

# Family- and community-based treatments

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Youth who develop disruptive behavior disorders (DBDs), such as oppositional defiant disorder and conduct disorder, often have complex developmental histories that involve a variety of risk and protective factors (Boden, Fergusson, & Horwood, 2010; Dodge & Pettit, 2003; Frick, 2012; Loeber, Burke, & Pardini, 2009). In addition to individual characteristics (e.g., male gender, problems with executive functioning, limited prosocial personality traits), the onset of DBDs is strongly associated with characteristics of the youths' familial and social backgrounds such as poor parent–child relationships, ineffective monitoring and discipline, association with antisocial peers, exposure to maltreatment, and community violence. As a result, families that present for treatment of a youth DBD frequently evidence multiple problems that impact treatment participation and success (Weisz, Ugueto, Cheron, & Herren, 2013). Indeed, these families may be the recipients of interventions from multiple youth service systems (e.g., mental health, juvenile justice, education), whose efforts are difficult to coordinate and often fail to fully conceptualize families' strengths and challenges (Greenberg & Lippold, 2014). Thus, a small proportion of youth with severe behavior problems receive the majority of resources and services from those systems (Shufelt & Cocozza, 2006). Taken together, these observations indicate a clear need for comprehensive, family- and community-based treatments that can address the complex needs of youth with serious DBDs and their families.

Unfortunately, even youth with severe, chronic behavior problems rarely receive such comprehensive treatments in the United States. Instead, typical interventions focus on individual youth characteristics associated with behavior problems, rather than familial and social characteristics, and are delivered in restrictive or difficult-to-access settings (e.g., outpatient clinic, group home, juvenile detention) that may impede generalization to the youth's daily life and relationships (see McCart & Sheidow, 2016). In fact, only 5% of youth who engage in serious and violent criminal behavior receive a treatment that targets factors in the familial and social background (Greenwood, 2008; Henggeler & Schoenwald, 2011). On the other hand, individually-focused interventions with demonstrated null or even negative effects continue to be widely used, including Scared Straight and wilderness challenge programs (Lipsey, 2009) and antipsychotic medications (Correll et al., 2009; Maayan & Correll, 2011). Without effective treatment, persistent patterns of antisocial

behavior are associated with poor educational, occupational, and health outcomes (Moore, Silberg, Roberson-Nay, & Mezuk, 2017; Odgers et al., 2008) and result in serious personal (e.g., victimization) and economic effects (Kilpatrick & Acierno, 2003; McCollister, French, & Fang, 2010; Robinson & Keithley, 2000). Thus, an increased emphasis on family- and community-based treatments is necessary to address the needs of youth with DBDs and their families, with the resultant reductions in antisocial behavior in turn benefitting taxpayers, victims, and society at large (see Greenwood & Welsh, 2012).

Despite the need for additional large-scale progress, several family- and community-based treatments of DBDs have demonstrated considerable promise over the past several decades both in controlled research studies and in widespread dissemination to community settings. This chapter provides an overview of the family- and community-based models with the strongest empirical support for treatment of DBDs. We begin by introducing the five models, including their respective clinical characteristics and associated research evidence. We then discuss the common theoretical, empirical, and clinical foundations that underlie all family- and community-based treatment models and likely account for their effectiveness with serious and complex DBD cases. A case example involving one such model, multi-systemic therapy (MST), is used to illustrate all of these foundational characteristics. Finally, we conclude by discussing several areas that will require additional attention in the continued development of family- and community-based treatments for youth DBDs.

## Family and community-based treatment models

### *Inclusion criteria*

We reviewed treatment models in the present chapter that met the following three inclusion criteria: (1) Used a family- or community-based mode of intervention, defined as interventions that addressed DBD symptoms by making positive changes in the youth's family and broader social ecology through direct interventions (e.g., home-based service delivery involving multiple family members). (2) Targeted youth (i.e., less than 18 years of age at the beginning of treatment) with a history of behavior problems requiring treatment due to associated distress, impairment, or risk of harm. We did not require specific DBD diagnoses because youth were often referred by service systems, such as juvenile justice, and were not necessarily assigned a formal diagnosis. (3) In at least two published, prospective research studies, showed positive effects on a measure of behavior problems or related outcomes (e.g., arrests) relative to a comparison condition (e.g., alternative treatment, treatment as usual, no-intervention control). Inclusion criteria were met by five treatments: multisystemic therapy (MST; Henggeler & Borduin, 1990; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 2009; see [www.mstservices.com](http://www.mstservices.com)), treatment foster care Oregon (TFCO; Chamberlain, 2003; see [www.tfcOregon.com](http://www.tfcOregon.com)), functional family therapy (FFT; Alexander & Parsons, 1982; Sexton, 2011; see

[www.fftlc.com](http://www.fftlc.com)); brief strategic family therapy (BSFT; Szapocznik, Hervis, & Schwartz, 2003; Szapocznik & Kurtines, 1989; see [www.bsft.org](http://www.bsft.org)), and multidimensional family therapy (MDFT; Liddle, 2002, 2009; see [www.mdft.org](http://www.mdft.org)).

## **MST**

MST (Henggeler & Borduin, 1990; Henggeler et al., 2009) is a family- and community-based treatment for serious conduct problems in youth. MST interventions target risk factors that have a demonstrated association with illegal and/or violent behaviors, such as individual mental health problems, caregiver parenting skills, family functioning, association with antisocial peers, and poor academic performance. Therapists use clinical techniques from evidence-based behavioral, cognitive-behavioral, and structural/strategic family therapies to achieve short-term therapeutic goals, which are designed to address the needs and strengths of the social–ecological systems in which the youth is embedded (i.e., family, peers, school, community). Treatment proceeds through an iterative process of assessment, case conceptualization, and intervention that follows nine core treatment principles. To facilitate engagement and minimize barriers to treatment, MST therapists deliver services in the home and other community settings (e.g., school, recreation center) at times convenient to the youths and caregivers (including evenings, weekends, and 24-7 crisis management). MST teams consist of two to four therapists and a supervisor, with each therapist carrying a caseload of four to six families. The average course of treatment lasts 3 to 5 months, with frequent initial contacts (i.e., 3+ per week) that are reduced commensurate with clinical progress.

The developers of MST have prioritized rigorous evaluation of the model over the past 40 years (see Henggeler, 2011), with more than a dozen clinical trials demonstrating that MST can produce reductions in youth behavior problems and related negative outcomes (e.g., incarceration and probation). Early quasi-experimental (Henggeler et al., 1986) and randomized (Borduin et al., 1995; Henggeler, Melton, & Smith, 1992) trials by the MST developers indicated that the model produced significant reductions, relative to usual mental health (i.e., individual or group) treatment or probation services, in youth behavior problems, rearrests, weeks incarceration, association with deviant peers, and youth and family psychiatric symptoms, as well as increases in family functioning and peer relations. Long-term follow-ups of those randomized trials demonstrated that reductions in arrest rates were robust for as long as 2.4 years (Henggeler, Melton, Smith, Schoenwald, & Hanley, 1993) to 21.9 years (Sawyer & Borduin, 2011) post-treatment. Furthermore, for families in the Borduin et al. study, MST also produced reductions in arrests and incarceration for closest-in-age siblings (Wagner, Borduin, Sawyer, & Dopp, 2014) and primary caregivers (Johnides, Borduin, Wagner, & Dopp, 2017) over 20 years post-treatment. In addition to research conducted by treatment developers, several randomized trials conducted by independent investigators have replicated the effectiveness of MST for severe conduct problems in the United States (Timmons-Mitchell, Bender, Kishna, & Mitchell, 2006), Norway (Ogden & Hagen,

2006; Ogden & Halliday-Boykins, 2004), the United Kingdom (Butler, Baruch, Hickey, & Fonagy, 2011), and the Netherlands (Asscher et al., 2013).

### *Adaptations of MST*

The MST model has been flexibly adapted for the treatment of a number of complex clinical problems. Two of those adaptations, MST for problem sexual behaviors (MST-PSB; Borduin & Munsch, 2014; see [www.mstpsb.com](http://www.mstpsb.com)) and MST for substance abuse (MST-SA; see [www.mstservices.com](http://www.mstservices.com)), are relevant to the present chapter. Both models consider the targeted problem behaviors to be specific manifestations of a general underlying tendency for antisocial behavior, rather than representing unique populations each requiring a different treatment approach, as in adult populations.

MST-PSB is an adaptation of MST for youth who engage in serious (e.g., repeated, violent) problematic sexual behaviors. The MST-PSB model uses the same social–ecological framework and model of service delivery as in standard MST, but focuses on aspects of the youth’s ecology that are functionally related to PSB (e.g., caregiver and youth denial about sexual offenses, barriers to effective parental monitoring of sexual development, developmentally inappropriate peer relations) as well as relapse prevention and victim safety. To date, three clinical trials of MST-PSB are the only randomized trials that have been conducted with juvenile sexual offenders (see Dopp, Borduin, Rothman, & Letourneau, 2017) and include (1) a small initial trial (Borduin, Henggeler, Blaske, & Stein, 1990) of MST-PSB vs individual therapy, as well as (2) a hybrid efficacy–effectiveness trial (Borduin, Schaeffer, & Heiblum, 2009) and (3) an effectiveness trial (Letourneau et al., 2009, 2013) that each compared MST-PSB to cognitive-behavioral therapy. Across studies, MST-PSB has been found to produce greater improvements in behavior problems (sexual and nonsexual) than the comparison treatments; the efficacy trials found lower rearrest rates (for sexual and nonsexual offenses) and fewer days incarcerated up to 8.9 years post-treatment in the MST-PSB conditions.

MST-SA focuses on youth who engage in serious antisocial behavior in the context of a substance use disorder. As in MST-PSB, MST-SA applies the standard MST framework and service delivery model to address social–ecological factors that increase the risk of substance use (e.g., physiological addiction, parental modeling of substance use behavior, association with substance-using peers). The therapist also helps caregivers to regularly monitor youth substance use (e.g., with urine drug screens) and enforce consequences associated with use and abstinence. Two randomized trials of MST-SA have demonstrated decreases in substance use relative to usual community treatment (Henggeler, Clingempeel, Brondino, & Pickrel, 2002; Henggeler, Pickrel, & Brondino, 1999) and when delivered to participants in a juvenile drug court (vs. drug court alone; Henggeler et al., 2006). In the former study, MST-SA was also associated with decreased violent crime (Henggeler et al., 2002). A follow-up of the latter study revealed decreased substance use among siblings in the MST-SA group (Rowland, Chapman, & Henggeler, 2008).

## **TFCO**

TFCO (Chamberlain, 2003), previously known as multidimensional treatment foster care, is an intensive community-based foster care intervention used as an alternative to residential settings, group care, and juvenile detention centers. The TFCO model primarily targets youth with severe emotional and behavior disturbances whose difficulties have not been well-managed by intensive outpatient treatment. Youth receiving TFCO are placed in highly trained therapeutic foster homes for periods of 6 to 9 months, during which time a multidisciplinary TFCO team supports the youth and families through daily monitoring, weekly individual and family therapy focused on behavioral (e.g., behavior management), and cognitive-behavioral (e.g., problem-solving skills training) interventions, medication management, and on-call crisis management. Each team carries a caseload of approximately 10 families at a time. Interventions focus on close supervision, consistency and stability of placement, supportive relationships with adults and peers, and diversions from association with deviant peers. Involvement of caregivers from the youth's aftercare placement is emphasized to maximize the maintenance and generalization of gains made during the TFCO placement. Separate adaptations of TFCO target the developmental needs of preschool-age children (TFCO-P), school-age children (TFCO-C), and adolescents (TFCO-A); TFCO-C and TFCO-A are most relevant to this chapter, whereas TFCO-P is primarily used to address child maltreatment rather than DBDs.

