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Evid Based Pract Child Adolesc Ment Health. Author manuscript; available in PMC 2018 April 24.

Published in final edited form as:

Evid Based Pract Child Adolesc Ment Health. 2016 ; 1(4): 159–175. doi:10.1080/23794925.2016.1247679.

Interpersonal Psychotherapy for Adolescents With Mood and Behavior Dysregulation: Evidence-Based Case Study

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Abstract

Interpersonal psychotherapy for depressed adolescents, an evidence-based psychotherapy, has been adapted for youth with chronic irritability and excessive reactivity (i.e., temper outbursts), to create Interpersonal Psychotherapy for Mood and Behavior Dysregulation (IPT-MBD). Youth with chronic irritability and excessive reactivity were originally conceptualized as severe mood dysregulation (SMD) and in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.) as disruptive mood dysregulation disorder. Because outbursts are the most prominent symptom, behavioral management strategies are typically a common focus of treatment. These outbursts, along with other mood symptoms, result in significant impairment in multiple domains, with a particularly adverse impact on interpersonal functioning. For this reason improving relationships is an important target for treatment. We present an evidence-based case study of an adolescent who met research criteria for SMD and who received the IPT-MBD intervention as part of a research study. Monthly ratings assessing severity and improvement of SMD symptoms were conducted by an independent evaluator. This adolescent had an overall improvement in SMD symptoms, attended all scheduled therapy sessions, and parent and teen reported satisfaction with the treatment. We discuss factors that may influence the effectiveness of this treatment.

Interpersonal psychotherapy for depressed adolescents (IPT-A) is a well-established and effective treatment for adolescents with depression. This therapy is manualized, is time limited, and focuses on the bidirectional interaction between an adolescent's mood and

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Conflict of interest

Laura Mufson receives book royalties from Guilford Press Inc. for the book *Interpersonal Psychotherapy for Depressed Adolescents* (2nd ed., 2004) and from Oxford University Press for the book *Preventing Adolescent Depression: Interpersonal Psychotherapy-Adolescent Skills Training* (2016). Mark Riddle receives book royalties from the American Academy of Pediatrics for the book *Pediatric Psychopharmacology for Primary Care* (2015).

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current relationships as targets for treatment (Mufson, Dorta, Moreau, & Weissman, 2004). The rationale for this treatment is based on the assumption that there is a relationship between the onset and/or maintenance of depression and difficulties in an adolescent's social and interpersonal relationships. Social supports have been shown to act as a safeguard against depression; in turn, interpersonal stress is associated with depression (Coyne, 1976). There is a reciprocal association between mood and relationships; low mood can interfere with relationships and problematic relationships can worsen mood. IPT focuses on four main areas of interpersonal difficulties (i.e., grief, role disputes, role transitions, and interpersonal deficits) and the relationship between interpersonal events and mood symptoms. The goals are to build adaptive interpersonal skills and to increase awareness of how mood symptoms can influence interpersonal events, and vice versa.

There is a strong evidence base for IPT in the treatment of adult mood disorders including bipolar disorder (BD; adapted to include social rhythm therapy; Frank et al., 2005; Miklowitz et al., 2007) and major depressive disorder, acute and maintenance (to prevent recurrence; Elkin et al., 1989; Frank, Kupfer, Wagner, McEachran, & Cornes, 1991). Because of the demonstrated benefit of IPT for adults with mood disorders, IPT was adapted for treating adolescents with depression (IPT-A). In a randomized trial comparing IPT-A to clinical monitoring, youth who received IPT-A had a greater reduction in depressive symptoms and greater improvement in social functioning compared to those who received clinical monitoring (Mufson, Weissman, Moreau, & Garfinkel, 1999). In an effectiveness trial of IPT-A compared to treatment as usual, youth randomly assigned to IPT-A had significantly fewer depressive symptoms and improved social and overall functioning compared to youth who received treatment as usual (Mufson, Dorta, Wickramaratne, et al., 2004). IPT-A has been included in the Substance Abuse and Mental Health Services Administration's National Registry of Evidence-Based Programs and Practices, American Psychological Association evidence-based treatments, and the Academy of Child and Adolescent Psychiatry's practice parameters. Preliminary evidence also suggests benefits of IPT for preadolescent depression (Family-Based Interpersonal Psychotherapy for Depressed Preadolescents; Dietz, Weinberg, Brent, & Mufson, 2015) and bipolar disorder in adolescents (Interpersonal and Social Rhythm Therapy for Adolescents with Bipolar Disorder [IPSRT-A]; Hlastala, Kotler, McClellan, & McCauley, 2010).

Given data supporting the utility of IPT for youth with mood disorders, we hypothesized that a modified version of IPT-A could benefit youth with severe mood dysregulation (SMD)/ disruptive mood dysregulation disorder (DMDD), which is characterized by chronic irritability, excessive reactivity, and impairment in multiple settings. DMDD is a new diagnosis in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013) based on research conducted on youth with SMD (Leibenluft, 2011; Leibenluft, Charney, Towbin, Bhangoo, & Pine, 2003; Table 1). The creation of SMD resulted from the debate in the field of child and adolescent psychiatry around the conceptualization of pediatric BD. Some researchers proposed that pediatric BD is characterized by chronic irritability (Biederman et al., 2005). Others contended that pediatric BD is characterized by distinct episodes of mania, featuring elated mood with or without irritability, similar to manic episodes seen in adults with BD (Leibenluft, 2011). Youth with chronic versus episodic irritability were compared in longitudinal, familial, and

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neurophysiological studies, and based on these studies researchers determined that chronic irritability in youth is not a developmental phenotype of pediatric BD (Brotman et al., 2007; Brotman et al., 2010; Brotman et al., 2006; Leibenluft, Cohen, Gorrindo, Brook, & Pine, 2006; Rich et al., 2011).

To meet criteria for SMD/DMDD, youth must have impairment in a minimum of two areas of functioning (peers, school, home), with severe impairment in at least one. Studies demonstrate that having a diagnosis of DMDD in childhood is associated with high levels of social impairment (Copeland, Angold, Costello, & Egger, 2013; Mulraney et al., 2016). Youth with SMD/DMDD frequently present to treatment for outbursts at school resulting in suspensions and for outbursts at home, which can include verbal rages, destruction of property, or physical aggression. Because the outbursts are the most prominent symptom of DMDD, many clinical interventions focus on behavioral management strategies, rather than on improving interpersonal relationships and mood regulation.

