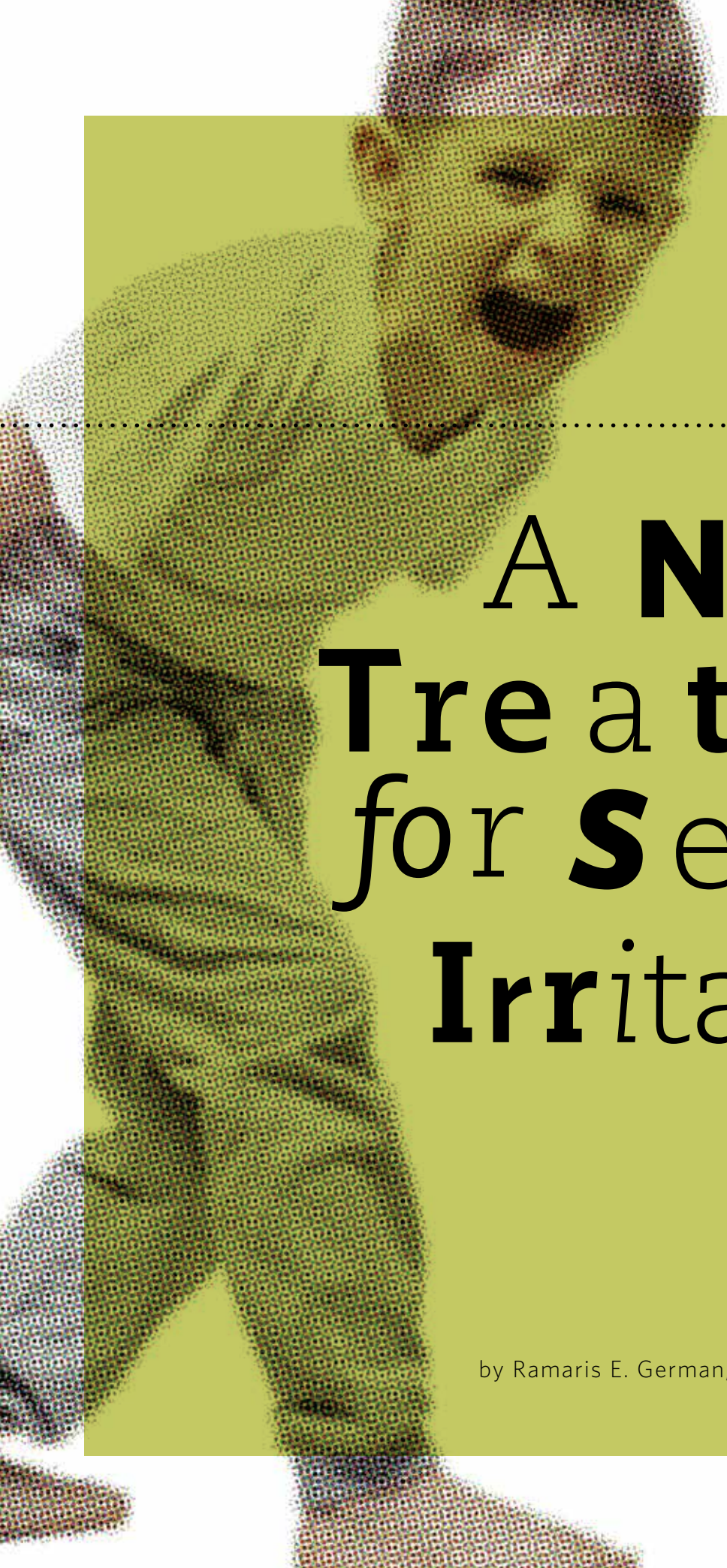

A Novel Treatment for Severe Irritability

by Ramaris E. German, PhD, and Melissa A. Brotman, PhD

SHUTTERSTOCK/ SONSEDSKA YULIIA

EXPOSURE-BASED CBT FOR DMDD

MANY CHILDREN get annoyed when asked to stop playing video games or to help with chores. However, for some children these types of age-appropriate demands can lead to extreme behavioral responses that are out of proportion relative to the request, such as snapping, yelling, or even throwing things. In addition, they tend to have a grumpy mood on most days, and parents feel that they must tread lightly or "walk on eggshells" because their child seems like he or she could get really angry at any moment.

These types of temper outbursts when accompanied with a chronically irritable mood on most days nearly every day, persist over at least a year, and are severe enough to cause impairment at home, school, or with peers have been named disruptive mood dysregulation disorder (DMDD).

Features of DMDD

DMDD was recently introduced into the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5) in 2013. DMDD consists of a behavioral component (such as recurrent severe temper outbursts with increased motor activity, and verbal or physical aggression) and a mood component (persistently irritable or angry mood on most days). The temper outbursts (either verbal rages or physical aggression towards property or people) are pervasive (happen three or more times per week in different contexts), are out of proportion based on the trigger, and inconsistent based on the child's developmental age.