Controlled evaluations have provided support for the clinical effectiveness of TFCO over the past several decades. Previous studies have demonstrated the benefits of TFCO versus group care-as-usual in terms of decreases in DBD-related outcomes such as arrest rates, number days in detention centers, disruption of placement, and self-reported delinquency in samples of male (Chamberlain & Moore, 1998; Chamberlain & Reid, 1998) and female (Leve, Chamberlain, & Reid, 2005) adolescents. Other studies have found evidence of additional positive outcomes for the samples in the aforementioned clinical trials, such as reduced teen pregnancy rates (Kerr, Leve, & Chamberlain, 2009), depressive symptoms (Harold et al., 2013), substance use (Rhoades, Leve, Harold, Kim & Chamberlain, 2014), and psychotic symptoms (Poulton et al., 2014), as well as increased school attendance and homework completion (Leve & Chamberlain, 2007). In addition, follow-up studies of these TFCO clinical trials have demonstrated the persistence of gains over periods as long as 24 months post-treatment (Chamberlain, Leve, & DeGarmo, 2007; Eddy, Whaley, & Chamberlain, 2004). Moreover, the positive effects of TFCO on youth behavior problems were replicated in randomized clinical trials conducted by independent researchers in the United Kingdom (Westermarck, Hansson, & Olsson, 2011) and Sweden (Bergström & Højman, 2016).

## **FFT**

FFT (Alexander & Parsons, 1982; Sexton, 2011) is a family-based treatment designed to work with families of adolescents who engage in a range of problematic

externalizing behaviors such as status offenses (e.g., breaking curfew, skipping school), delinquency, and substance use. FFT therapists seek to address dysfunctional youth behavior by changing family interactions and improving intrafamilial relationship functioning. Given the lower acuity of its target population, FFT teams can support up to eight therapists (per supervisor) each with caseloads of 15–20 families; furthermore, the treatment can be delivered as a home-based model or in traditional outpatient settings. FFT is comprised of five major phases delivered over 3 to 4 months of weekly sessions: (1) engagement, (2) motivation, and (3) relational assessment, which together comprise assessment and treatment planning; (4) behavior change, in which problem behaviors are targeted for change using behavioral (e.g., communication training) and cognitive-behavioral (e.g., assertiveness training, anger management) interventions; and (5) generalization, during which the therapist helps the family extend gains into multiple behavioral domains and systems (e.g., increasing endogenous support from family or school personnel) while planning for future challenges.

Several controlled trials support the efficacy and effectiveness of FFT. Compared to alternative treatment conditions (e.g., family group treatment, group homes), FFT has demonstrated greater reductions in status offenses in randomized (Alexander & Parsons, 1973) and quasi-experimental (Barton, Alexander, Waldron, Turner, & Warburton, 1985) studies. More recently, a large ( $N = 917$ ) quasi-experimental effectiveness study demonstrated that FFT produced lower rates of felony and violent crimes compared to usual probation services, but only when therapists had high supervisor ratings of adherence to the FFT model (Sexton & Turner, 2010). In addition, siblings of participants in the Alexander and Parsons (1973) trial had less court involvement in the FFT group vs comparison groups at 40-month follow-up (Klein, Alexander, & Parsons, 1977). Regarding replication by independent investigators, quasi-experimental trials have found favorable recidivism rates for FFT participants with a predominantly rural sample (Gordon, Arbuthnot, Gustafson, & McGreen, 1988; Gordon, Graves, & Arbuthnot, 1995) in follow-ups from 2.5 to 5.0 years. Other studies have found benefits of FFT in terms of reduced emotional and behavioral problems (Celinska, Furrer, & Cheng, 2013; Hartnett, Carr, & Sexton, 2016). FFT has also shown some promise, albeit with inconsistent results, in the treatment of youth substance use problems (Waldron, Brody, & Hops, 2017). However, a recent study found no difference between FFT and probation as usual with a racially diverse sample (Darnell & Schuler, 2015) and it has not shown effectiveness with juvenile sexual offenders (Erickson, 2008). Overall, the evidence for effectiveness of FFT is promising but is generally limited to youth with less serious or complex DBD presentations.

### **BSFT**

BSFT (Szapocznik et al., 2003; Szapocznik & Kurtines, 1989) is a family-based treatment that primarily targets substance use in youth (ages 8–17) but has also demonstrated significant effects on associated behavior problems (e.g., vandalism, truancy). BSFT focuses on the role of the family as a foundation for socialization

and development and uses a variety of behavioral (e.g., contingency management), cognitive-behavioral (e.g., communication skills training), and structural–strategic interventions, over approximately 12 to 16 weekly sessions, to target individual, family, school, and peer factors that contribute to problem behaviors. Early BSFT research focused primarily on intervention with black and Hispanic youth in southern Florida and, as such, the model provides more explicit guidance for consideration of cultural factors than other family- and community-based treatments (see [Robbins et al., 2003](#)). BSFT can be delivered in home-based or outpatient mental health formats; in either case, the therapist incorporates a number of engagement strategies that maximize family participation in treatment ([Coatsworth, Santisteban, McBride, & Szapocznik, 2001](#); [Santisteban et al., 1996](#)). BSFT teams typically consist of four therapists and a supervisor, with each therapist carrying a caseload of approximately 12 families at a time.

In addition to evidence for its effectiveness in reducing adolescent substance use (see [Hogue, Henderson, Ozechowski, & Robbins, 2014](#); [Robbins et al., 2011](#)), the results of several controlled trials suggest that BSFT can reduce youth DBD symptoms as well as improve family functioning and socialized aggression ([Santisteban et al., 2003](#); [Szapocznik et al., 1989](#)). In fact, a recent effectiveness study found lower incidences of incarceration and decreased externalizing behaviors 3–7 years following treatment for the BSFT group versus treatment as usual ([Horigian et al., 2015](#)). The generalizability of the aforementioned study findings is limited by the involvement of BSFT developers, but an independent effectiveness trial recently demonstrated the promise of BSFT (vs. phone contact and referrals) in reducing conduct problems and substance use with gang-affiliated Mexican–American adolescents ([Valdez, Cepeda, Parrish, Horowitz, & Kaplan, 2013](#)).

## **MDFT**

MDFT ([Liddle, 2002, 2009](#)) is a family-based treatment for substance use and associated behavior problems in youth and young adults (ages 9–26). It is similar to other family- and community-based treatments in that problem behaviors are conceptualized in terms of risk and protective factors associated with the individual, parent, family, and community (e.g., school, juvenile court). These risk and protective factors are targeted through weekly sessions across three stages of treatment: (1) engagement (“build the foundation”); (2) behavior change (“prompt action and change”) through behavioral, cognitive, and structural–strategic interventions; and (3) generalization and sustainment (“seal the changes and exit”). A course of MDFT typically lasts 3 months, with 2–3 sessions per week in the first two phases and less frequent (weekly or biweekly) contact in the third phase. MDFT teams primarily operate in outpatient office settings but therapists sometimes deliver in-home services.

As with BSFT, controlled studies of MDFT have indicated considerable effectiveness in the treatment of substance use disorders (see [Hogue et al., 2014](#); [Van der pol et al., 2017](#)). Moreover, several of those studies (e.g., [Liddle et al., 2001](#); [Liddle, Rowe, Dakof, Henderson, & Greenbaum, 2009](#)) revealed that MDFT

resulted in greater reductions in DBD symptoms, as well as associated risk factors in family, peer, and school domains, than did comparison group therapy conditions up to 12 months post-treatment. The positive impact of MDFT has also been replicated with youth participating in juvenile drug court (Dakof et al., 2015) and at sites in five European nations (Schaub et al., 2014). It is important to note that a core group of researchers, often including the treatment developer, has generated all of the aforementioned data. Thus, independent replications of the effects of MDFT on DBD symptoms is warranted to assess the generalizability of findings to date.

## Theoretical foundations

Family- and community-based treatments for DBDs are rooted in several theoretical traditions that emphasize contextual factors in the development, maintenance, and amelioration of mental disorders and symptoms. These theories inform the emphasis in each of these models on intervention capacity to address a comprehensive and individualized (i.e., specific to a particular youth and family) set of risk factors while concomitantly building protective factors. Moreover, the importance of parents and other caregivers is highlighted across theoretical schools, given that those individuals are the most proximal (i.e., direct) influence on youth behavior. Nevertheless, as we discuss next, there are key differences between various theories and the relative emphasis on each theory differs between treatment models.

Family systems theory (Bateson, 1972; Hoffman, 1981; P. P. Minuchin, 1985) underlies all of the family- and community-based treatments for DBDs to some extent. This theory views the family as a rule-based system in which all behaviors, including problematic ones such as DBD symptoms, “fit” within the context of reciprocal and circular relations between family members (Pinsof & Lebow, 2005). Thus, a family systems therapist might consider how caregiver discipline strategies influence youth aggressive behaviors, how the aggressive behaviors of the youth shape and guide the responses of the caregivers, and what function each of these behaviors serves in the family’s daily functioning when planning interventions. Therapeutic approaches that are based on family systems theory include structural therapy, which emphasizes the organization of relationships within the family and seeks to reorganize dysfunctional structures into functional ones (S. Minuchin, 1974); strategic therapy, in which problem behaviors are understood in the context of modifiable behavioral sequences that serve functions within the family (Haley, 1987); and family communications therapy, which attempts to modify the ways in which family members communicate about and jointly understand problems (Watzlawick, Bavelas, & Jackson, 1967). MST, BSFT, and MDFT tend to emphasize structural and strategic interventions in particular, through processes such as “joining” the family system and targeting sequences of family interaction for modification. On the other hand, FFT is most strongly associated with communication-

focused interventions, given the strong emphasis on developing a shared understanding (e.g., through reframing and communication skills training) in FFT (see [Alexander & Parsons, 1982](#); [Sexton, 2011](#)).

Social learning theory ([Bandura, 1977](#)) is an extension of classic behavioral theories that complements family systems theory in several ways. Most importantly, this theory emphasizes the influence of social context on learning (e.g., through modeling and vicarious reinforcement) as well as the reciprocal nature of those learning experiences. Of particular relevance to DBDs is coercion theory, an extension of social learning theory that describes a cyclical pattern of behavioral contingencies in which parent and youth engage in aggressive behavior (e.g., yelling, threatening, physical force) to control one another's actions, increasingly eroding both family members' abilities to engage in alternative, noncoercive behaviors over time due to differential reinforcement ([Granic & Patterson, 2006](#)). For example, if a parent and teenager disagree about household rules, either could escalate coercion until the family reaches a crisis (e.g., parent hits the teenager as punishment, after which the teenager complies; teenager threatens to run away from home, after which the parent acquiesces their demands). Social learning theory is relevant to all family- and community-based treatments for DBD, but it was most influential to the development of TFCO (see [Chamberlain, 2003](#)) as indicated by a heavy emphasis on learning-based (e.g., behavioral, cognitive-behavioral) interventions in that model.

The aforementioned theories are most readily applied to interactions between immediate family members, yet all of the treatment models presented in this chapter include interventions involving external systems with which families interact. The theory of social ecology ([Bronfenbrenner, 1979](#)) extends the basic tenets of family systems and social learning theories to characterize broader and more numerous contextual influences on psychosocial functioning: The individual is viewed as nested within a network of interconnected systems that include the family, peers, school, neighborhood, and community. In terms of youth behavior problems, the theory of social ecology suggests that such behaviors can be maintained by problematic transactions between the youth and any given system (e.g., a youth is truant from school due to a history of negative experiences in academic settings) as well as among the pertinent systems (e.g., disagreement between parents and school personnel undermines enforcement of consistent consequences for youth truancy). This theory also emphasizes the importance of ecological validity in understanding human behavior; i.e., the assumption that behavior should be understood within its naturally occurring contexts. Thus, all family- and community-based treatments for DBDs are consistent with the theory of social ecology to the extent to which assessment and treatment take place in the same contexts in which problem behaviors occur. In particular, MST (see [Henggeler, Schoenwald, et al., 2009](#)) most explicitly incorporates principles of the theory of social ecology into its model of clinical services (i.e., service delivery in home, school, and community settings) and interventions (i.e., extrafamilial drivers of behavior targeted from the outset of therapy).

## Empirical foundations

As would be predicted by the previously reviewed theories, empirical research has identified a number of risk factors for DBDs across family, peer, school, and neighborhood domains (see Farrington & Loeber, 2000; Frick, 2012; Henry, Tolan, & Gorman-Smith, 2001; Herrenkohl et al., 2001; Liberman, 2008; Loeber et al., 2009; Monahan, Steinberg, & Cauffman, 2009). Individual youth characteristics, such as impulsivity, hostile attribution biases, and limited prosocial traits are also associated with DBDs and may serve as important clinical targets or moderators of treatment effectiveness in family- and community-based treatments. Nevertheless, those individual-level variables also have been well-characterized in previous reviews, as well as in other chapters in this book, and thus are not discussed in detail here. Moreover, it should be noted that many social–ecological risk factors for DBDs are also associated with youth problem sexual behaviors (Ronis & Borduin, 2013; van Wijk et al., 2005) and substance abuse (American Academy of Child and Adolescent Psychiatry, 2005; Hawkins, Catalano, & Miller, 1992).