However, the lack of focus on improving interpersonal relationships is problematic because youth with SMD/DMDD experience chronic irritability, which leads to outbursts and affects interpersonal interactions. We posited a bidirectional interaction between irritable mood and relationships. For example, if a teen has an irritable mood he may be more likely to argue with a parent, which can affect the relationship negatively, whereas having an argument with a parent is also likely to adversely affect a teen's mood. Therefore, we theorized that interpersonal psychotherapy could be beneficial, given its focus on improving relationships and evidence that an interpersonal focus can result in remission of mood symptoms. Because these youth are chronically irritable with outbursts and have a high rate of social impairment (Copeland et al., 2013), they have an increase in conflicts at home, at school, and with peers. Given the impairment in interpersonal relationships these youth experience, we developed a modified version of IPT-A, the Interpersonal Psychotherapy for Mood and Behavior Dysregulation (IPT-MBD), with the goal of reducing outbursts and irritability by improving communication and problem-solving skills. We hypothesized that a decrease in outbursts would result in an improved mood (e.g., decrease in irritability and anger) and reduced mood dysregulation, which would lead to an improvement in relationships due to improving interpersonal interactions.

Next we discuss a case study of a teen who met criteria for SMD and received a 20-session course of IPT-MBD as part of a research study.

Methods

Participants

Therapist—The therapist (principal investigator [PI]) attended a 2-day training in IPT-A, conducted by an IPT-A expert (LM), who developed the IPT-A intervention. The therapist was then supervised by LM on two IPT-A cases, including weekly review of audiotaped sessions and supervision calls. For the case presented, all IPT-MBD therapy sessions were conducted by the PI under supervision of an expert in IPSRT-A (SH), who reviewed audiotaped sessions and provided weekly feedback.

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Participant—The participant was a 13-year-old female adolescent who met criteria for SMD and was recruited from a child and adolescent psychiatry outpatient clinic at an academic medical institution.

Procedures

Study procedures were approved by the university Institutional Review Board. Consent was obtained from the parents and assent from the teen. The guardian also gave consent to include clinical material for the purposes of this article. Names have been altered and identifying information has been removed from the material presented. The scripted excerpts have been taken from audiotapes and session notes with minor edits to improve comprehensibility.

Measures

Diagnostic evaluation—The Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children–Present and Lifetime (K-SADS-PL; Kaufman et al., 1997) is a semistructured diagnostic interview for children and adolescents designed to screen for and diagnose comorbid psychiatric disorders. The KSADS-SMD module was developed by researchers at the National Institute for Mental Health (NIMH) to reliably diagnose youth with SMD. Research staff with a master's degree in a mental health field (the independent evaluator [IE]) and the PI were trained in the administration of the K-SADS-SMD module by research staff at NIMH who developed this module.

Mood ratings—To systematically assess irritability and outbursts over the 20-week intervention, an IE administered the Mood Symptoms Questionnaire (MSQ), a semistructured clinical interview developed by researchers at NIMH, every 4 weeks. This information was used to inform SMD specific Clinical Global Impressions Scale (CGI) ratings. The PI and IEs were trained by research staff at NIMH in the administration of the MSQ. Due to the association between SMD and depressive disorders, the IE also administered the Children's Depression Rating Scale–Revised (CDRS-R; Poznanski & Mokros, 1996), a clinician-administered standardized instrument that assesses for depressive symptoms every 4 weeks to assess for reemergence of a depressive episode.

Functional assessment—The CGI scale (Guy, 1976) is a clinician-rated measure with two subscales—Severity and Improvement. CGI ratings were completed at baseline and every 4 weeks by the IE. The Improvement subscale is based on current ratings compared with baseline ratings. A CGI is determined for the outbursts, the mood between outbursts, and the hyperarousal symptoms. The CGI for the mood symptoms (outbursts and mood between outbursts) is then used to determine an overall CGI-SMD. The independent evaluator met with the adolescent and parent separately to complete the CDRS-R and MSQ and determined summary scores based on both teen- and parent-report. The CGI ratings were informed by the MSQ.

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Case example

"Jennifer" is a 13-year-old Caucasian female adolescent living in a middle-class family, with college-educated parents and a 16-year-old sibling. Her parents described her as "carefree" until the onset of irritability at age 11, the end of fifth grade. With the transition to middle school, increased academic demands, and more challenging peer relationships, Jennifer's irritability worsened, and she began having aggressive outbursts.

Her parents first sought outpatient treatment at age 12 for Jennifer's verbally and physically aggressive behaviors at home. Prior to referral for IPT-MBD, she and her parents participated in weekly therapy focused on behavioral management for approximately 1½ years. She also received pharmacological treatment. Past medication history included previous selective serotonin reuptake inhibitor (SSRI) and stimulant trials. During the course of this outpatient treatment, she had four psychiatric hospitalizations, for physical aggression toward parents and for suicidal ideation, and a day hospital admission following one of the inpatient admissions. Neuropsychological testing revealed average IQ on the major domains of the Wechsler Intelligence Scale for Children–Fourth Edition and a specific weakness in her visual-spatial processing abilities, as well as mild variability in performance on measures assessing attention, executive functioning, and memory. Jennifer also had been diagnosed recently with expressive and pragmatic language disorders.

Her parents tried to maintain a unified approach to parenting; however, at times her father would take on the role of peacekeeper within the family, whereas Jennifer's mother felt they were too accommodating of Jennifer's behaviors. Her mother played a more nurturing role, and Jennifer turned to her for reassurance and support. Jennifer had a more joking/humor-based relationship with her father. Jennifer's sister felt resentful that Jennifer was the focus of the attention in the family due to her behavioral and mood symptoms and was critical of how Jennifer interacted with their parents. At times Jennifer's sister tried to take on a parenting role with Jennifer, which led to verbal altercations between them. Jennifer's parents struggled with how to manage her aggressive behaviors at home, resulting in crisis agency home visits, emergency room visits, and hospitalizations, in addition to outpatient treatment.

K-SADS-PL diagnoses at the initial visit included current SMD, attention deficit/hyperactivity disorder (ADHD), generalized anxiety disorder, and a past history of major depressive disorder (two episodes). The autism spectrum disorder (ASD) screen was completed as part of the K-SADS-PL. The screening items include questions about development of language, stereotypes, inflexible adherence to routines/rituals, restricted interests, and impairment in nonverbal behaviors (i.e., eye contact, range of facial expressions). Jennifer did not meet criteria for having any ASD symptoms on the K-SADS-PL. Her baseline CGI-Severity was 5, "markedly ill." The outbursts consisted of physical aggression one or two times per month toward parents and verbally aggressive outbursts on average three times per week, with impairment in peer, school, and home settings. She had milder outbursts several times per day, which consisted of yelling at her parents. Her baseline CDRS-R T score was 61.5, with *T* scores 65 and above, indicating increasing likelihood of having a depressive disorder. In addition to attending a school with a small

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class size, Jennifer's teachers made accommodations regarding her academic work, such as extra time for testing, preferential seating near the teacher, regular check-ins with teachers regarding homework, and extended deadlines for missing work. She began IPT-MBD treatment on a stable dose of an SSRI—escitalopram 20 mg daily—and an atypical antipsychotic—risperidone 0.25 mg in the morning and 0.5 mg in the evening; neither was changed during the 20 weeks of therapy.