Irritability, the prominent feature of DMDD, is one of the most common reasons that youth are brought in for mental health evaluation and treatment. In epidemiological studies, the prevalence of DMDD is between 0.8 to 3.3 percent. Children with DMDD may be diagnosed with ADHD. Of note, in community samples, not all youth who have DMDD are diagnosed with ADHD. One study found between 6.3 to 30.8 percent of children with DMDD also had a comorbid diagnosis of ADHD (Copeland, 2013). However, of children referred to the National Institute of Mental Health for severe irritability, the rate of ADHD can be as high as 80-90 percent (Brotman, 2010; Deveney, 2015).

Some studies have explored an "irritable ADHD" subtype (Karalunas 2014; 2018). However, it is important to note that in those studies DMDD was not explicitly measured; instead, measures examining emotion regulation and irritability were assessed using a parent/guardian temperament questionnaire that also included symptoms of sadness. It is important to note that no one has directly compared this "irritable ADHD" subtype using the classification by Karalunas and colleagues to youth who meet semi-structured diagnostic interview criteria for DMDD. Future work is necessary to examine clinical, behavioral, and neural similarities and differences to develop more targeted treatments. Therefore, it's important for parents of children with ADHD to think about the level of irritability in their child and bring it up to their pediatrician or mental healthcare provider if they are concerned.

A research treatment

Irritability, the defining feature of DMDD, is a significant public health issue. Along with the burden and difficulties experienced by children, parents, and those affected by the disorder, DMDD has been shown to increase the likelihood of developing depression and anxiety disorders in adulthood. This has led scientists at the NIMH to develop and investigate the efficacy of a novel exposure-based cognitive behavioral therapy (CBT) approach for the treatment of severe irritability in youth.

CBT is an evidence-based treatment that has been proven to be effective for the treatment of mood disorders (mainly depression and anxiety), as well as some behavioral problems. Put simply, CBT interventions target thoughts (cognition) and behaviors to change a person's mood. Exposure therapy, a type of CBT, has been most

effective to treat anxiety. In that context, therapists generate a "fear hierarchy" and in-vivo (during the session) practice "exposing" the patient to the fear-provoking stimulus. For example, someone afraid of dogs would look at pictures of dogs; over the course of treatment, this person would work their way up to touching a dog and finally to tolerate being in the presence of dogs.

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With repeated exposure, the anxious person learns to not avoid the stimulus and learns new ways of responding to the fear-provoking situations. Up until now, exposure therapy has been mainly used to treat anxiety-related disorders. However, in our research on CBT at NIMH, we aim to use the same exposure therapy principles with children with severe irritability by generating a "frustration hierarchy," and working our way up the hierarchy in-vivo (during the session) to expose children to anger-provoking situations. Preliminary evidence suggests that we are teaching the children to learn new, more adaptive ways of responding to the anger-provoking situations that does not result in yelling, screaming, or physical behavior that causes problems (Kircanski, 2018).

This is a novel approach to the treatment of severe irritability. Although there have been several treatments for disruptive behavior disorders, such as parent management training (Kazdin, 2017) and dialectical behavior therapy (Perepletchikova, 2017) that have been proven to be effective, there are no interventions yet developed that specifically target severe irritability as that found in DMDD.

The exposure-based CBT treatment consists of twelve sessions; each session has two portions, a child portion followed by a parent portion. After psychoeducation about irritability and assessing the child's engagement using motivational interviewing techniques, the therapist develops a hierarchy of anger-provoking situations specific to the child from least anger-provoking to most. The majority of the treatment is focused on exposure-based behavioral interventions by conducting exposures starting from those on the lowest end of the hierarchy and moving up in gradation of anger-provoking situations. At the end of each session, the therapist debriefs with the child about the exposures and then assigns homework based on the exposures done in session. The final phase of the child sessions focuses on maintenance and termination.

Similar to established parent management trainings, the parent sessions are module-based with the goal of teaching concrete skills and decreasing parental stress. Parents are engaged throughout the treatment and are a critical part of all the exposures and interventions. Also, as treatment progresses, the exposures may start to involve situations with parents that have previously triggered outbursts. Overall, the goal is to train the parent(s) on how to manage the problematic behaviors and how they themselves can engage in behaviors that can help prevent or decrease the child's outbursts and irritability.

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Exposure-based CBT is still being tested here at NIMH. Therefore, this treatment should not be used by clinicians until efficacy is established, and thus, is not ready for dissemination to the community. So, it is not recommended for clinicians or parents to try this treatment on their own at this time. When considering the first line of defense to treat a child's most pressing clinical problem (anxiety, depression, or PTSD, for example), it is critical to know the specific diagnosis to understand what is being targeted. And, since there are already empirically supported treatments for many psychological disorders, it's clinically indicated to explore those first and talk with a mental health professional.

While a small, initial pilot study for the exposure-based CBT treatment being tested has shown promising results in reducing DMDD symptoms (Kircanski, 2018), the NIMH is currently actively recruiting for a larger study to determine the efficacy of this treatment to address the serious public health concern of irritability in youth. If interested, call (301) 496-8381 or email irritablekids@mail.nih.gov, or visit https://www.clinicaltrials.gov/ct2/show/NCT02531893 for more information.

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