Family context is a key influence on the development of DBDs in youth. Parents of youth with DBDs have been found to use frequent, yet unpredictable, punitive behaviors (e.g., yelling, nagging, threatening, spanking) and infrequent reinforcement, including highly aggressive forms of punishment (e.g., hitting, slapping) meant to gain control over the youth's behavior (Salzinger, Feldman, Hammer, & Rosario, 1993; Stormshak, Bierman, McMahon, & Lengua, 2000). Furthermore, parental relationships of youths with DBDs are often characterized by low warmth, high rigidity, and ineffective communication (Burke, Loeber, Lahey, & Rathouz, 2005; Caspi et al., 2004; McCarty & McMahon, 2003) that exceed the effects of passive genotype–environment correlations (Bornovalova et al., 2014). However, it is important to note that parenting behaviors may be influenced by various social–ecological factors, such as youth temperament and behavior (Pardini, 2008) or cumulative socioeconomic disadvantage across generations (Scaramella, Neppl, Ontai, & Conger, 2008), in addition to individual characteristics of the parent such as learning history, intelligence, or psychopathology. Moreover, the behavior of other members of the family can indirectly influence the development of youth DBDs through modeling of conflict and antisocial behavior. For example, discord in caregiver relationships is linked to delinquency and externalizing behaviors in youth (Amato, 2001; Burt, Barnes, McGue, & Iacono, 2009; Bornovalova et al., 2014), and children of parents who engage in antisocial behavior are more likely to engage in similar behaviors (Herndon & Iacono, 2005).

Outside of family functioning, association with deviant peers is the other correlate with the strongest relationship to behavior problems in youth (Gifford-Smith, Dodge, Dishion, & McCord, 2005; Keenan, Loeber, Zhang, Stouthamer-Loeber, & van Kammen, 1995; Monahan et al., 2009). Youth with behavior problems are often rejected by their typically developing peers, leading to delays in social development and increased affiliation with peers who also exhibit behavior problems (Cillessen & Mayeux, 2004; Dishion, Spracklen, Andrews, & Patterson, 1996). This is

concerning because many of the typical interventions (e.g., group treatment, residential settings) for youth behavior problems group together peers with similar disruptive behaviors and isolate them from prosocial peers (Gifford-Smith et al., 2005). Furthermore, school underachievement is associated with DBDs, although the causal pathways of this relation are highly complex. Indeed, DBD symptoms may interfere with school performance, especially in the context of attention-deficit/hyperactivity symptoms (Frick et al., 1991; Metcalfe, Harvey, & Laws, 2013), yet, academic difficulties may also lead to poor self-image and social bonding that increases problematic behaviors (Hinshaw, 1992) or affiliation with deviant peers (Herrenkohl et al., 2001). Moreover, neighborhood and community factors may provide an important context for the development of DBDs. Youth from economically disadvantaged neighborhoods are exposed to significantly more stress, which may heighten aggressive behavior (Attar, Guerra, & Tolan, 1994). Youth who reside in neighborhoods with high levels of community violence are at greater risk of engaging in violent behavior themselves (Margolin & Gordis, 2000; Schwartz & Proctor, 2000) and families in such neighborhoods experience less cohesion and social support among community members (Sampson, Raudenbush, & Earls, 1997).

Finally, it is important to note that the relative importance of various risk factors may depend on other youth characteristics. For example, youth gender appears to differentiate both the strength and relevance of certain risk factors, yet the findings presented in this section are based on samples largely or entirely comprised of male youth (see Keenan, Loeber, & Green, 1999). Female youth seem to be more strongly affected by conflictual or disengaged relationships with caregivers (Kroneman, Loeber, Hipwell, & Koot, 2009; Pittman & Chase-Lansdale, 2001) and also engage in higher rates of relational aggression in family interactions (Taylor & Borduin, 2014). Furthermore, compared to male peers with DBDs, they show greater susceptibility to peer influence (e.g., from deviant peers; Rose & Rudolph, 2006) and can be more strongly ostracized due to their aggressive behavior conflicting with stereotypical gender roles (Kroneman et al., 2009). In sum, treatment providers need to consider risk and protective factors for DBDs from all levels of a youth's social ecology as well as interactions between those factors and the youth's characteristics.

## Clinical foundations

Consistent with their theoretical and empirical foundations, family- and community-based treatments for DBDs are designed to provide intensive interventions that target the social–ecological risk factors that influence serious antisocial behaviors. As a result, the five treatment models described in this chapter share a number of common features in terms of clinical service delivery strategies. For example, parents and other family members are directly involved in therapy, as these individuals are viewed as valuable resources even if they are characterized by serious and multiple needs. The models also place a high degree of responsibility

on the therapist to select (and continuously refine) intervention strategies that will achieve targeted changes in youth behaviors and associated risk factors. Nevertheless, there is some variability between models depending on their theoretical underpinnings and specific target population.

Family- and community-based treatments use different strategies to address the challenge of engaging families and other relevant stakeholders. Such efforts are critical, given the inconsistent attendance and high drop-out rates in more traditional services (e.g., office-based treatment; Kazdin, 2015). MST and TFCO therapists deliver all services in home, school, and community settings as a way to decrease barriers to service access. FFT, BSFT, and MDFT providers sometimes deliver services in this way, but may also deliver office-based services depending on the needs of each case or the administrative structure of their service organization. Regardless of delivery method, therapists who provide these models seek to engage and increase motivation of family members through processes such as “joining” with the family (i.e., establishing and balancing a complex network of therapeutic alliances with all members), identifying benefits to all family members for making desired changes, and problem-solving practical barriers to treatment attendance.

An added benefit to the delivery of interventions in natural settings is the increased ecological validity of services. By assessing and intervening with problem behaviors within the relevant social contexts, family- and community-based treatments maximize the likelihood that changes will generalize across time, settings, and family members. In FFT, BSFT, and MDFT programs, the family is viewed as the primary social ecology for the youth’s behavior problems and thus even office-based services can be ecologically valid to the extent that they involve the entire family. For the more severe forms of DBD treated by MST and TFCO programs, delivery of services in home, school, and community settings is essential to allow participation of all relevant family members (e.g., siblings, godparents, grandparents) as well as promote participation of other important adults in the youth’s life (e.g., teachers, probation officers) across all phases of treatment. Due to the high risk of harm (e.g., by assault, runaway, self-harm) in more clinically complex families, MST and TFCO provide on-call crisis services 24 hours a day, 7 days a week, to ensure that an interventionist can coach the family through clinical crises at the moment they occur. Overall, by providing intensive, accessible, and ecologically valid services for brief periods, family- and community-based treatments can produce large reductions in DBD symptoms that are sustained many years after completion of treatment.

The organizational structure of service provision should be matched to support differences in clinical procedures between the various models of family- and community-based treatments. For instance, organizations must support the ability of MST or TFCO therapists to travel to community settings for service delivery, flex schedules to hold appointments at times convenient to the family (e.g., evenings and weekends), and provide multiple services to a family in a given week. Moreover, these family- and community-based treatments are all delivered by licensed teams who together attend training, participate in group supervision and

expert consultation, and (when relevant) provide on-call crisis coverage while exclusively delivering the selected treatment model. MST and FFT providers are generalists who provide all clinical services to a limited caseload of families, whereas clinical roles in TFCO are highly specialized such that an individual therapist, family therapist, and skills coach each provide services to all families on the entire team's caseload. These role differences reflect the relatively higher emphasis on skills training versus family interventions in TFCO. In contrast to those three models, BSFT and MDFT (as well as MST-SA) require extensive specialized knowledge of youth substance use disorders and treatment, as does MST-PSB for problem sexual behaviors.

It is notable that all of these treatment models allow for considerable flexibility in delivery, with fidelity to the model guided by general principles rather than specification of session-by-session content. Such an approach facilitates use with complex cases that present a variety of clinical needs and strengths. The specific guiding principles differ from model to model but typically emphasize factors such as consideration of the social–ecological context of behaviors; present-focused and action-oriented solutions to problems that require effort from all individuals involved; matching of interventions to the developmental needs of the youth; and empowerment of parents and other caregivers to effect long-term change. FFT, BSFT, and MDFT further organize the tasks of treatment into phases that guide engagement, behavior change, and generalization of gains. To promote therapist fidelity to the specified model and principles, each family- and community-based treatment requires quality assurance activities such as training, expert consultation, and monitoring of outcomes. The nature and duration of these strategies differ between treatment developers; e.g., all require a period of expert consultation, with MDFT permitting full certification after the shortest period (6 months) and MST requiring ongoing quality assurance for the duration of program certification.

## **Case example: MST with Carlos**

The following case example illustrates the theoretical, empirical, and clinical foundations of MST. The individuals described in the case example are composites of various families whom we have seen benefit—or suspect would have benefitted—from MST over the years. All identifying information has been modified to protect confidentiality.

Carlos was a 14-year-old Hispanic male who lived with his mother, maternal uncle, and three younger siblings (ages 12, 8, and 5) in Springdale, AR. He was referred to MST following an incident in which he stole his uncle's car and ran away from home overnight following an argument. That incident was the culmination of an escalating pattern of interpersonal conflicts between Carlos and various family members, coupled with occasional property offenses (e.g., shoplifting), over the past 2 years. Based on a psychosocial evaluation conducted in juvenile detention, the family court judge assigned Carlos and his family to participate in MST as

a term of his probation. However, she warned them that she could execute an order of incarceration for any future offense (e.g., minor probation violation). The case was referred to Mary, a clinical social worker, who provided the family with a 4-month course of MST.

Initial sessions focused on engaging with the family and other relevant systems, developing overarching treatment goals, and identifying proximal intervention targets to achieve those goals. At the first session, Mary met with Carlos and his mother in their home and was also introduced to each of the younger siblings. All parties agreed to family goals of spending quality time together, solving problems through words, and respecting others' property. Carlos agreed to pass on what he learned in treatment to his younger siblings, and they agreed to listen. However, it quickly became clear that Mary had failed to identify a key driver of conflict in the family—Carlos's uncle—which resulted in failure of this initial plan. The uncle had moved in and become the primary disciplinarian in the home after Carlos's father left his mother 4 years ago; when Carlos entered puberty, he began insisting that his uncle no longer had authority over him and that he should be the "man of the house." After a particularly heated argument in which Carlos punched a wall, his mother privately admitted to Mary that she would prefer to be in charge of disciplining her own children, but doubted her ability to manage Carlos's "out of control" behavior on her own. Mary and the mother invited the uncle to participate in future sessions, which required a change to evening appointments to accommodate his work schedule.

Over the course of several weeks, Mary—in consultation with the supervisor and other therapists on her MST team—designed a series of tailored interventions to address the individual and familial factors that influenced the Carlos–mother–uncle triad. Ongoing assessment was a critical component to ensuring that the case conceptualization was accurate and for determining when each family member was prepared for the next step in the sequence. For example, Mary conducted several individual meetings with Carlos to teach him anger management skills such as relaxation and cognitive reappraisal (e.g., "I am becoming a man, and that means learning to be in touch with my emotions"), so that he could exert better self-regulation during heated family discussions. On the other hand, Mary quickly discontinued parent management training with Carlos's mother; it became clear that the mother had adequate skills in this area, but did not want to disrespect her brother by asking him to provide less support. Using a structural family therapy approach recently covered in a booster training by her MST Expert Consultant, Mary placed the mother back at the head of the family by assigning her the role of mediator between Carlos and his uncle; mother monitored the appropriateness of their discussions and was tasked with determining when an issue had been adequately resolved. As she gained confidence, she suggested that her brother teach her son about "the ways of being a man"—topics such as shaving, sexual education, and respecting women. These "man-to-man" talks were uncomfortable at first but brought Carlos and his uncle closer together over time.