Treatment structure

The structure of IPT-MBD is modeled after the IPT-A manual with initial, middle, and final phases. Given the chronicity of the mood symptoms and level of impairment of youth with SMD/DMDD, the IPT-MBD manual followed the session schedule from the IPSRT-A manual, consisting of weekly sessions for 16 weeks and then biweekly for 4 weeks for a 20-week intervention.

The IPT-A manual (Mufson, Dorta, Moreau, et al., 2004) was modified to address the verbal and physical outbursts and chronic irritability of SMD/DMDD, which culminated in the IPT-MBD manual (Miller, Hlastala, & Mufson, 2015). The components of IPT-MBD are summarized in Table 2. Modifications, discussed in more detail next, include (a) psychoeducation on DMDD/SMD, (b) anger/outburst ratings, (c) outburst data gathering, (d) family accommodations due to outbursts, (e) modified social rhythm metric (SRM), (f) longer duration of treatment, and (g) increase in parental involvement.

Initial phase (Sessions 1–5)—Early sessions of IPT-MBD focused on alliance, rapport building, and engagement in treatment. This can be challenging at times, given the adolescent's severe irritability. For this reason, the therapist focused on empathic listening and validating the teen's feelings of frustration and anger. In the first session, the therapist provided psychoeducation to Jennifer and her parent about the construct of SMD/DMDD, which is "clinically conceptualized as an externalizing mood disorder with the outbursts as a behavioral manifestation of the underlying irritability" (Miller et al., 2015). Irritability is viewed as having two components: an affective one, typically anger or grumpiness, and a behavioral one, temper outbursts or aggression (verbal or physical; Leibenluft & Stoddard, 2013). The therapist discussed the link between the outbursts and the underlying irritability and explained that youth with chronic irritability have a lower frustration tolerance and are more easily set off, resulting in outbursts. Although the outbursts, labeled as behaviors (e.g., yelling, slamming doors, destruction of property), are the most apparent component of the disorder, the therapist also emphasized the impact of the irritability in the mood disorder. Part of psychoeducation involved discussing the lack of control Jennifer had over the outbursts and identifying a treatment goal of gaining control. Discussion also focused on the distinctions among episodic irritability, chronic irritability, BD, and SMD/DMDD. The psychoeducation module also included information regarding the pharmacologic treatment of SMD/DMDD.

A modified SRM was included from the IPSRT-A manual (S. A. Hlastala, personal communication, May 21, 2009), as an added component to be used flexibly when needed for teens with significant sleep regulation problems, as youth with mood disorders can have

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difficulties with sleep, which can contribute to worsening mood symptoms (Harvey, 2011). Psychosocial stressors trigger or worsen mood episodes through the disruption of sleep and social routines (Frank, Swartz, & Kupfer, 2000; Hlastala & Frank, 2006). The IPT-MBD modified version of the SRM records sleep/awake times and mood ratings with a reduced number of targeted interpersonal activities per day. The goal of regulating their routines is to improve mood dysregulation and hyperarousal symptoms, decrease outbursts, and thereby improve their relationships. For teens with mildly disrupted sleep patterns, psychoeducation about sleep hygiene was included. Because Jennifer did not have any issues with her sleep/wake cycle, this was not a focus of treatment.

Another modification in the initial phase of treatment was the limited sick role (Mufson, Dorta, Moreau, et al., 2004). Within the IPT-A model, depression is viewed as a biologically based illness with symptoms that can adversely affect the adolescent's overall functioning, such as low energy and motivation. Through the limited sick role, expectations for the adolescent are temporarily reduced while the teen is depressed. Blame is removed from the adolescent while encouraging the adolescent to engage in his or her normal activities and responsibilities. As the depression improves, expectations are gradually raised. This concept was modified in the IPT-MBD manual to focus on accommodations that have arisen as a result of the teen's outbursts. Accommodations are ways in which parents, schools, and peers modify their interactions with the teen so as to avoid outbursts. Accommodations involve reduced demands, limits, or requests made to the teen. The therapist focused on acknowledging and empathizing with Jennifer's parents that these accommodations are being made, with the goal of decreasing the level of accommodation as mood symptoms improve. For example, Jennifer's parents discussed having reduced expectations of Jennifer compared to when her older sister was her age with regard to completing chores and homework assignments. They also had difficulty instilling consequences for missing schoolwork and for aggressive and disrespectful behavior during outbursts. This discussion works best with the parent alone to foster a more open discussion without the teen feeling defensive or guilty about what their parents have implemented to manage their behaviors.

Another component in the initial phase involved gathering information about outbursts and having Jennifer identify what helped her to de-escalate and what may contribute to continued escalation, with the goal of incorporating the de-escalation strategies into the middle phase. The therapist and Jennifer discussed her most severe outbursts, which involved physical aggression toward her parents. She discussed wanting her parents to refrain from making sarcastic comments during outbursts. She also expressed wanting hugs and comfort at the end of the outburst when her mood was sad.

The IPT-A manual includes mood ratings with the goal of linking moods to interpersonal events and increasing awareness of how interpersonal interactions affect one's mood. The IPT-MBD manual modifies the mood ratings to include anger/outburst ratings, with the goal of tracking angry mood/outbursts and linking them to the interpersonal interactions that triggered the outburst. Specifically, the teen is asked to rate the most severe anger in the past week on a scale of 1 to 10, with 10 representing the most intense anger. The therapist then inquires if the anger occurred in the context of an outburst, as they typically occur together. If the teen has difficulty identifying when he or she experienced the most intense anger, the

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therapist asks about the worse outburst of the week and then asks the teen to rate the intensity of the anger during the outburst. Typically, these teens can quickly escalate to a mood rating of 10. Therefore, the mood ratings are also used during sessions to help the teen identify less intense feelings of anger or irritability during interpersonal interactions. This is done in an effort to utilize skills to de-escalate before becoming explosively angry. The teen is also asked to rate the best mood of the week, with 10 being the most intense positive mood. The objective is to identity interpersonal interactions that improve the teen's mood with a goal of increasing those positive interpersonal interactions.

Sessions with Jennifer were structured to begin with a 10- to 15-min period during which the therapist would complete the review of symptoms and obtain mood ratings. Jennifer was asked to report on her best and worst mood (which typically coincided with the worst outburst) of the week and to identify the interpersonal interactions associated with each mood with the goal of identifying patterns in her interpersonal interactions and relationships that affected her mood positively and negatively.

