youth or in group settings could be readily used in school settings. However, some research suggests that family-based treatments are more effective than individual or group-based treatment approaches for conduct problems (Waldron & Turner, 2008). Thus, additional research on best practices for involving families in school-based treatments for conduct problems is warranted.

Schools have some clear advantages over clinic-based services for the assessment and treatment of conduct and substance use problems. These include improved access to care, the capacity to assess and treat large numbers of youth, observation of youth in an important social context and among peers, and the capacity for regular contact with youth to ensure treatment engagement. Thus, delivery of treatment in school settings overcomes many barriers common to outpatient mental health treatment facilities, including low motivation among parents to bring youth to treatment, lack of transportation to the clinic, and cancelled or missed appointments. At the same time, school-based providers face their own challenges, including difficulties with engaging parents and other family members in treatment, scheduling sessions at times that working family members can attend, and addressing school sanctions often experienced by youth with conduct problems (e.g., suspensions/expulsions from school). Therefore, the development of treatments specifically for school settings will advance the field in important ways.

One emerging model that has been developed specifically for school settings is a brief intervention for adolescents with mild to moderate substance use problems (Winters, Fahnhorst, Botzet, Lee, & Lalone, 2012). This approach was developed to improve access to substance abuse treatment services through delivery in the schools.

The rationale for the brief approach (i.e., four sessions) was to provide a standalone treatment for youth with the mildest problems, while serving as a gateway to more intensive community-based treatments for youth with more serious substance use problems. The intervention showed promising effects on substance use outcomes as well as engagement in subsequent substance use services (Winters et al., 2012). Notably, effectiveness increased substantially when even a single parenting session was provided. Though more research is needed on this specific intervention, this approach to treatment development can serve as an example of how to tailor treatments for the school setting. For example, many school-based treatment providers may be in the position to manage mild to moderate conduct or substance use problems, but find it challenging to provide the level of care needed for more severe problems. An approach to triaging cases and increasing the effectiveness of linking youth with more serious problems to community resources is likely to be attractive to both providers and school administrators. Further, these types of approaches allow a large number of youth with mild symptoms to access services that they would be unlikely to receive in the community. Additional treatment approaches for conduct and substance use problems designed with both the strengths and limitations of school-based treatment in mind are sorely needed.

Conclusion

School-based mental health services have the capacity to overcome many of the barriers to EBTs for conduct and substance use problems in rural settings. Though few of the existing EBTs have been developed specifically for school settings or evaluated in rural settings, it is likely that several of these treatments could be effectively delivered in rural school settings. These include the EBTs delivered as either individual or group-based therapies (i.e., CBT, Problem-Solving Skills Training; Group Assertiveness Training) as well as the family-based treatments that do not require an intensive team-based approach (e.g., BSFT, FBT, MDFT). Adoption of these treatments can be accomplished through specialized training of school-based mental health providers and, whenever possible, ongoing support from treatment developers or expert supervisors to ensure high treatment fidelity. Though additional research on these EBTs in rural school settings would be helpful in determining their efficacy and specifying any necessary modifications, these treatments represent the field's current knowledge about best practices for conduct and substance use problems.

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Kristyn Zajac, Ph.D., is an Assistant Professor at the Calhoun Cardiology Center, Behavioral Cardiovascular Prevention Division, and Department of Medicine at the University of Connecticut School of Medicine. She earned her Ph.D. in clinical psychology from the University of Delaware and completed an NIMH-funded postdoctoral research fellowship at the Medical University of South Carolina's (MUSC) National Crime Victims Research and Treatment Center. Prior to her appointment at the University of Connecticut, Dr. Zajac was an Assistant Professor of Psychiatry and Behavioral Sciences at MUSC's Family Services Research Center and the director of MUSC's Adolescent and Family Services clinic. Her research focuses broadly on the development, refinement, and evaluation of effective behavioral treatments for addictions among adolescents and young adults, particularly those with co-occurring mental health conditions. Her work has been funded by the National Institute on Drug Abuse and the American Psychological Foundation.

Arthur "Trey" Andrews III, Ph.D., is a jointly appointed Assistant Professor in the Department of Psychology and Institute for Ethnic Studies at the University of Nebraska-Lincoln. He received his Ph.D. in clinical psychology from the University of Arkansas in 2014. He then completed a 2-year NIMH-funded postdoctoral fellowship at the National Crime Victims Research and Treatment Center at the Medical University of South Carolina. Dr. Andrews has published several peer-reviewed articles focusing on trauma-related mental health disparities and barriers to service utilization. He also has conducted research evaluating novel approaches to mental health services, such as integrated care and mobile health applications that reduce disparities in service utilization. Dr. Andrews has extensive experience providing direct services to trauma-exposed youth and, before arriving at the University of Nebraska-Lincoln, he managed a school-based mental health services.

Ashli J. Sheidow, Ph.D., is a Senior Research Scientist at the Oregon Social Learning Center (OSLC). Prior to joining OSLC, she was a Professor of Psychiatry and Behavioral Sciences at the Family Services Research Center of the Medical University of South Carolina. She received her Ph.D. in 2001 in clinical psychology from the University of Illinois at Chicago. Her interests focus broadly on the development, prevention, and treatment of adolescent and young adult psychopathology and delinquency from an ecological perspective, with concentrations in co-occurring disorders, effective dissemination of evidence-based practices, and advanced quantitative methods. Her work, funded primarily by the National Institute on Drug Abuse and the National Institute of Mental Health, has included intervention development and evaluation projects, as well as dissemination and implementation research.