Everyone agreed that family life was better with mom in charge. An increasingly warm, cohesive, and structured family life freed up additional resources to address factors outside the home that had impacted Carlos's behavior. For example, approximately 2 months into treatment, Carlos was caught with a pack of cigarettes by one of his teachers. Initially, his mother was furious and called his probation officer to complain about the behavior, but she regretted that decision when the probation officer informed her that Carlos would have to go back to court because he had committed a probation violation. Noting a chance for the mother to develop better advocacy skills, Mary arranged a meeting with her and the probation officer and conducted extensive preparation with the mother ahead of time. In contrast to her previous passive approaches, mother was able to convince the probation officer to forego another court hearing by stating "I'm gonna come down on him with much tougher consequences than anything the court can throw at him." Indeed, Carlos was grounded for a month and his mother arranged for him to volunteer at the local Ronald McDonald House, so that he could learn more about the effects of smoking and cancer. She also worked with Mary to identify prosocial peers with whom he could spend time on a "trial basis" before his grounding officially ended. Carlos attempted to defy the terms of his consequences—e.g., by sneaking out of the house after curfew—several times, but mother had "learned her lesson" about crises and always consulted with the on-call MST therapist rather than the probation officer. Through coaching from Mary, mother was able to maintain control of the family dynamic for that critical month. During one session, Carlos told his siblings, "Mom is different now—she really means business. We better do what she says." The siblings listened attentively to his advice.

Three years after the end of treatment, Mary received a phone call from Carlos's mother informing her that Carlos was getting ready to graduate from high school and that she could not be more proud. His uncle had eventually moved out of the home, but Carlos still looked up to him—in fact, his plan was to attend trade school and get a job at his uncle's company. The mother started to thank Mary for getting their family "back on track," but Mary quickly pointed out—as she had many times during their 4 months of working together—that every good thing in Carlos's life could be traced back to his mother's influence. They agreed to disagree.

## Future research directions

Despite the promise of family- and community-based treatments to reduce the individual, familial, and societal impacts of youth problem behaviors, none is effective with every youth and even the most well-researched models still have limited availability in community settings. Thus, continued development and refinement of family- and community-based treatments for youth DBDs should be a priority for scientists and policymakers alike who are interested in maximizing the public health impact of these treatments. In this section, we offer several recommendations for key research that would expand the existing literature in this area.

## ***Moderators and mediators of change***

Most studies evaluating family- and community-based treatments for youth DBDs have focused on comparison of group means (vs. comparison conditions) on key post treatment outcome measures. It would also be useful for researchers to identify the mechanisms by which the treatments achieve their effects (i.e., mediators) as well as the conditions under which they are most effective (i.e., moderators), yet far less research has rigorously evaluated these aspects of effectiveness.

Regarding mediators of clinical effects, identification of such variables is key to validating the theories of change that underlie family- and community-based treatment models and might ultimately help to improve their efficiency in achieving clinically significant changes. All of the treatment models reviewed in this chapter propose that changes in family functioning (e.g., adaptability and cohesion, parenting skills) are a primary mechanism for reductions in youth problem behaviors. In the most comprehensive mediation study in this area, [Deković, Asscher, Manders, Prins, & van der Laan \(2012\)](#) demonstrated that reduced DBD symptoms in MST (vs. treatment-as-usual) were mediated by month-to-month improvements in parental self-efficacy and positive discipline skills, with change in self-efficacy preceding change in discipline skills. Other, simpler mediation studies have also found changes in parenting practices to mediate the effects of MST ([Henggeler, Letourneau, et al., 2009](#); [Huey, Henggeler, Brondino, & Pickrel, 2000](#)) and TFCO ([Eddy & Chamberlain, 2000](#)) on youth antisocial behavior (including problem sexual behaviors). Findings regarding BSFT ([Horigian et al., 2015](#); [Santisteban et al., 2003](#)) and MDFT ([Henderson, Rowe, Dakof, Hawes, & Liddle, 2009](#)) are consistent but have focused primarily on mechanisms for reduced substance use, and the proposed mechanisms of FFT have not been formally evaluated. Moreover, reduced association with deviant peers has been found to mediate effectiveness of TFCO ([Eddy & Chamberlain, 2000](#); [Van Ryzin & Leve, 2012](#)) and MST-PSB ([Henggeler, Letourneau, et al., 2009](#)), although it remains unclear whether changes in peer relations are themselves mediated by changes in parenting. Given the heterogeneous risk factors for youth DBDs, studies that match specific clinical techniques (e.g., interventions targeting peer relations) to youths' clinical presentations (i.e., risk profiles) may be necessary to conduct adequately powered tests of all possible mediating pathways (see [Dopp, Borduin, White, & Kuppens, 2017](#)).

In terms of moderating variables, identification of factors that influence the effectiveness of a treatment can help to define the appropriate scope of its delivery or suggest refinements to address subpopulations of interest. For example, several studies have indicated that MST does not show differential effectiveness with youth from a variety of racial and ethnic backgrounds ([Letourneau et al., 2009](#); [Sawyer & Borduin, 2011](#)), but outcomes may be enhanced by ethnic match between the therapist and caregiver ([S. L. Foster et al., 2009](#); [Halliday-Boykins, Schoenwald, & Letourneau, 2005](#)). In contrast, other studies have found reduced effects of FFT with black and Hispanic youth ([Darnell & Schuler, 2015](#)), of MDFT with Hispanic youth ([Greenbaum et al., 2015](#)), and of BSFT for some subpopulations of Hispanic youth ([Santisteban et al., 1996](#)). Thus, attention to cultural sensitivity will likely be

of critical importance to the continued refinement of these treatment models, given their high levels of family involvement and emphasis on contextual variables. Similarly, it would be useful to consider treatment modifications that enhance appropriateness for female youth (as has been done for TFCO).

More controversial is the role of limited prosocial (i.e., callous–unemotional; see Frick, 2012) traits in responsiveness of youth DBDs to treatment; some studies found that youth with such traits demonstrated smaller reductions in symptoms (Manders, Dekovic, Asscher, van der Laan, & Prins, 2013), whereas others showed the opposite relation (Sinclair et al., 2016; White, Frick, Lawing, & Bauer, 2013). Additional research is needed to disentangle these processes of clinical change, perhaps by specifying and testing candidate mediators that are specific to youth with limited prosocial traits. Finally, systems-level characteristics beyond the youth and family may also serve as important moderators. For instance, Woolfenden, Williams, & Peet (2001) noted that involvement in the juvenile justice system should be explored as a moderator of family- and community-based treatment effects, given the emphasis on justice-involved youth in most clinical trials in this area. As one such example, Letourneau et al. (2009) did not find differential effectiveness of MST-PSB for youth who were diverted from legal intervention versus referred as a term of probation (i.e., pre- vs. post-adjudication).

### ***Economic impact***

Crime and other problematic behaviors of youth with DBDs are associated with high societal costs (E. M. Foster, Jones, & the Conduct Problems Prevention Research Group, 2006; McCollister et al., 2010); yet the comprehensive family- and community-based treatments that are best suited to the treatment of those behaviors are also quite expensive. Therefore, administrators, policymakers, and researchers have been increasingly interested in documenting the economic costs and benefits of clinically effective treatments for this population (see Greenwood & Welsh, 2012). In one of the most comprehensive economic research efforts in this area, researchers at the Washington State Institute for Public Policy developed a cost-benefit model (i.e., WSIPP model; see WSIPP, 2017b) to estimate the economic costs and benefits of various social services, including family- and community-based treatments for DBDs. Their most recent estimates (WSIPP, 2017a) indicated returns per dollar spent (i.e., across taxpayers and crime victims) of \$1.14–\$2.42 for MST (including MST-PSB and MST-SA), \$2.08 for TFCO, \$8.87 for FFT, \$0.65 for BSFT, and \$0.28 for MDFT. These findings indicate that family- and community-based treatments are sometimes capable of producing economic as well as clinical benefits, with the treatments that focus on youth at high risk for particularly expensive outcomes (e.g., incarceration) being the most likely to recoup the cost of treatment. Nevertheless, the WSIPP analytic strategy is limited by reliance on general information to estimate treatment costs, such as market rates for labor and services, and benefits, such as pooled treatment effect sizes for dichotomous outcomes (e.g., presence or absence of arrest, substance use disorder, etc.).

In response to the aforementioned limitations, researchers have modified the WSIPP model to incorporate more precise data (e.g., real-world program costs, continuous measures of post-treatment outcomes) from clinical trials of MST. For example, [Dopp, Borduin, Wagner, & Sawyer \(2014\)](#) adapted the WSIPP model to analyze rearrest data for serious juvenile offenders ([Sawyer & Borduin, 2011](#)) and their siblings ([Wagner et al., 2014](#)) who had participated in the [Borduin et al. \(1995\)](#) clinical trial of MST. The results showed that every dollar spent on MST recovered \$5.04 in savings to taxpayers and crime victims over the 25 years following treatment. Similarly, [Borduin and Dopp \(2015\)](#) applied the adapted WSIPP model to rearrest data from the [Borduin et al. \(2009\)](#) clinical trial to estimate the economic benefit of MST-PSB. That cost-benefit study found that every dollar spent on MST-PSB recovered \$48.81 in savings to taxpayers and crime victims. Moreover, the economic savings from the [Dopp et al. \(2014\)](#) and [Borduin and Dopp \(2015\)](#) analyses were even greater when estimated on a year-by-year basis rather than averaged across a lengthy follow-up period, although the analytic procedures for such computations are highly complex (see [Dopp, Borduin, Willroth, & Sorg, 2017](#)). Taken together, these three studies suggest that economic analyses that incorporate detailed data from clinical trials are useful to consider alongside population-level estimation methods (e.g., [WSIPP, 2017b](#)). It is unfortunate that no such studies of TFCO, FFT, BSFT, and MDFT have yet been published.

Overall, it is important for administrators and policymakers to consider the economic impact of family- and community-based treatment models, given that treatments of no or unknown effectiveness are often cheaper to implement in the short-term (see [Schoenwald & Henggeler, 2004](#)). Moreover, future economic studies of all of family- and community-based treatment models should expand the scope of monetized outcomes beyond the prevailing focus on crime rates and incorporate service utilization in other sectors (e.g., social welfare, mental health, primary care) to explore the possibility of cost-shifting during treatment or follow-up.

### ***Dissemination and implementation***

As noted previously, the developers of family- and community-based treatments for youth DBDs use a variety of training and quality assurance strategies to maintain treatment integrity in community settings. These strategies are executed by purveyor organizations (i.e., MST Services [MST Associates for MST-PSB]; TFC Consultants; FFT, LLC; BSFT Institute; and MDFT International), who oversee the dissemination and implementation process for a given treatment model. In addition to training in clinical intervention techniques, purveyor organizations often provide technical assistance in the substantial changes in the organizational structure (e.g., a shift to community-based services) and culture (e.g., a continuous quality assurance and improvement system) required by these models.

Despite the associated costs and burden, intensive support for the dissemination and implementation of family- and community-based treatment models are critical. Indeed, there is a well-established positive association between fidelity to the model and reductions in targeted problem behaviors in MST (Henggeler, Melton, Brondino, Scherer, & Hanley, 1997; Schoenwald, Chapman, Sheidow, & Carter, 2009), FFT (Sexton & Turner, 2010), BSFT (Rohrbaugh, 2014), and MDFT (Hogue et al., 2008). To use MST as an example, a randomized clinical trial in Sweden (Sundell et al., 2008) had low fidelity to the MST model and failed to find a significant treatment effect relative to community services. In the time since that trial, Sweden has sustained MST and demonstrated associated improvements in both treatment fidelity and outcomes (Löfholm, Eichas, & Sundell, 2014). In contrast, discontinuation of quality assurance from MST services has been associated with decreases in fidelity and treatment effectiveness within three years of discontinuation (Smith-Boydston, Holtzman, & Roberts, 2014). In sum, research has consistently supported the importance of treatment fidelity in maximizing the clinical benefits of family- and community-based treatments, which are exceptionally complex and would be challenging to implement in isolation. However, it is important to note that statistics on fidelity are rarely reported in journal articles unless implementation problems occurred during the study. Systematic assessment and reporting of implementation variables in clinical trials would allow for more rigorous examination of their moderating effects.