The next step in the initial phase was completion of the closeness circle and interpersonal inventory. The closeness circle was used to identify Jennifer's significant relationships and give a picture of which relationships were more problematic and which relationships served as a source of support. The interpersonal inventory was utilized to examine significant relationships in Jennifer's life to identify the relationship issues that may be most impacting her symptoms, assess her problem-solving and communication skills, and identify one of the four problem areas as the focus of treatment. Detailed discussion of the positive and negative aspects of the relationships, as well as expectations for the relationships, was used to facilitate her understanding of the link between mood symptoms (primarily irritability and anger) and events that are occurring within important interpersonal relationships. For example, "Now, that we have completed the closeness circle, I would like to spend some time talking about some of these important relationships in more detail to get a sense of how these relationships affect your mood. You have indicated that you think it will be important to talk about your relationship with your mother, father, and sister to understand your mood difficulties. Which relationship would you like to talk about first?" Jennifer chose to discuss her relationship with her mother first. Jennifer was asked to describe her mother. She then was asked to discuss positive experiences she has had with her mother, linking these to her mood. Jennifer also discussed what she and her mother argue about, how those disagreements affect her mood, and what she feels comfortable talking about with her mother. Last, Jennifer discussed what she would like to change about her relationship with her mother.

Jennifer's most important relationships were with her parents and older sister. She described both of her parents in mostly positive terms despite having significant conflicts with them. She also discussed wanting to spend more time with each of them. Most of her arguments occurred with her mother, though she endorsed less frequent arguing with her sister and wanted to improve this relationship. The therapist and Jennifer also briefly discussed other family members and peer relationships, though Jennifer did not report any close peer relationships. Jennifer had no meaningful friendships for several years, which her mother attributed to her irritability.

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A central argument between Jennifer and her parents revolved around school-related issues, specifically homework completion and studying. Jennifer felt like her parents were trying to control her by scheduling times for her to complete her work and study for tests. She was unable to see her parents' perspective and work on problem-solving strategies. Jennifer struggled with utilizing organizational skills, handing assignments in on time, and studying in advance for tests and was at risk of failing classes. At the same time, her parents wanted her to have more responsibility at home, such as making lunch for herself. Jennifer became upset at this expectation and felt that it was her parents' responsibility. Another challenging topic centered around the use of electronics and implementation of time limits. Jennifer also felt that her sister and she were treated differently, with her sister given more freedom by their parents. Jennifer's parents discussed how Jennifer's sister felt resentful that their parents treated Jennifer differently due to the family accommodations that were in place to manage her outbursts. Despite these conflicts, Jennifer enjoyed spending time with her parents, outside of interactions around school and chores. However, she always wanted to decide the family activity, and Jennifer became upset if she was not allowed to make the decisions.

At the conclusion of the initial phase of treatment, the therapist and Jennifer worked collaboratively to decide on the problem area of focus, which helped increase engagement in the ensuing weeks of treatment. Problem areas in IPT include grief (onset of depression after death), role disputes (depression due to mismatched expectations in a relationship), role transitions (difficulty adjusting to a life change, such as the divorce of parents or start of high school) and interpersonal deficits (difficulty initiating and maintaining relationships as a consequence of depression; Mufson, Dorta, Moreau, et al., 2004). The IPT-MBD formulation for Jennifer focused on interpersonal disputes with her parents as the main contributor and perpetuator of her mood symptoms. In addition to specific arguments about electronics and schoolwork, Jennifer and her parents had different expectations for how independently and responsibly she should be functioning at her age. Although Jennifer wanted to manage school responsibilities on her own, she also wanted less responsibility regarding chores. Because Jennifer was chronically irritable and had difficulty managing her low frustration tolerance, she frequently had outbursts with her parents, which then adversely affected her mood and which in turn further exacerbated the conflicts with her parents. A secondary problem area was interpersonal skills deficits, chronic deficits in interpersonal functioning or skills leading to social isolation, which included difficulty with emotion regulation, perspective taking, problem solving, and communicating emotions effectively. The therapist presented the formulation describing the conflict between Jennifer and her mother and linking it to its effect on Jennifer's mood while also presenting hope that Jennifer's mood would improve as her relationship with her mother improved. Jennifer was then asked to comment on whether the formulation made sense and to explain it in her own words to ensure that she understood the formulation that would guide the focus of treatment.

During the initial phase of treatment, a stimulant (dexmethylphenidate extended-release) was added to the medication regimen to treat Jennifer's ADHD-related academic struggles. The dose was titrated to 15 mg in the morning, and 5 mg short-acting dexmethylphenidate was prescribed for the afternoon. The treatment with the stimulant co-occurred with

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improvement in hyperarousal symptoms of SMD (i.e., distractibility, pressured speech) but did not result in noticeable improvement in chronic irritability or outbursts.

Middle phase (Session 6–17)—In the middle phase of IPT-MBD, the therapist and teen focused on working within the identified problem area of interpersonal disputes. Jennifer had verbally aggressive outbursts several times a week commonly triggered by not completing homework assignments, which often resulted in physical aggression toward her mother. For this reason, the initial focus of treatment emphasized her parents disengaging from the conflict so that Jennifer could de-escalate, as she was unable to disengage and conflict would quickly escalate. We discussed obstacles to the parents disengaging, such as Jennifer following her parents as they tried to disengage by going into a different room to provide space between them. We problem solved and encouraged her parents to retreat to their bedroom with the door closed until Jennifer de-escalated. We found that the physical barrier of the door was helpful in facilitating the disengagement. For this family, retreating to the bedroom facilitated disengagement from the outburst. Other adolescents have requested space from their parent to facilitate de-escalation. During the middle phase, the therapist works with the parents and teen to develop an outburst plan to facilitate disengagement, which may require problem solving over a few sessions to implement an effective plan.

A significant focus of the middle phase is on teaching better communication skills. The "Teen Tips" developed for IPT-A to provide strategies for teens to express feelings in a nonblaming manner, utilize perspective taking in interpersonal interactions, and engage in problem-solving skills (Mufson, Dorta, Moreau, et al., 2004) were introduced in the middle phase. Teen Tips include (a) aim for good timing, (b) give to get, (c) "I feel" statements, (d) always have more than one solution in mind, and (e) don't give up (Mufson, Dorta, Moreau, et al., 2004). Due to Jennifer's significant interpersonal skills deficits, she had more difficulty initially utilizing these skills and more time was needed in session to practice the skills before using them outside of sessions. In addition, her parents were educated about the strategies in order to help support their use outside of sessions.

Problem-solving skills were taught through the decision analysis, a process whereby the therapist and Jennifer identified a problem and generated and evaluated possible solutions to pick the best one to try first. This skill was utilized to develop a plan for managing homework because this topic frequently resulted in outbursts. A particularly challenging topic was the appropriate level of parental involvement needed to monitor Jennifer's completion of her homework. The school's plan was to directly contact her parents when assignments were missing, which frequently led to outbursts. Therefore the therapist spoke with school personnel, who agreed to remove Jennifer's parents from this issue and have the teachers e-mail a learning specialist to assist in managing late assignments.