Numerous additional areas of research have the potential to inform efforts by treatment developers and purveyor organizations in their efforts to promote treatment fidelity. For instance, measurement of fidelity is challenging and must balance scientific validity with feasibility and usefulness in routine care (Schoenwald et al., 2011). This task is complicated by the multiply-determined nature of fidelity in family- and community-based treatment models for youth DBDs, which captures various aspects of provider behavior (e.g., frequency of behaviors, competence in service delivery) among therapists, supervisors, and consultants (see e.g., MST Services, n.d.). The “gold-standard” of observational coding is rarely used in this area, even in clinical trials (cf. Robbins et al., 2011; Hogue et al., 2008), as it is time- and cost-prohibitive. One example of innovation in fidelity measurement is a multimedia web-based system for monitoring TFCO fidelity that permits video observation for supervision and consultation (Feil, Sprengelmeyer, Davis, & Chamberlain, 2012). It will be important for future research to evaluate the validity, feasibility, and usefulness of these and other fidelity measurement strategies, especially in light of recent indications that existing measures may not demonstrate measurement equivalence in novel contexts (e.g., Lange et al., 2016). Moreover, little research has examined organizational factors that predict the adoption, implementation, and sustainment of family- and community-based treatment models for youth DBDs. To date, examples of organizational variables such as therapist job satisfaction, participatory decision-making, and opportunities for growth and advancement have predicted fidelity and outcomes in MST (Schoenwald, Chapman,

Henry, & Sheidow, 2012). Additional research in this area is indicated, given the implications of such variables for maintaining high-quality service delivery with complex treatment models and challenging clinical populations.

## Conclusions

The present review demonstrated that family- and community-based treatments (in particular, MST, TFCO, FFT, BSFT, and MDFT) for youth with complex or severe DBDs have the potential to produce greater reductions in behavior problems and more improvements in a variety of secondary outcomes than usual community services. When considered along with endorsements from numerous national organizations (e.g., Blueprints for Healthy Youth Development, <http://www.blueprintsprograms.com/>; National Registry of Evidence-based Programs and Practices, <http://nrepp.samhsa.gov/landing.aspx>; Office of Juvenile Justice and Delinquency Prevention Model Programs Guide, <https://www.ojjdp.gov/mpg/>), our review suggests that increased implementation of family- and community-based treatments are likely to result in greater reductions in youth problem behaviors, financial savings for taxpayers, and decreases in criminal victimization (see e.g., Dopp et al., 2014).

Our conclusions must be considered in the context of three key limitations. First, continued validation and replication are needed for even the most well-established treatment models and especially for those, such as BSFT and MDFT, for which the bulk of existing research has directly involved the treatment model developer(s). As the evidence base for family- and community-based treatments expands over time, it should be subjected to regular review through a combination of narrative and meta-analytic (see e.g., Dopp et al., 2017) reviews. Second, we focused on published research regarding family- and community-based treatments for DBDs, but it may be useful for other reviews with different purposes to more thoroughly explore unpublished research as well (e.g., to mitigate effects of publication bias). Finally, it is notable that all of the reviewed treatment models were developed in the United States, which may limit how well the present results generalize to family- and community-based treatments that have been developed in other countries, cultural contexts, and languages. Nevertheless, it is encouraging that research on these models in international settings has demonstrated their ability to achieve comparable effects as in the United States.

In sum, given the importance of reducing the personal, social, and financial consequences of DBDs in youth, we believe that priority should be placed on the evaluation and dissemination of promising family- and community-based treatment models. However, we also wish to emphasize effective large-scale strategies to address youth DBDs will require strong partnerships between provider organizations, treatment developers, and policymakers. These stakeholders should consider the research described in this chapter as they select treatment options to meet the needs of youth with DBDs, their families, and the communities in which they live.

## References

- Alexander, J. F., & Parsons, B. V. (1973). Short-term behavioral intervention with delinquent families: Impact on family process and recidivism. *Journal of Abnormal Psychology, 81*, 219–225.
- Alexander, J. F., & Parsons, B. V. (1982). *Functional family therapy*. Pacific Grove, CA: Brooks/Cole. Available from <https://doi.org/10.1037/11621-000>.
- Amato, P. R. (2001). Children of divorce in the 1990s: An update of the Amato and Keith (1991) meta-analysis. *Journal of Family Psychology, 15*(3), 355–370. Available from <https://doi.org/10.1037/0893-3200.15.3.355>.
- American Academy of Child and Adolescent Psychiatry. (2005). Practice parameter for the assessment and treatment of children and adolescents with substance use disorders. *Journal of the American Academy of Child & Adolescent Psychiatry, 44*(6), 609–621. Available from <https://doi.org/10.1097/01.chi.0000159135.33706.37>.
- Asscher, J. J., Deković, M., Manders, W. A., van der Laan, P. H., Prins, P. J. M., ... the Cost-Effectiveness Study Group. (2013). A randomized controlled trial of the effectiveness of multisystemic therapy in the Netherlands: Post-treatment changes and moderator effects. *Journal of Experimental Criminology, 9*, 169–187. Available from <https://doi.org/10.1007/s11292-012-9165-9>.
- Attar, B. K., Guerra, N. G., & Tolan, P. H. (1994). Neighborhood disadvantage, stressful life events and adjustments in urban elementary-school children. *Journal of Clinical Child Psychology, 23*(4), 391–400.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Barton, C., Alexander, J. F., Waldron, H., Turner, C. W., & Warburton, J. (1985). Generalizing treatment effect of functional family therapy: Three replications. *American Journal of Family Therapy, 13*, 16–26.
- Bateson, G. (1972). *Steps to an ecology of the mind*. New York: Ballentine.
- Bergström, M., & Höjman, L. (2016). Is multidimensional treatment foster care (MTFC) more effective than treatment as usual in a three-year follow-up? Results from MTFC in a Swedish setting. *European Journal of Social Work, 19*, 219–235. Available from <https://doi.org/10.1080/13691457.2015.1030361>.
- Boden, J. M., Fergusson, D. M., & Horwood, L. J. (2010). Risk factors for conduct disorder and oppositional/defiant disorder: Evidence from a New Zealand birth cohort. *Journal of the American Academy of Child & Adolescent Psychiatry, 49*(11), 1125–1133. Available from <https://doi.org/10.1016/j.jaac.2010.08.005>.
- Borduin, C. M., & Dopp, A. R. (2015). Economic impact of multisystemic therapy with juvenile sexual offenders. *Journal of Family Psychology, 29*, 687–696. Available from <https://doi.org/10.1037/fam0000113>.
- Borduin, C. M., Henggeler, S. W., Blaske, D. M., & Stein, R. J. (1990). Multisystemic treatment of adolescent sexual offenders. *International Journal of Offender Therapy and Comparative Criminology, 34*, 105–113. Available from <https://doi.org/10.1177/0306624X9003400204>.
- Borduin, C. M., Mann, B. J., Cone, L. T., Henggeler, S. W., Fucci, B. R., Blaske, D. M., & Williams, R. A. (1995). Multisystemic treatment of serious juvenile offenders: Long-term prevention of criminality and violence. *Journal of Consulting and Clinical Psychology, 63*, 569–578. Available from <https://doi.org/10.1037/0022-006X.63.4.569>.
- Borduin, C.M., & Munsch, R.M. (2014). *Multisystemic therapy for youths with problem sexual behaviors*. Unpublished manuscript, Department of Psychological Sciences, University of Missouri.

- Borduin, C. M., Schaeffer, C. M., & Heiblum, N. (2009). A randomized clinical trial of multisystemic therapy with juvenile sexual offenders: Effects on youth social ecology and criminal activity. *Journal of Consulting and Clinical Psychology, 77*(1), 26–37. Available from <https://doi.org/10.1037/a0013035>.
- Bornoalova, M. A., Cummings, J. R., Hunt, E., Blazei, R., Malone, S., & Iacono, W. G. (2014). Understanding the relative contributions of direct environmental effects and passive genotype-environment correlations in the association between familial risk factors and child disruptive behavior disorders. *Psychological Medicine, 44*(4), 831–844. Available from <https://doi.org/10.1017/S0033291713001086>.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Burke, J. D., Loeber, R., Lahey, B. B., & Rathouz, P. J. (2005). Developmental transitions among affective and behavioral disorders in adolescent boys. *Journal of Child Psychology and Psychiatry, 46*(11), 1200–1210. Available from <https://doi.org/10.1111/j.1469-7610.2005.00422.x>.
- Burt, S. A., Barnes, A. R., McGue, M., & Iacono, W. G. (2009). Parental divorce and adolescent delinquency: Ruling out the impact of common genes. *Developmental Psychology, 44*(6), 1668–1677. Available from <https://doi.org/10.1037/a0013477>.
- Butler, S., Baruch, G., Hickey, N., & Fonagy, P. (2011). A randomized controlled trial of multisystemic therapy and a statutory therapeutic intervention for young offenders. *Journal of the American Academy of Child & Adolescent Psychiatry, 50*, 1220–1235. e2. Available from <https://doi.org/10.1016/j.jaac.2011.09.017>.
- Caspi, A., Moffitt, T. E., Morgan, J., Rutter, M., Taylor, A., & Polo-Tomas, M. (2004). Maternal expressed emotion predicts children's antisocial behavior problems: Using monozygotic-twin differences to identify environmental effects on behavioral development. *Developmental Psychology, 40*(2), 149–161. Available from <https://doi.org/10.1037/0012-1649.40.2.149>.
- Celinska, K., Furrer, S., & Cheng, C. (2013). An outcome-based evaluation of functional family therapy for youth with behavioral problems. *Journal of Juvenile Justice, 2*(2), 23–36.
- Chamberlain, P. (2003). *Treating chronic juvenile offenders: Advances made through the Oregon multidimensional treatment foster care model*. Washington, DC: American Psychological Association. Available from <https://doi.org/10.1037/10596-000>.
- Chamberlain, P., Leve, L. D., & DeGarmo, D. S. (2007). Multidimensional treatment foster care for girls in the juvenile justice system: 2-year follow-up of a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 75*, 187–193.
- Chamberlain, P., & Moore, K. (1998). A clinical model for parenting juvenile offenders: A comparison of group care versus family care. *Clinical Child Psychology and Psychiatry, 3*, 375–386.
- Chamberlain, P., & Reid, J. B. (1998). Comparison of two community alternatives to incarceration for chronic juvenile offenders. *Journal of Consulting and Clinical Psychology, 66*, 624–633. Available from <https://doi.org/10.1037/0022-006X.66.4.624>.
- Cillessen, A. H. N., & Mayeux, L. (2004). From censure to reinforcement: Developmental changes in the association between aggression and social status. *Child Development, 75*(1), 147–163.
- Coatsworth, J. D., Santisteban, D. A., McBride, C. K., & Szapocznik, J. (2001). Brief strategic family therapy versus community control: Engagement, retention, and an exploration of the moderating role of adolescent symptom severity. *Family Process, 40*, 313–332. Available from <https://doi.org/10.1111/j.1545-5300.2001.4030100313.x>.

- Correll, C. U., Manu, P., Olshanskiy, V., Napolitano, B., Kane, J. M., & Malhotra, A. K. (2009). Cardiometabolic risk of second-generation antipsychotic medications during first-time use in children and adolescents. *Journal of the American Medical Association*, *302*, 1765–1773. Available from <https://doi.org/10.1001/jama.2009.1549>.
- Dakof, G. A., Henderson, C., Rowe, C. L., Boustani, M., Greenbaum, P. E., Wang, W., ... Liddle, H. A. (2015). A randomized clinical trial of family therapy in juvenile drug court. *Journal of Family Psychology*, *29*(2), 232–241. Available from <https://doi.org/10.1037/fam0000053>.
- Darnell, A. J., & Schuler, M. S. (2015). Quasi-experimental study of Functional Family Therapy effectiveness for juvenile justice aftercare in a racially and ethnically diverse community sample. *Children and Youth Services Review*, *50*, 75–82. Available from <https://doi.org/10.1016/j.chilyouth.2015.01.013>.
- Deković, M., Asscher, J. J., Manders, W. A., Prins, P. J. M., & van der Laan, P. (2012). Within-intervention change: Mediators of intervention effects during multisystemic therapy. *Journal of Consulting and Clinical Psychology*, *80*(4), 574–587. Available from <https://doi.org/10.1037/a0028482>.
- Dishion, T. J., Spracklen, K. M., Andrews, D. W., & Patterson, G. R. (1996). Deviancy training in male adolescent friendships. *Behavior Therapy*, *27*(3), 373–390.
- Dodge, K. A., & Pettit, G. S. (2003). A biopsychosocial model of the development of chronic conduct problems in adolescence. *Developmental Psychology*, *39*, 349–371.
- Dopp, A. R., Borduin, C. M., Rothman, D., & Letourneau, E. J. (2017). Evidence-based treatments for youths who engage in illegal sexual behaviors. *Journal of Clinical Child and Adolescent Psychology*, *46*(5), 631–645. Available from <https://doi.org/10.1080/15374416.2016.1261714>.
- Dopp, A. R., Borduin, C. M., Wagner, D. V., & Sawyer, A. M. (2014). Economic impact of multisystemic therapy through midlife: A cost-benefit analysis with serious juvenile offenders and their siblings. *Journal of Consulting and Clinical Psychology*, *82*, 694–705. Available from <https://doi.org/10.1037/a0036415>.
- Dopp, A. R., Borduin, C. M., White, M. H., & Kuppens, S. (2017). Family-based treatments for serious juvenile offenders: A multilevel meta-analysis. *Journal of Consulting and Clinical Psychology*, *85*(4), 335–354. Available from <https://doi.org/10.1037/ccp0000183>.
- Dopp, A. R., Borduin, C. M., Willroth, E. C., & Sorg, A. A. (2017). Long-term economic benefits of psychological interventions for criminality: Comparing and integrating estimation methods. *Psychology, Public Policy, and Law*, *23*(3), 312–323. Available from <https://doi.org/10.1037/law0000134>.
- Eddy, J. M., & Chamberlain, P. (2000). Family management and deviant peer association as mediators of the impact of treatment condition on youth antisocial behavior. *Journal of Consulting and Clinical Psychology*, *68*, 857–863.
- Eddy, M. J., Whaley, R. B., & Chamberlain, P. (2004). The prevention of violent behavior by chronic and serious male juvenile offenders: A 2-year follow-up of a randomized clinical trial. *Journal of Emotional and Behavioral Disorders*, *12*, 2–8. Available from <https://doi.org/10.1177/10634266040120010101>.
- Erickson, C.J. (2008). *The effectiveness of functional family therapy in the treatment of juvenile sexual offenders* (Unpublished doctoral dissertation). Indiana University, Bloomington, IN.
- Farrington, D. P., & Loeber, R. (2000). Epidemiology of juvenile violence. *Child and Adolescent Psychiatric Clinics of North America*, *9*, 733–748.

- Feil, E. G., Sprengelmeyer, P. G., Davis, B., & Chamberlain, P. (2012). Development and testing of a multimedia internet-based system for fidelity and monitoring of multidimensional treatment foster care. *Journal of Medical Internet Research*, *14*(5), e139. Available from <https://doi.org/10.2196/jmir.2034>.
- Foster, S. L., Cunningham, P. B., Warner, S. E., McCoy, D. M., Barr, T. S., & Henggeler, S. W. (2009). Therapist behavior as a predictor of Black and White caregiver responsiveness in multisystemic therapy. *Journal of Family Psychology*, *23*(5), 626–635. Available from <https://doi.org/10.1037/a0016228>.
- Foster, E. M., Jones, D., & the Conduct Problems Prevention Research Group. (2006). Can a costly intervention be cost-effective? An analysis of violence prevention. *Archives of General Psychiatry*, *63*, 1284–1291. Available from <https://doi.org/10.1001/archpsyc.63.11.1284>.
- Frick, P. J. (2012). Developmental pathways to conduct disorder: Implications for future directions in research, assessment, and treatment. *Journal of Clinical Child & Adolescent Psychology*, *41*(3), 378–389. Available from <https://doi.org/10.1080/15374416.2012.664815>.
- Frick, P. J., Kamphaus, R. W., Lahey, B. B., Loeber, R., Christ, M. A. G., Hart, E. L., & Tannenbaum, L. E. (1991). Academic underachievement and the disruptive behavior disorders. *Journal of Consulting and Clinical Psychology*, *59*(2), 289–294. Available from <https://doi.org/10.1037/0022-006X.59.2.289>.
- Gifford-Smith, M., Dodge, K. A., Dishion, T. J., & McCord, J. (2005). Peer influence in children and adolescents: Crossing the bridge from developmental to intervention science. *Journal of Abnormal Child Psychology*, *33*(3), 255–265. Available from <https://doi.org/10.1007/s10802-005-3563-7>.
- Gordon, D. A., Arbuthnot, J., Gustafson, K. E., & McGreen, P. (1988). Home-based behavioral-systems family therapy with disadvantaged juvenile delinquents. *American Journal of Family Therapy*, *16*, 243–255.
- Gordon, D. A., Graves, K., & Arbuthnot, J. (1995). The effect of functional family therapy for delinquents on adult criminal behavior. *Criminal Justice and Behavior*, *22*, 60–73.
- Granic, I., & Patterson, G. R. (2006). Toward a comprehensive model of antisocial development: A dynamic systems approach. *Psychological Review*, *113*, 101–131. Available from <https://doi.org/10.1037/0033-295X.113.1.101>.
- Greenberg, M. T., & Lippold, M. A. (2014). Promoting healthy outcomes among youth with multiple risks: Innovative approaches. *Annual Review of Public Health*, *34*, 253–270. Available from <https://doi.org/10.1146/annurev-publhealth-031811-124619>.
- Greenbaum, P. E., Wang, W., Henderson, C. E., Kan, L., Hall, K., Dakof, G. A., & Liddle, H. A. (2015). Gender and ethnicity as moderators: Integrative data analysis of multidimensional family therapy randomized clinical trials. *Journal of Family Psychology*, *29*(6), 919–930. Available from <https://doi.org/10.1037/fam0000127>.
- Greenwood, P. (2008). Prevention and intervention programs for juvenile offenders: The benefits of evidence-based practice. *Future of Children*, *18*, 11–36.
- Greenwood, P. W., & Welsh, B. C. (2012). Promoting evidence-based practice in delinquency prevention at the state level: Principles, progress, and policy directions. *Criminology & Public Policy*, *11*, 493–513. Available from <https://doi.org/10.1111/j.1745-9133.2012.00826.x>.
- Haley, J. (1987). *Problem-solving therapy* (2nd ed.). San Francisco, CA: Jossey-Boss, Inc.
- Halliday-Boykins, C. A., Schoenwald, S. K., & Letourneau, E. J. (2005). Caregiver-therapist ethnic similarity predicts youth outcomes from an empirically based treatment. *Journal of Consulting and Clinical Psychology*, *73*, 808–818.

- Harold, G. T., Kerr, D. C. R., Van Ryzin, M., DeGarmo, D. S., Rhoades, K. A., & Leve, L. D. (2013). Depressive symptom trajectories among girls in the juvenile justice system: 24-month outcomes of an RCT of multidimensional treatment foster care. *Prevention Science, 14*(5), 437–446. Available from <https://doi.org/10.1007/s11121-012-0317-y>.
- Hartnett, D., Carr, C., & Sexton, T. (2016). The effectiveness of functional family therapy in reducing adolescent mental health risk and family adjustment difficulties in an Irish context. *Family Process, 55*(2), 287–304. Available from <https://doi.org/10.1111/famp.12195>.
- Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin, 112*(1), 64–105. Available from <https://doi.org/10.1037/0033-2909.112.1.64>.
- Henderson, C. E., Rowe, C. L., Dakof, G. A., Hawes, S. W., & Liddle, H. A. (2009). Parenting practices as mediators of treatment effects in an early-intervention trial of multidimensional family therapy. *The American Journal of Drug and Alcohol Abuse, 35*, 220–226. Available from <https://doi.org/10.1080/00952990903005890>.
- Henggeler, S. W. (2011). Efficacy studies to large-scale transport: The development and validation of MST programs. *Annual Review of Clinical Psychology, 7*, 351–381. Available from <https://doi.org/10.1146/annurev-clinpsy-032210-104615>.
- Henggeler, S. W., & Borduin, C. M. (1990). *Family therapy and beyond: A multisystemic approach to treating the behavior problems of children and adolescents*. Pacific Grove, CA: Brooks/Cole.
- Henggeler, S. W., Clingempeel, W. G., Brondino, M. J., & Pickrel, S. G. (2002). Four-year follow-up of multisystemic therapy with substance-abusing and substance-dependent juvenile offenders. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*, 868–874. Available from <https://doi.org/10.1097/00004583-200207000-00021>.
- Henggeler, S. W., Halliday-Boykins, C. A., Cunningham, P. B., Randall, J., Shapiro, S. B., & Chapman, J. E. (2006). Juvenile drug court: Enhancing outcomes by integrating evidence-based treatments. *Journal of Consulting and Clinical Psychology, 74*, 42–54. Available from <https://doi.org/10.1037/0022-006X.74.1.42>.
- Henggeler, S. W., Letourneau, E. J., Chapman, J. E., Borduin, C. M., Schewe, P. A., & McCart, M. R. (2009). Mediators of change for multisystemic therapy with juvenile sexual offenders. *Journal of Consulting and Clinical Psychology, 77*, 451–462. Available from <https://doi.org/10.1037/a0013971>.
- Henggeler, S. W., Melton, G. B., Brondino, M. J., Scherer, D. G., & Hanley, J. H. (1997). Multisystemic therapy with violent and chronic juvenile offenders and their families: The role of treatment fidelity in successful dissemination. *Journal of Consulting and Clinical Psychology, 65*, 821–833. Available from <https://doi.org/10.1037/0022-006X.65.5.821>.
- Henggeler, S. W., Melton, G. B., & Smith, L. A. (1992). Family preservation using multisystemic therapy: An effective alternative to incarcerating serious juvenile offenders. *Journal of Consulting and Clinical Psychology, 60*, 953–961. Available from <https://doi.org/10.1037/0022-006X.60.6.953>.
- Henggeler, S. W., Melton, G. B., Smith, L. A., Schoenwald, S. K., & Hanley, J. H. (1993). Family preservation using multisystemic treatment: Long-term follow-up to a clinical trial with serious juvenile offenders. *Journal of Child and Family Studies, 2*, 283–293. Available from <https://doi.org/10.1007/BF01321226>.

- Henggeler, S. W., Pickrel, S. G., & Brondino, M. J. (1999). Multisystemic treatment of substance-abusing and dependent delinquents: Outcomes, treatment fidelity, and transportability. *Mental Health Services Research, 1*, 171–184. Available from <https://doi.org/10.1023/A:1022373813261>.
- Henggeler, S. W., Rodick, J. D., Borduin, C. M., Hanson, C. L., Watson, S. M., & Urey, J. R. (1986). Multisystemic treatment of juvenile offenders: Effects on adolescent behavior and family interaction. *Developmental Psychology, 22*, 132–141. Available from <https://doi.org/10.1037/0012-1649.22.1.132>.
- Henggeler, S. W., & Schoenwald, S. K. (2011). Evidence-based interventions for juvenile offenders and juvenile justice policies that support them. *Society for Research in Child Development: Social Policy Report, 25*, 1–20.
- Henggeler, S. W., Schoenwald, S. K., Borduin, C. M., Rowland, M. D., & Cunningham, P. B. (2009). *Multisystemic therapy for antisocial behavior in children and adolescents*. New York, NY: Guilford Press.
- Henry, D. B., Tolan, P. H., & Gorman-Smith, D. (2001). Longitudinal family and peer group effects on violence and nonviolent delinquency. *Journal of Clinical Child Psychology, 30*, 172–186.
- Herndon, R. W., & Iacono, W. G. (2005). Psychiatric disorder in the children of antisocial parents. *Psychological Medicine, 35*, 1815–1824. Available from <https://doi.org/10.1017/S0033291705005635>.
- Herrenkohl, T. I., Huang, B., Kosterman, R., Hawkins, J. D., Catalano, R. F., & Smith, B. H. (2001). A comparison of social development processes leading to violent behavior in late adolescence for childhood initiators and adolescent initiators of violence. *Journal of Research in Crime and Delinquency, 38*, 45–63.
- Hoffman, L. (1981). *Foundations of family therapy*. New York: Basic Books.
- Hinshaw, S. P. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence: Causal relationships and underlying mechanisms. *Psychological Bulletin, 111*(1), 127–155.
- Hogue, A., Henderson, C. E., Dauber, S., Barajas, P. C., Fried, A., & Liddle, H. A. (2008). Treatment adherence, competence, and outcome in individual and family therapy for adolescent behavior problems. *Journal of Consulting and Clinical Psychology, 76*, 544–555. Available from <https://doi.org/10.1037/0022-006X.76.4.544>.
- Hogue, A., Henderson, C. E., Ozechowski, T. J., & Robbins, M. S. (2014). Evidence base on outpatient behavioral treatments for adolescent substance use: Updates and recommendations 2007–2013. *Journal of Clinical Child & Adolescent Psychology, 43*(5), 695–720. Available from <https://doi.org/10.1080/15374416.2014.915550>.
- Horigian, V. E., Feaster, D. J., Robbins, M. S., Brincks, A. M., Ucha, J., & Szapocznik, J. (2015). A cross-sectional assessment of the long term effects of brief strategic family therapy for adolescent substance use. *The American Journal on Addictions, 24*(7), 637–645. Available from <https://doi.org/10.1111/ajad.12278>.
- Huey, S. J., Henggeler, S. W., Brondino, M. J., & Pickrel, S. G. (2000). Mechanisms of change in multisystemic therapy: Reducing delinquent behavior through therapist adherence and improved family and peer functioning. *Journal of Consulting and Clinical Psychology, 68*, 451–467.
- Johnides, B. D., Borduin, C. M., Wagner, D. V., & Dopp, A. R. (2017). Effects of multisystemic therapy on caregivers of serious juvenile offenders: A 20-year follow-up to a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 85*(4), 323–334. Available from <https://doi.org/10.1037/ccp0000199>.