To assess what communication strategies were needed to improve the situation, the therapist used a communication analysis technique to examine both the verbal and nonverbal aspects of communication of the most severe outburst of the week. The therapist parsed the outburst interaction into its conversational components and closely examined all aspects of the interpersonal interaction, including what was said and how it was expressed and the

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associated feelings for both involved in the interaction. That information was then used to craft a new interaction or refine another attempt at the same conversation by using specific strategies to improve the expression of empathy, encourage perspective taking for both parent and teen, and communicate feelings and opinions more effectively to facilitate being heard.

The structure of the middle sessions included an initial 10- to 15-min review of symptoms and completion of mood ratings. Next, Jennifer described in detail the most significant outburst of the week, which correlated with the rating of the worst mood of the week. Because Jennifer had difficulty remembering the details of the outbursts, she would discuss what she was able to remember. The initial discussion took place with Jennifer alone. Jennifer's parent was then typically asked to join the session, with her permission, to review the outburst in further detail and discuss how changes in communication and interactions by both the parent and teen could have led to a different outcome, without an outburst.

For example:

Therapist: What was your worst mood of the week?

Jennifer: A 10.

T: Sounds like you had a rough time this week. What was going on when your mood was a 10?

J: At lunch I was sitting with the people I usually sit with—Mary, Claire and Dottie. They started talking about their plans for the weekend. They were talking about it right in front of me and didn't even inviteme.

T: I'm sorry to hear about that. What kinds of emotions were you feeling?

J: Angry, sad and disrespected—don't you think that was rude? I was right there and they just acted as if I didn't even exist?

T: That sounds really upsetting. What did you do?

J: I went to math class, and I just felt depressed. I was also thinking about things at home and how I am not getting along with my parents. So I went to see the counselor and I cried. I told her I felt like hurting myself but I wasn't going to.

T: That sounds like you did the right thing by going to talk with the counselor when you were feeling really upset.

J: And they called my mom from the counselor's office.

Jennifer continued discussing the interaction with her mother in the car, which then led to an outburst. Because she had difficulty recalling the specific dialogue that led to the outburst with her mother, the therapist encouraged Jennifer to discuss her feelings. Jennifer expressed feeling hurt and upset by the interaction with her peers. She felt her mother was blaming her for placing herself in situations where she has upsetting interactions with peers, rather than

offering her support. Jennifer's mother joined the session and was asked to discuss her recollection of the conversation leading up to the outburst, which led to this exchange in the session:

Mother: When I picked her up from school she said, "So did you hear?" I said I heard and I am wondering what happened to the plan of you using your skills. You were supposed to reach out to us if you had thoughts to hurt yourself. Were you just trying to get out of math class?

J: No, since I was at school I thought it was best to talk with the counselor.

M: I also said, "I don't understand why you keep going back to sit with these girls over and over again?" Jennifer got irritable and said that she didn't want to talk. Then she started flicking me and hit me. We were also waiting for her sister who was late to be picked up.

T: When were you having this conversation?

M: In the car while we were waiting to pick up her sister at her sister's school.

T: Let's break down this interaction. Jennifer, how were you feeling when you got into Mom's car?

J: Still kind of down and upset about what happened at lunch. I feel like I have no friends and no one likes me.

T: How did you feel when Mom asked you why you keep sitting with those girls if they are not nice to you?

J: Irritated. It's like she is saying it's my fault that they aren't nice to me.

T: Mom, did you realize Jennifer felt that way?

M: No, I was just saying that comment because I wanted her to think about what keeps happening when she sits with those girls and see that they aren't real friends.

T: Jennifer, did you realize that was why Mom was saying that?

J: No.

T: What would you have wanted Mom to say instead?

J: I don't know.

T: Maybe something like "I am sorry you had such a bad day. Do you want to talk about it?"

J: Maybe something like that.

T: So maybe talking about your feelings but not a plan to change things. [*Pause*] What about the car? Does that seem like a good place to have important conversations? It's pretty close quarters and if emotions get intense there is no place to take some space. Let's think about

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"Aim for Good Timing." Mom, if you really want to talk about a plan for change you could bring that up in the car and say, "I would really like to talk more about this at home, can we?"

M: I guess that makes sense. I could tell Jennifer was irritable waiting for her sister.

T: That is another good point when thinking about "Aim for Good Timing." Is it a good time to talk about important things when one of you is already angry or irritated? Probably not. Probably best to wait until both of you are in a calm mood to have important discussions.

T: Jennifer, why don't you tell Mom what you told me about your decision about the lunch table?

J: I decided that I am not going to sit with those girls anymore because I don't like how they make me feel. I am sitting with other kids now.

M: Jennifer, that is great. I am very glad to hear that.

The therapist continued to discuss the need to balance acknowledging feelings with problem solving in the moment and the difficulty teens have in trying to problem solve during an outburst. Jennifer's mother was counseled to try problem solving with her once she has acknowledged Jennifer's feelings and Jennifer appeared calm.

This process provided an opportunity for in vivo perspective taking for Jennifer; she was able to hear from her mother how the outburst affected her, and Jennifer was able to express how she had felt during the interaction. In addition to an emphasis on perspective taking, to aid in more flexible thinking, therapy also focused on improving communication, increasing self-awareness of her emotional state, learning to disengage from disagreements to calm down, and problem solving. Jennifer identified other strategies to help her calm down, such as listening to music.

In addition to increasing awareness of her own internal emotional state, Jennifer was encouraged to increase her awareness of others' emotional states. Jennifer was prompted to identify how her mother felt in certain situations to help her become more aware of her mother's feelings, which would in turn help her "Aim for Good Timing" when bringing up issues with her mother. When Jennifer had difficulty identifying her mother's emotional state we discussed the importance of Jennifer learning to check in with her mother about her feelings, and we practiced in session what she could say. Jennifer's mother also utilized this technique by recognizing that after a long day at work she was too tired to have the patience needed to discuss homework issues with Jennifer, as this topic frequently resulted in outbursts. Her mother used "Aim for Good Timing" and planned those talks when she was not feeling stressed or tired and felt she had more patience. Work at home primarily focused on practicing skills outside of session. Jennifer's parents facilitated use of the skills by prompting and reminding Jennifer, who had difficulty initially utilizing them without parental support.

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Although the therapist was available by phone for crisis calls, the family rarely utilized this resource, which may be due to the chronicity of the illness and behaviors. The family called early in treatment after an outburst to notify the therapist. The therapist reviewed the interpersonal interaction leading to the outburst and reviewed the plan to disengage to allow the teen to de-escalate.