- Kazdin, A. E. (2015). Clinical dysfunction and psychosocial interventions: The interplay of research, methods, and conceptualization of challenges. *Annual Review of Clinical Psychology, 11*, 25–52. Available from <https://doi.org/10.1146/annurev-clinpsy-032814-112720>.
- Keenan, K., Loeber, R., & Green, S. (1999). Conduct disorder in girls: A review of the literature. *Clinical Child and Family Psychology Review, 2*(1), 3–19. Available from <https://doi.org/10.1023/A:1021811307364>.
- Keenan, K., Loeber, R., Zhang, Q., Stouthamer-Loeber, M., & van Kammen, W. B. (1995). The influence of deviant peers on the development of boys' disruptive and delinquent behavior: A temporal analysis. *Developmental Processes in Peer Relations and Psychopathology, 7*(4), 715–726. Available from <https://doi.org/10.1017/S0954579400006805>.
- Kerr, D. C. R., Leve, L. D., & Chamberlain, P. (2009). Pregnancy rates among juvenile justice girls in two randomized controlled trials of multidimensional treatment foster care. *Journal of Consulting and Clinical Psychology, 77*, 588–593. Available from <https://doi.org/10.1037/a0015289>.
- Kilpatrick, D. G., Ruggiero, K. J., Acierno, R., Saunders, B. E., Resnick, H. S., & Best, C. L. (2003). Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: Results from the National Survey of Adolescents. *Journal of Consulting and Clinical Psychology, 71*(4), 692–700. Available from <https://doi.org/10.1037/0022-006X.71.4.692>.
- Klein, N. C., Alexander, J. F., & Parsons, B. V. (1977). Impact of family systems intervention on recidivism and sibling delinquency: A model of primary prevention and programme evaluation. *Journal of Consulting and Clinical Psychology, 45*, 469–474.
- Kroneman, L. M., Loeber, R., Hipwell, A. E., & Koot, H. M. (2009). Girls' disruptive behavior and its relationship to family functioning: A review. *Journal of Child and Family Studies, 18*(3), 259–273.
- Lange, A., Scholte, R. H., van Geffen, W., Timman, R., Busschbach, J. J., & van der Rijken, R. E. (2016). The lack of cross-national equivalence of a Therapist Adherence Measure (TAM-R) in multisystemic therapy (MST). *European Journal of Psychological Assessment, 32*(4), 312–325. Available from <https://doi.org/10.1027/1015-5759/a000262>.
- Letourneau, E. J., Henggeler, S. W., Borduin, C. M., Schewe, P. A., McCart, M. R., Chapman, J. E., & Saldana, L. (2009). Multisystemic therapy for juvenile sexual offenders: 1-year results from a randomized effectiveness trial. *Journal of Family Psychology, 23*, 89–102. Available from <https://doi.org/10.1037/a0014352>.
- Letourneau, E. J., Henggeler, S., McCart, M., Borduin, C., Schewe, P., & Armstrong, K. (2013). Two-year follow-up of a randomized effectiveness trial evaluating MST for juveniles who sexually offend. *Journal of Family Psychology, 27*, 978–985. Available from <https://doi.org/10.1037/a0034710>.
- Leve, L. D., & Chamberlain, P. (2007). A randomized evaluation of multidimensional treatment foster care: Effects on school attendance and homework completion in juvenile justice girls. *Research on Social Work Practice, 17*, 657–663. Available from <https://doi.org/10.1177/1049731506293971>.
- Leve, L. D., Chamberlain, P., & Reid, J. B. (2005). Intervention outcomes for girls referred from juvenile justice: Effects on delinquency. *Journal of Consulting and Clinical Psychology, 73*, 1181–1185. Available from <https://doi.org/10.1037/0022-006X.73.6.1181>.

- Liberman, A. M. (Ed.), (2008). *The long view of crime: A synthesis of longitudinal research*. New York, NY: Springer.
- Liddle, H. A. (2002). *Multidimensional family therapy treatment (MDFT) for adolescent cannabis users: Vol. 5. Cannabis Youth Treatment (CYT) manual series*. Rockville, MD: Center for Substance Abuse Treatment, Substance Abuse Mental Health Services Administration.
- Liddle, H. A. (2009). *Multidimensional Family Therapy for adolescent drug abuse: Clinician's manual*. Center City, MN: Hazelden Publishing Co.
- Liddle, H. A., Dakof, G. A., Parker, K., Diamond, G. S., Barrett, K., & Tejada, M. (2001). Multidimensional family therapy for adolescent drug abuse: Results of a randomized clinical trial. *American Journal of Drug and Alcohol Abuse*, 27(4), 651–688.
- Liddle, H. A., Rowe, C. L., Dakof, G. A., Henderson, C., & Greenbaum, P. (2009). Multidimensional Family Therapy for young adolescent substance abuse: Twelve month outcomes of a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 77(1), 12–25. Available from <https://doi.org/10.1037/a0014160>.
- Lipsey, M. W. (2009). The primary factors that characterize effective interventions for juvenile offenders: A meta-analytic overview. *Victims and Offenders*, 4, 124–147. Available from <https://doi.org/10.1080/115564880802612573>.
- Loeber, R., Burke, J. D., & Pardini, D. A. (2009). Development and etiology of disruptive and delinquent behavior. *Annual Review of Clinical Psychology*, 5, 291–310. Available from <https://doi.org/10.1146/annurev.clinpsy.032408.153631>.
- Löfholm, C. A., Eichas, K., & Sundell, K. (2014). The Swedish implementation of multisystemic therapy for adolescents: Does treatment experience predict treatment adherence. *Journal of Clinical Child & Adolescent Psychology*, 43, 643–655. Available from <https://doi.org/10.1080/15374416.2014.883926>.
- Maayan, L., & Correll, C. U. (2011). Weight gain and metabolic risks associated with anti-psychotic medications in children and adolescents. *Journal of Child and Adolescent Psychopharmacology*, 21, 517–535. Available from <https://doi.org/10.1089/cap.2011.0015>.
- Manders, W. A., Dekovic, M., Asscher, J. J., van der Laan, P. H., & Prins, P. J. M. (2013). Psychopathy as predictor and moderator of Multisystemic Therapy outcomes among adolescents treated for antisocial behavior. *Journal of Abnormal Child Psychology*, 41, 1121–1132. Available from <https://doi.org/10.1007/s10802-013-9749-5>.
- Margolin, G., & Gordis, E. B. (2000). The effects of family and community violence on children. *Annual Review of Psychology*, 51(1), 445–479.
- McCarty, C. A., & McMahon, R. J. (2003). Mediators of the relation between maternal depressive symptoms and child internalizing and disruptive behavior disorders. *Journal of Family Psychology*, 17(4), 545–556. Available from <https://doi.org/10.1037/0893-3200.17.4.545>.
- McCart, M. R., & Sheidow, A. J. (2016). Evidence-based psychosocial treatments for adolescents with disruptive behavior. *Journal of Clinical Child and Adolescent Psychology*, 45(5), 529–563. Available from <https://doi.org/10.1080/15374416.2016.1146990>.
- McCollister, K. E., French, M. T., & Fang, H. (2010). The cost of crime to society: New crime-specific estimates for policy and program evaluation. *Drug & Alcohol Dependence*, 108(1), 98–109. Available from <https://doi.org/10.1016/j.drugalcdep.2009.12.002>.
- Metcalf, L. A., Harvey, E. A., & Laws, H. B. (2013). The longitudinal relation between academic/cognitive skills and externalizing behavior problems in preschool children. *Journal of Educational Psychology*, 105(3), 881–894. Available from <https://doi.org/10.1037/a0032624>.

- Minuchin, S. (1974). *Families and family therapy*. Cambridge, MA: Harvard University Press.
- Minuchin, P. P. (1985). Families and individual development: Provocations from the field of family therapy. *Child Development*, *56*, 289–302.
- Monahan, K., Steinberg, L., & Cauffman, E. (2009). Affiliation with antisocial peers, susceptibility to peer influence, and antisocial behavior during the transition to adulthood. *Developmental Psychology*, *45*(6), 1520–1530.
- Moore, A. A., Silberg, J. L., Roberson-Nay, R., & Mezuk, B. (2017). Life course persistent and adolescence limited conduct disorder in a nationally representative US sample: Prevalence, predictors, and outcomes. *Social Psychiatry and Psychiatric Epidemiology*, *52*, 435–443. Available from <https://doi.org/10.1007/s00127-017-1337-5>.
- MST Services (n.d.). *Multisystemic Therapy: Continuous quality improvement*. Retrieved June 18, 2017 from [http://mstservices.com/files/QA\\_system.pdf](http://mstservices.com/files/QA_system.pdf).
- Odgers, C. L., Moffitt, T. E., Broadbent, J. M., Dickson, N., Hancox, R. J., Harrington, H., ... Caspi, A. (2008). Female and male antisocial trajectories: From childhood origins to adult outcomes. *Development and Psychopathology*, *20*, 673–716. Available from <https://doi.org/10.1017/s0954579408000333>.
- Ogden, T., & Hagen, K. A. (2006). Multisystemic therapy of serious behaviour problems in youth: Sustainability of therapy effectiveness two years after intake. *Journal of Child and Adolescent Mental Health*, *11*, 142–149. Available from <https://doi.org/10.1111/j.1475-3588.2006.00396.x>.
- Ogden, T., & Halliday-Boykins, C. A. (2004). Multisystemic treatment of antisocial adolescents in Norway: Replication of clinical outcomes outside of the US. *Child and Adolescent Mental Health*, *9*, 77–83. Available from <https://doi.org/10.1111/j.1475-3588.2004.00085.x>.
- Pardini, D. A. (2008). Novel insights into longstanding theories of bidirectional parent-child influences: Introduction to the special section. *Journal of Abnormal Child Psychology*, *36*, 627–631.
- Pinsof, W. M., & Lebow, J. L. (2005). *Family psychology: The art of the science*. New York, NY: Oxford University Press.
- Pittman, L. D., & Chase-Lansdale, P. L. (2001). African American adolescent girls in impoverished communities: Parenting style and adolescent outcomes. *Journal of Research on Adolescence*, *11*(2), 199–224. Available from <https://doi.org/10.1111/1532-7795.00010>.
- Poulton, R., Van Ryzin, M. J., Harold, G. T., Chamberlain, P., Fowler, D., & Leve, L. D. (2014). Effects of multidimensional treatment foster care on psychotic symptoms in girls. *Journal of the American Academy of Child & Adolescent Psychiatry*, *53*(12), 1279–1287. Available from <https://doi.org/10.1016/j.jaac.2014.08.014>.
- Rhoades, K. A., Leve, L. D., Harold, G. T., Kim, H., & Chamberlain, P. (2014). Drug use trajectories after a randomized controlled trial of MTFC: Associations with partner drug use. *Journal of Research on Adolescence*, *24*, 40–54. Available from <https://doi.org/10.1111/jora.12077>.
- Robbins, M. S., Feaster, D. J., Horigian, V. E., Rohrbaugh, M., Shoham, V., & Szapocznik, J. (2011). Brief strategic family therapy versus treatment as usual: Results of a multisite randomized trial for substance using adolescents. *Journal of Consulting and Clinical Psychology*, *79*(6), 713–727. Available from <https://doi.org/10.1037/a0025477>.
- Robbins, M. S., Szapocznik, J., Santisteban, D. A., Hervis, O. E., Mitrani, V. B., & Schwartz, S. J. (2003). Brief strategic family therapy for Hispanic youth. In A. E. Kazdin, & J. R. Weisz (Eds.), *Evidence-based psychotherapies for children and adolescents* (pp. 407–424). New York, NY, US: Guilford Press.