The therapist typically also met with Jennifer's mother alone at the end of the joint session for 10 min to offer support and to allow the parent to voice frustrations. The therapist reviewed expectations of what the teen was able to do developmentally, given language issues (i.e., pragmatic and expressive language disorders) and significant cognitive rigidity. The therapist also discussed the importance of validating feelings, using "Aim for Good Timing," and utilizing perspective taking strategies with Jennifer. The parents were encouraged to increase verbalization of their emotions to model healthy expression of feelings and to aid Jennifer in understanding their point of view. Specifically, the parents were coached to utilize "I feel" statements to express a range of emotions in interactions with Jennifer.

As Jennifer's mood became more regulated, she was better able to disengage from conflicts to help herself calm down. We discussed the importance of Jennifer communicating to her parents that she needed to take a break before she walked away so that her parents would not perceive her as being disrespectful. As the treatment progressed, the teen was better able to identify her affective state, regulate her mood, and de-escalate. At Week 16, the therapist discussed with Jennifer and her mother if they wanted to continue weekly sessions rather than change to biweekly. Although outbursts had reduced in frequency overall, Jennifer had a recent aggressive outburst. Therefore Jennifer and her mother chose to continue weekly sessions, and the emphasis of treatment was on mood regulation through disengagement when significant conflicts arose and continued work on perspective taking and communication and problem-solving skills. Assessing improvement over time is an ongoing clinical process using mood/outburst ratings, in combination with discussion of skills being utilized between sessions, and in session discussion of interpersonal behavior changes illustrated in communication and decision analyses.

As mentioned, the main focus of treatment was improving Jennifer's relationship with her parents. However, because Jennifer did not have any close peer relationships, the interpersonal strategies were also applied to increase her peer social supports by using them to facilitate her engagement in extracurricular activities once there was improvement in her relationship with her parents. In addition, we discussed how the strategies could be helpful in Jennifer's relationship with her sister to increase their positive interactions. The goal was to show Jennifer that these strategies were useful in a variety of interpersonal interactions, not just with her parents. Her parents were also coached to deconstruct outbursts between Jennifer and her sister at home, with a focus on improving perspective taking and use of the communication and problem-solving strategies with her sister.

Final phase (Session 18–20)—The last few sessions of IPT-MBD focused on termination. The therapist and Jennifer reviewed how her mood symptoms were at the beginning of treatment compared to the end of treatment. As part of this assessment, the

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therapist and Jennifer discussed how often she was experiencing irritable mood, as well as the frequency, severity, and duration of outbursts. Jennifer had not had any more physically aggressive outbursts and outbursts took the form of more developmentally appropriate verbal arguments with her parents. By the end of treatment, verbal outbursts were significantly less frequent and severe, occurring once every 2 weeks rather than several times per week. At the end of the treatment, Jennifer's chronic irritability was also significantly reduced. At the beginning of the treatment, her mother reported that she was irritable "all the time." By Week 20, she no longer exhibited irritability at school and experienced significantly shorter and less frequent bouts of irritability at home, rather than prior sustained periods of irritability.

The therapist and teen also reviewed which skills had been most helpful in treatment and worked on facilitating generalization of the skills by identifying future situations, specifically with peers or her sister, that might lead to anger, irritability, or outbursts and discussed how the skills could be utilized in those situations. The therapist and Jennifer then met with her parent to conduct a similar review of skills that had helped her and her parents.

When Jennifer was asked what had been helpful in therapy, she replied, "When you dug deep and breaking things down." She acknowledged that although discussing her emotions may have been difficult at times, it was very beneficial. She also expressed that understanding and clarifying her parents' point of view was also important. In addition, conducting communication analyses and deconstructing the interpersonal interactions were also helpful. Although she expressed sadness around termination, she was not concerned that her symptoms would recur. Jennifer's mother found "Aim for Good Timing," including checking one's own emotional state prior to engaging in interpersonal interactions, very helpful concepts. She incorporated these skills not only into her interactions with Jennifer but also with her interactions with coworkers. She also learned to validate her daughter's emotions first, communicate that she understands what she is feeling, and give her space for her feelings, rather than quickly jump into problem-solving mode. She also told the therapist, "I hear your voice on my shoulder saying disengage." Her mother also expressed improvement in Jennifer's self-esteem, stating that she "feels more in control so she feels better about herself."

Since initiation of treatment with IPT-MBD, Jennifer had no further psychiatric hospitalizations, emergency room visits, or need for more intensive outpatient treatment. Jennifer attended all scheduled therapy sessions. Jennifer and her mother reported being very satisfied with the IPT-MBD treatment and reported a significant improvement in symptoms for which they sought treatment and an improved outlook on Jennifer's future. At the end of treatment, Jennifer's CGI-Severity rating of SMD was a 3, "mildly ill"; CGI-Improvement rating of SMD was a 2, "much improved"; and she did not meet criteria for SMD for the last month of the treatment. Over the course of the therapy there was no reemergence of a depressive disorder. At Week 20, her CDRS-R T score was 44; individuals with T scores below 54 are unlikely to have a depressive disorder. The improvement in SMD symptoms led to a decrease in depressive symptoms and CDRS-R scores. Jennifer's depressive symptoms, (i.e., feelings of guilt, low self-esteem, low mood), occurred largely in the context of her outbursts. Therefore, when the SMD symptoms improved, evidenced by

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decreasing outbursts, a reduction in irritable mood and an increase in positive interpersonal interactions, it was accompanied by a large reduction in depressive symptoms. Ratings were completed by an independent evaluator. Summary ratings are presented in Table 3.

At the conclusion of treatment, the therapist, parent, and teen discussed whether Jennifer should continue in some form of treatment. Although Jennifer's mood symptoms were significantly improved from baseline, the most significant change had occurred in the last 4 weeks of treatment. The therapist, parent, and teen agreed on the importance of continuing to solidify Jennifer's skills and were concerned that if she did not continue in treatment, her gains would not be sustained. In addition, Jennifer continued to experience difficulties in developing friendships and ongoing problems in her relationship with her sister. Therefore, Jennifer continued in openended psychotherapy with an interpersonal focus. Treatment continued to focus on perspective-taking skills given continued difficulties due to pragmatic language deficits and poor organizational skills given her diagnosis of ADHD. Shortly after completion of IPT-MBD, the atypical antipsychotic was slowly tapered off. In the 6 months following completion of IPT-MBD, Jennifer neither had any physically aggressive outbursts nor required a more intensive level of treatment, and outbursts continued to reduce in frequency. For high school, Jennifer transitioned to a public school setting without accommodations.

Discussion

Results from this evidence-based case study suggest that IPT-MBD (an adapted form of IPT-A for adolescents with SMD) has the potential to be beneficial for youth who manifest chronic irritability, anger, and excessive reactivity. We believe that IPT-MBD will be equally relevant to adolescents with DMDD because of the similarities between SMD and DMDD and the specific focus on the management of irritability, anger, and outbursts.

Several issues with the application of IPT-MBD arose in this particular case study. Jennifer's expressive and pragmatic language disorders contributed to a more complex treatment case. She had difficulty with the social aspects of language and with effectively communicating in interpersonal relationships. To address the language disorders, the therapist would assess whether the teen understood the therapeutic concepts by asking her to summarize ideas in her own words. The teen was forthright when she did not understand concepts or specific words. The therapist would then change her wording and check with the teen to see if she understood the new phrasing. The therapist also asked clarifying questions when she was unsure what the teen was trying to communicate. The therapist modeled these techniques for the parents to use at home to improve understanding and communication. Although prevalence rates of diagnoses of language disorders in youth with SMD/DMDD are unknown, data suggest deficits in communication and social reciprocity in youth with SMD, as well as other mood disorders (Pine, Guyer, Goldwin, Towbin, & Leibenluft, 2008). In addition, data demonstrate that youth with language disorders are more likely to experience internalizing and externalizing symptoms than youth with typical language development (Yew & O'Kearney, 2013). At this time, there are insufficient data to determine if youth with SMD/DMDD are more likely to have language deficits than youth with other psychiatric disorders.

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Another technique utilized to address the pragmatic language disorder was an increased time spent on improving perspective taking so that Jennifer could better understand her parents' point of view and respond differently in interpersonal interactions. In addition to the pragmatic language issues, Jennifer also had significant cognitive rigidity, which contributed to her difficulty in seeing another's viewpoint in interpersonal interactions. Strategies such as "Aim for Good Timing" and in vivo perspective-taking exercises in session with her parents were helpful in giving her more practice and time to assess another's point of view, leading to a decrease in frustration, which at times stemmed from not completely understanding both sides of the situation.

Because adolescents with SMD/DMDD may exhibit significant cognitive (Dickstein et al., 2007) and interpersonal inflexibility, along with years of mood symptoms and impairment, the therapy includes significant parental involvement. In our experience thus far, factors that influence the amount of parental involvement needed are age and interpersonal skill level of the teen, problem area of focus, and willingness of the teen to involve the parent. Treatment with younger adolescents, those with a problem area of disputes with parents, or less interpersonally skilled teens will necessitate more active involvement of parents. In the initial phase, when discussing the overview of IPT-MBD the parents are informed that there is a varying degree of parental involvement during treatment, anywhere from weekly to monthly, beginning in the middle phase of treatment. Factors, such as the focus of treatment and nature of the parent–adolescent relationship, will be used to determine how often they participate.

Jennifer's family was highly invested and engaged in treatment. The biggest challenges, aside from the pragmatic language issues and cognitive inflexibility, were the slow initial progress and the need for the significant level of parental involvement to effect change. Originally, this intervention was conceptualized as more teen driven, like IPT-A; however, this teen had significant difficulty disengaging initially, so the parents were coached to disengage from the conflicts so the adolescent could de-escalate. Further along in treatment, Jennifer was better able to avoid situations that would cause an outburst or de-escalate herself before the interaction resulted in an outburst. The parents were also actively involved with helping utilize skills outside of session. Because this teen felt close to her parents, despite having significant outbursts, the therapist was able to maintain alliance with the teen while actively involving the parents in her treatment. Not all teens are amenable to this level of parental involvement. These parents were also eager to have guidance on how to manage these behaviors and were open to learning and using skills. Other parents might view these mood symptoms and behaviors as something the teen alone needed to work on.

There was a strong emphasis on collaborative work and not laying blame with the teen and parents to demonstrate that both can make changes in interactions to decrease outbursts. Jennifer's parents also benefited from time spent alone with the therapist to offer support and empathy, as they were exhausted from the outbursts and the accommodations they put forth on a daily basis. This additional support can be provided during the last 10 min of a session (time permitting), during an extended session, or as an additional session, as needed.

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Although this teen had difficulty with interpersonal interactions, she remained engaged in treatment and committed to working on improving her relationships, which resulted in improvement in her SMD symptoms. Two other nonspecific components of treatment that may be important to effect change in response to treatment are therapeutic alliance and active engagement in the treatment framework. Although we did not measure these components, we have found that teens may show less improvement in mood symptoms when they waver in the commitment to working on improving relationships or do not want to focus on the relationships that most negatively affect their mood. In addition, some of these youth have minimal insight into the extent of their irritability and its impact on relationships. Although IPT focuses on increasing awareness of the impact of one's mood on interpersonal interactions, some youth have had difficulty tolerating these discussions. As mentioned, another factor that impacts the effectiveness of treatment is cognitive/interpersonal rigidity, which can affect one's ability to see another person's point of view. This rigidity limits the teen's understanding of the impact of the outbursts on others and decreases the motivation to make changes in interpersonal interactions. In these cases, the parents may need to do more of the initial work to model willingness to change interpersonal interactions and may need to modify expectations. It is also important to assess for other disorders that may more aptly account for the cognitive rigidity, such as ASD, and may not be attributable to a diagnosis of DMDD.

Jennifer did not have any outbursts in session. She became upset and frustrated and would briefly raise her voice, but she did not escalate to having a significant outburst. IPT-MBD has been utilized with other teens with DMDD/SMD. Teens have become angry, frustrated, loud, or shut down in sessions, but very few have had significant outbursts. This may be due to the therapist spending a lot of time validating and discussing emotions and utilizing perspective taking to remove a feeling of blame for both the parent and teen. If the teen escalated in session with the parent, the therapist would ask if the teen would like the parent to leave the session to allow the teen space to de-escalate. This models the skill of disengagement for both parent and teen in session. The therapist would discuss the incident with the teen during that session if he or she was able to tolerate it or at the next session.

In general, due to the chronic nature of this mood disorder, it is possible that the teen will experience improvement in mood symptoms yet still require further treatment. It is important to assess how often the teen is experiencing chronically irritable mood compared to the beginning of treatment. The therapist should also discuss accommodations in place to manage behaviors and impairment associated with the mood symptoms at home, school, and with peers. The therapist should assess the number of outbursts per week, duration, and severity compared to baseline. Depending on the frequency, severity, and impairment of mood symptoms, further treatment may be indicated. If there has been improvement in symptoms, it is reasonable to decrease to biweekly sessions. More data on the IPT-MBD intervention are needed to develop a more systematic approach to tapering of treatment. Also, due to the prevalence of comorbidities in youth with SMD/DMDD, teens may require treatment for other disorders after the mood symptoms have remitted. Once the outbursts and irritability have improved and mood has become more regulated, adolescents are better able to address symptoms of comorbid disorders. In this particular case, Jennifer continued to have difficulty forging peer relationships given her skills deficits and language disorders.

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Furthermore, she continued to struggle with executive functions, such as organization and planning.