- Robinson, F., & Keithley, J. (2000). The impacts of crime on health and health services: A literature review. *Health, Risk & Society, 2*(3), 253–266.
- Rohrbaugh, M. J. (2014). Old wine in new bottles: Decanting systemic family process research in the era of evidence-based practice. *Family Process, 53*(3), 434–444. Available from <https://doi.org/10.1111/famp.12079>.
- Ronis, S. T., & Borduin, C. M. (2013). Antisocial behavior trajectories of adolescents and emerging adults with histories of sexual aggression. *Psychology of Violence, 3*, 367–380. Available from <https://doi.org/10.1037/a0033597>.
- Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin, 132*(1), 98–131. Available from <https://doi.org/10.1037/0033-2909.132.1.98>.
- Rowland, M. R., Chapman, J. E., & Henggeler, S. W. (2008). Sibling outcomes from a randomized trial of evidence-based treatments with substance abusing juvenile offenders. *Journal of Child & Adolescent Substance Abuse, 17*, 11–26.
- Salzinger, S., Feldman, R. S., Hammer, M., & Rosario, M. (1993). The effects of physical abuse on children's social relationships. *Child Development, 64*(1), 169–187. Available from <https://doi.org/10.2307/1131444>.
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science, 277*(5328), 918–924. Available from <https://doi.org/10.1126/science.277.5328.918>.
- Santisteban, D. A., Coatsworth, J. D., Perez-Vidal, A., Kurtines, W. M., Schwartz, S. J., LaPerriere, A., & Szapocznik, J. (2003). The efficacy of brief strategic family therapy in modifying Hispanic adolescent behavior problems and substance use. *Journal of Family Psychology, 17*, 121–133. Available from <https://doi.org/10.1037/0893-3200.17.1.121>.
- Santisteban, D. A., Szapocznik, J., Perez-Vidal, A., Kurtines, W. M., Murray, E. J., & LaPerriere, A. (1996). Efficacy of intervention for engaging youth and families into treatment and some variables that may contribute to differential effectiveness. *Journal of Family Psychology, 10*(1), 35–44. Available from <https://doi.org/10.1037/0893-3200.10.1.35>.
- Sawyer, A. M., & Borduin, C. M. (2011). Effects of multisystemic therapy through midlife: A 21.9-year follow-up to a randomized clinical trial with serious and violent juvenile offenders. *Journal of Consulting and Clinical Psychology, 79*, 643–652. Available from <https://doi.org/10.1037/a0024862>.
- Scaramella, L. V., Neppl, T. K., Ontai, L. L., & Conger, R. D. (2008). Consequences of socioeconomic disadvantage across three generations: Parenting behavior and child externalizing problems. *Journal of Family Psychology, 22*(5), 725–733. Available from <https://doi.org/10.1037/a0013190>.
- Schaub, M. P., Henderson, C. E., Pelc, I., Tossmann, P., Phan, O., Hendriks, V., . . . Rigter, H. (2014). Multidimensional Family Therapy decreases the rate of externalising behavioural disorder symptoms in cannabis abusing adolescents: Outcomes of the INCANT trial. *BMC Psychiatry, 14*(1), 26–34. Available from <https://doi.org/10.1186/1471-244X-14-26>.
- Schoenwald, S. K., Chapman, J. E., Henry, D. B., & Sheidow, A. J. (2012). Taking effective treatments to scale: Organizational effects on outcomes of multisystemic therapy for youths with co-occurring substance use. *Journal of Child & Adolescent Substance Abuse, 21*(1), 1–31. Available from <https://doi.org/10.1080/1067828X.2012.636684>.

- Schoenwald, S. K., Chapman, J. E., Sheidow, A. J., & Carter, R. E. (2009). Long-term youth criminal outcomes in MST transport: The impact of therapist adherence and organizational climate and structure. *Journal of Clinical Child & Adolescent Psychology, 38*(1), 91–105. Available from <https://doi.org/10.1080/15374410802575388>.
- Schoenwald, S. K., Garland, A. F., Chapman, J. E., Frazier, S. L., Sheidow, A. J., & Southam-Gerow, M. A. (2011). Toward the effective and efficient measurement of implementation fidelity. *Administration and Policy in Mental Health and Mental Health Services Research, 38*(1), 32–43. Available from <https://doi.org/10.1007/s10488-010-0321-0>.
- Schoenwald, S. K., & Henggeler, S. W. (2004). A public health perspective on the transport of evidence-based practices. *Clinical Psychology: Science and Practice, 11*, 360–363. Available from <https://doi.org/10.1093/clipsy.bph092>.
- Schwartz, D., & Proctor, L. J. (2000). Community violence exposure and children's social adjustment in the school peer group: The mediating roles of emotion regulation and social cognition. *Journal of Consulting and Clinical Psychology, 68*(4), 670–683. Available from <https://doi.org/10.1037/0022-006X.68.4.670>.
- Sexton, T. L. (2011). *Functional family therapy in clinical practice: An evidence-based treatment model for working with troubled adolescents*. New York, NY: Taylor & Francis.
- Sexton, T., & Turner, C. W. (2010). The effectiveness of functional family therapy for youth with behavioral problems in a community practice setting. *Journal of Family Psychology, 24*, 339–348. Available from <https://doi.org/10.1037/a0019406>.
- Shufelt, J. S., & Coccozza, J. C. (2006). *Youth with mental health disorders in the juvenile justice system: Results from a multi-state, multi-system prevalence study*. Delmar, NY: National Center for Mental Health and Juvenile Justice.
- Sinclair, I., Parry, E., Biehal, N., Freesen, J., Kay, C., Scott, S., & Green, J. (2016). Multidimensional Treatment Foster Care in England: Differential effects by level of initial antisocial behavior. *European Child and Adolescent Psychiatry, 25*, 843–852. Available from <https://doi.org/10.1007/s00787-015-0799-9>.
- Smith-Boydston, J. M., Holtzman, R. J., & Roberts, M. C. (2014). Transportability of multi-systemic therapy to community settings: Can a program sustain outcomes without MST Services oversight? *Child & Youth Care Forum, 43*, 593–605. Available from <https://doi.org/10.1007/s10566-014-9255-0>.
- Stormshak, E. A., Bierman, K. L., McMahon, R. J., & Lengua, L. J. (2000). Parenting practices and child disruptive behavior problems in early elementary school. *Journal of Clinical Child Psychology, 29*(1), 17–29. Available from [https://doi.org/10.1207/S15374424jccp2901\\_3](https://doi.org/10.1207/S15374424jccp2901_3).
- Sundell, K., Hansson, K., Löfholm, C. A., Olsson, T., Gustle, L. H., & Kadesjo, C. (2008). The transportability of MST to Sweden: Short-term results from a randomized trial of conduct disordered youth. *Journal of Family Psychology, 22*, 550–560. Available from <https://doi.org/10.1037/a0012790>.
- Szapocznik, J., Hervis, O., & Schwartz, S. (2003). *Brief strategic family therapy for adolescent drug abuse*. Bethesda, MD: National Institute on Drug Abuse. (NIH Pub. No. 03–4751).
- Szapocznik, J., & Kurtines, W. M. (1989). *Breakthroughs in family therapy with drug abusing and problem youth*. New York, NY: Springer.
- Szapocznik, J., Rio, A., Murray, E., Cohen, R., Scopetta, M., & Kurtines, W. (1989). Structural family versus psychodynamic child therapy for problematic Hispanic boys.

- Journal of Consulting and Clinical Psychology*, 57(5), 571–578. Available from <https://doi.org/10.1037/0022-006X.57.5.571>.
- Taylor, E. K., & Borduin, C. M. (2014). The family context of relational aggression in “difficult to treat” female juvenile offenders. *Journal of Marital and Family Therapy*, 40(3), 357–366. Available from <https://doi.org/10.1111/jmft.12038>.
- Timmons-Mitchell, J., Bender, M. B., Kishna, M. A., & Mitchell, C. C. (2006). An independent effectiveness trial of multisystemic therapy with juvenile justice youth. *Journal of Clinical Child and Adolescent Psychology*, 35, 227–236. Available from [https://doi.org/10.1207/s15374424jccp3502\\_6](https://doi.org/10.1207/s15374424jccp3502_6).
- Valdez, A., Cepeda, C., Parrish, D., Horowitz, R., & Kaplan, C. (2013). An adapted brief strategic family therapy for gang-affiliated Mexican American adolescents. *Research on Social Work Practice*, 23, 383–396. Available from <https://doi.org/10.1177/1049731513481389>.
- Van der pol, T. M., Machteld, H., Noom, M. J., Stams, G. J. M., Doreleijers, T. A. H., van Domburgh, L., & Vermeiren, R. R. J. M. (2017). Research review: The effectiveness of multidimensional family therapy in treating adolescents with multiple behavior problems—a meta-analysis. *Journal of Child Psychology and Psychiatry*. Available from <https://doi.org/10.1111/jcpp.12685>, Advanced online publication.
- Van Ryzin, M. J., & Leve, L. D. (2012). Affiliation with delinquent peers as a mediator of the effects of multidimensional treatment foster care for delinquent girls. *Journal of Consulting and Clinical Psychology*, 80(4), 588–596. Available from <https://doi.org/10.1037/a0027336>.
- van Wijk, A., Loeber, R., Vermeiren, R., Pardini, D., Bullens, R., & Doreleijers, T. (2005). Violent juvenile sex offenders compared with violent juvenile nonsex offenders: Explorative findings from the Pittsburgh youth study. *Sexual Abuse*, 17, 333–352. Available from <https://doi.org/10.1177/107906320501700306>.
- Wagner, D. V., Borduin, C. M., Sawyer, A. M., & Dopp, A. R. (2014). Long-term prevention of criminality in siblings of serious and violent juvenile offenders: A 25-year follow-up to a randomized clinical trial of multisystemic therapy. *Journal of Consulting and Clinical Psychology*, 82, 492–499. Available from <https://doi.org/10.1037/a0035624>.
- Waldron, H. B., Brody, J. L., & Hops, H. (2017). Functional family therapy for adolescent substance use disorders. In J. R. Weisz, & A. E. Kazdin (Eds.), *Evidence-based psychotherapies for children and adolescents* (3rd ed, pp. 342–360). New York, NY, US: Guilford Press.
- Washington State Institute for Public Policy. (2017a). *Benefit-cost results*. Olympia, WA: Author. Retrieved June 18, 2017 from <http://www.wsipp.wa.gov/BenefitCost>.
- Washington State Institute for Public Policy. (2017b). *Benefit-cost technical documentation*. Olympia, WA: Author. Retrieved June 18, 2017 from <http://www.wsipp.wa.gov/TechnicalDocumentation/WsippBenefitCostTechnicalDocumentation.pdf>.
- Watzlawick, P., Bavelas, J. B., & Jackson, D. D. (1967). *Pragmatics of human communication: A study of interactional patterns, pathologies and paradoxes*. New York, NY: W. W. Norton & Company, Inc.
- Weisz, J. R., Ugueto, A. M., Cheron, D. M., & Herren, J. (2013). Evidence-based youth psychotherapy in the mental health ecosystem. *Journal of Clinical Child and Adolescent Psychology*, 42, 274–286. Available from <https://doi.org/10.1080/15374416.2013.764824>.
- Westermarck, P. K., Hansson, K., & Olsson, M. (2011). Multidimensional Treatment Foster Care (MTFC): Results from an independent replication. *Journal of Family Therapy*, 33, 20–41.

- 
- White, S. F., Frick, P. J., Lawing, K., & Bauer, D. (2013). Callous-unemotional traits and response to Functional Family Therapy in adolescent offenders. *Behavioral Sciences and the Law, 31*, 271–285. Available from <https://doi.org/10.1002/bsl.204>.
- Woolfenden, S., Williams, K. J., & Peat, J. (2001). Family and parenting interventions in children and adolescents with conduct disorder and delinquency aged 10-17. *Cochrane Database of Systematic Reviews*(Issue 2). Available from <https://doi.org/10.1002/14651858.CD003015>, Article No. CD003015.