Youth with SMD/DMDD may be complicated to treat due to the chronicity of the illness, comorbidities, impairment in multiple settings, and possible need for a combination of therapy and medication to treat the irritability and outbursts. Children with SMD/DMDD typically utilize a range of services, including outpatient services (therapy and/or medication); more intensive services, such as inpatient hospitalization; and school supports. In a study of youth with SMD followed for 4 years, the majority of youth were in outpatient treatment and treated with psychotropic medication, the most common being an atypical antipsychotic or medication for ADHD (Deveney et al., 2015). At baseline, 36% of these youth had a lifetime history of inpatient hospitalization (Deveney et al., 2015). Since DMDD is a new diagnosis in the *DSM-5*, there are limited data on the most effective treatment approaches for these youth. Youth will likely benefit from a comprehensive, individualized approach to treatment. For example, if the teen has impairment in the school setting, the therapist should liaison with school personnel to advocate for appropriate academic supports. Because this mood disorder is comorbid with other disorders, pharmacologic management may be indicated to treat comorbidities. As was the case with Jennifer, ADHD is highly comorbid with DMDD (Copeland et al., 2013). The role of medication in the treatment of SMD/DMDD is under investigation. Studies assessing another psychosocial intervention have utilized a stimulant titration phase prior to initiating therapy (Waxmonsky et al., 2008; Waxmonsky et al., 2013). Current medication treatment trials include stimulant optimization and randomization to an SSRI or placebo. At this time, there are insufficient data for a systematic approach to treatment. In our experience thus far with IPT-MBD, some youth require a combined treatment approach, whereas others may improve with therapy alone.

Limitations

The purpose of this case study is to present an adapted form of IPT-A for a population of youth with a newly conceptualized mood disorder. Although it appears beneficial for Jennifer, there are significant limitations to the generalizability from one case study. Therefore, a randomized pilot study to assess feasibility and acceptability of IPT-MBD compared to treatment as usual is under way. One limitation is the permissibility of medication changes during the study. Although the addition of a stimulant medication had no apparent effect on mood ratings, it is important to recognize there could be an impact over time. Although the treatment was initially delineated as 20 weeks, the intervention has been extended to 24 weeks. We piloted this intervention on a few youth with SMD, and the majority of improvement in symptoms occurred in the last 4 weeks of treatment, based on independent evaluator ratings; therefore, we extended the duration of treatment to encourage further solidification of skills. However, because this is a new adaptation of IPT-A, and youth with SMD/DMDD represent a population with severe, long-standing impairment and comorbidity, more data are needed to determine the optimal number of sessions. This number may vary according to the interpersonal skill level of the teen at initiation of treatment.

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Conclusions

Youth with SMD, as well as DMDD, have severe chronic irritability that affects their interpersonal relationships with parents and peers, at home, and at school. This adaptation of IPT targets chronic irritability and outbursts, which if proven beneficial in a randomized controlled trial could be generalizable to the new *DSM-5* disorder of DMDD. To utilize IPT-MBD in an outpatient setting, a therapist should have training in IPT-A to learn the fundamentals of this therapy and then incorporate the modifications discussed. Duration of treatment will depend upon severity and improvement of symptoms of outbursts and irritability. From experience thus far, the range is typically between 18 and 24 sessions depending on factors such as age, skill level of the adolescent, and parental involvement. Although some adolescents may improve with therapy alone, others may need a combined approach and involvement of a child and adolescent psychiatrist. We believe that focusing on interpersonal relationships and interactions in treatment is crucial for these youth, as the irritability and outbursts typically manifest as conflict with peers, teachers, and parents. This adapted form of IPT-A holds promise as a potentially effective psychotherapy for adolescents with SMD or DMDD and warrants further study.

Acknowledgments

The authors thank Ryan Moore, LCSW, Jason Straub, LCSW, Paige Johnston, LCPC, Catherine H. Yokum, LCSW, Kenneth Towbin, MD, and the research team of the Section on Bipolar Spectrum Disorders in the Emotion and Development Branch, Intramural Research Program, National Institute of Mental Health.

Funding

This work was supported by the National Institute of Mental Health, grant number K23MH090246.

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Table 1

Comparison of Severe Mood Dysregulation (SMD) and Disruptive Mood Dysregulation Disorder (DMDD).

SMD[a]	DMDD[b]
Similarities	
• Temper outbursts: 3 times per week	• Temper outbursts: 3 times per week
• Chronically irritable, angry mood	• Chronically irritable, angry mood
• Duration: minimum 12 months	• Duration: Minimum 12 months
• Impairment: present in 2 settings Differences	• Impairment: Present in 2 settings
• Age of onset before 12	• Age of onset before 10
• Hyperarousal symptoms 3	• No hyperarousal symptom requirement
• Not symptom free for 2 months	• Not symptom free for 3 months

[a]Clinical construct utilized in research studies pre-DMDD.

[b]*Diagnostic and Statistical Manual of Mental Disorders* (5th ed.) diagnosis.

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Table 2

Interpersonal psychotherapy for mood and behavior dysregulation concepts.

Initial: Sessions 1–5
• Develop rapport
• Review of symptoms
• Psychoeducation: SMD/DMDD
• Outburst data gathering; outburst plan if clinically indicated
• Limited sick role and accommodations
• Closeness circle
• Interpersonal inventory
• Mood/outburst ratings: Link mood to interpersonal events
• Interpersonal formulation
Middle: Sessions 6–18[a]
• Review of symptoms
• Mood/outburst ratings: Link mood to interpersonal events
• Work on identified problem area
• Develop disengagement strategies
• Communication analysis
• Decision analysis
• Teen tips
• Parental involvement: Amount is dependent on age and skill level of teen and problem area of focus
Termination: Sessions 19–20
• Review of symptoms
• Assess symptom improvement: specifically, number of outbursts per week/month and frequency, duration of irritability
• Review interpersonal skills that were most beneficial with teen and parent
• Generalize skills/relapse prevention: Discuss future interpersonal scenarios where skills might be utilized
• Discuss feelings about ending treatment
• Assess need for continued treatment

Note. SMD/DMDD = severe mood dysregulation/disruptive mood dysregulation disorder.

[a]Middle phase may be extended if needed to Session 22. Termination phase would be Sessions 23 and 24.

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Table 3

Summary of monthly ratings assessments.

Study visit	CDRS-R	CGI-S	CGI-I
Baseline	61.5	5	
Week 4	61.0	4	4
Week 8	62.5	4	4
Week 12	53.0	4	4
Week 16	61.5	4	4
Week 20	44.0	3	2

Note. CDRS-R = Children's Depression Rating Scale–Revised; CGI-S = Clinical Global Impressions Scale–Severity; CGI-I = Clinical Global Impression Scale–Improvement.