"Media Addiction" in a 10-Year-Old Boy

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CASE: Bryan is a 10-year-old boy who is brought to his pediatrician by his parents with concerns about oppositional behaviors. Bryan's parents report that he has always been hyperactive and oppositional since a very young age. He has been previously diagnosed with attention-deficit hyperactivity disorder and has been treated with appropriate stimulant medications for several years; however, despite this, his parents feel increasingly unable to manage his difficult behaviors. He refuses to do chores or follow through with household routines. He refuses to go to bed at night. His family feels unable to take him to public places because he "climbs all over everything." At school, he acts up in class, is often disruptive, and requires close supervision by teachers. He was recently kicked off of the school bus. He has very few friends, and his parents state that other children do not enjoy to be around him.

Bryan's parents also report that he is "obsessed" with electronics. He spends most his free time watching TV and movies and playing computer games. He has a television in his bedroom because otherwise he "monopolizes" the family television. The family also owns several portable electronic devices that he frequently uses. Bryan insists on watching TV during meals and even that the TV stays on in an adjacent room while showering. He gets up early each morning and turns on the television. He refuses to leave the house unless he can take a portable screen device with him. His parents admit to difficulty placing limits on this behavior because they feel it is the only way to keep his other behaviors under control. His mother explains "it is our only pacifier" and that attempts to place restrictions are met with explosive tantrums and have thus been short lived. These efforts have also been impeded due to the habits of his parents and older sibling, who also enjoy spending a significant amount of time watching television.

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Bryan's is an extreme case of an all too frequent phenomenon in today's culture that is well known to pediatricians: the overuse of television and other media. Children grow up in a dense media environment, and a look inside the average American home will reveal 4 televisions, 3 DVD or VCR players, 1 digital video recorder, 2 CD players, 2 radios, 2 video game consoles, and 2 computers.[1] The average 8 to 18-year-old spends over 7.5 hours/day consuming these various media options and manages to pack 10 hours and 45 minutes worth of total content into those hours using more than 1 device at a time![1] This represents an upward trend in recent years that will likely continue with the explosion in mobile media devices on the market. It is against this backdrop that Bryan's case must be considered.

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Excessive media usage has been associated with a wide range of adverse health and social-emotional outcomes in children and adolescents. It is a significant risk factor for childhood obesity and may also lead to decreased academic achievement and sleep disorders.[2] Exposure to media violence has been convincingly shown to increase the risk of aggressive behaviors.[2] Youth who are the highest media consumers also report lower levels of personal contentment.[1] For these reasons, the American Academy of Pediatrics recommends that children's total media time be limited to 2 hours/day or less.[3]

Bryan's underlying behaviors are consistent with his diagnosis of attention-deficit hyperactivity disorder (ADHD) and also suggest a coexisting oppositional defiant disorder (ODD). His behaviors are severe and have led to significant impairment in academic, family, and social functioning. They have not been successfully managed with stimulant medications. A careful reassessment for alternative diagnostic possibilities is warranted. For example, Bryan's extreme media preoccupation and social impairment might suggest an autistic spectrum disorder, as well.

Bryan's case is even more challenging due to his parents' loss of control over Bryan's media usage, which is clearly sabotaging any attempt at positive discipline. In this case, it would seem that nothing short of a complete

withdrawal of all access to television and other media will enable Bryan's parents to reassert the degree of authority necessary to implement behavioral changes. Only then could media access be reintroduced, in limited amounts, contingent on positive behaviors. Of course, decreasing media usage is difficult even in nonextreme cases, and many families are unwilling to make changes that would necessitate dramatic alterations, not only in the media consumption habits of the child but also in those of the parents and family. Indeed, child screen-time has been shown to be directly associated with parental screen-time,[4] and thus, the first barrier will be to convince Bryan's parents to reduce (or eliminate) their own media consumption. Other barriers to limiting media use in children include the parents' need for a safe, affordable distraction to allow time to complete their own work, the ingrained role that television plays in a family's day-to-day routines, and a lack of concern that media usage is a problem for their child.[5] These are all likely to be present in Bryan's family and will need to be addressed to achieve success. The involvement of a behavioral therapist who could provide weekly coaching is recommended.

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This case raises concerns for ODD, a condition characterized by developmentally inappropriate, negativistic, defiant, and disobedient behavior.[1] ODD is often comorbid with ADHD, but so are oppositional behaviors not rising to the level of an ODD diagnosis, and it is not yet clear which is the case here. Understanding how ADHD was first diagnosed and how responses to interventions have been assessed will help guide next steps. If rating scales have been used, they should be repeated. If they have not been used, they should be. I would use the Vanderbilt rating scales[2] that are validated, free, and include questions about oppositional behaviors.[3]

"Appropriate stimulant medications" must be delineated; it is critical to know the dosing and how the current dose was arrived at. The Multimodal Treatment Study of ADHD showed that patients receiving "community care," when compared with the study protocol "forced titration" strategy, tended to receive lower doses of stimulant medication; improvement in the community care group was less than in the study groups.[4]

If there is no positive response or significant side effects at an appropriate trial dose, the stimulant should be discontinued and a different stimulant should be prescribed. If a partial positive response occurs, increasing the dose as tolerated and monitoring for side effects is appropriate. A stimulant alone may benefit not only the ADHD symptoms but also oppositional symptoms in the context of ADHD.[5] If the dose is maximized and symptoms persist, considering an augmenting agent, such as an a-adrenergic medication, may be effective for both ADHD and oppositional symptoms.[6]

If clinically significant oppositional symptoms continue when ADHD pharmacological treatment has been optimized, consideration of an ODD diagnosis and possible referral for assessment and treatment by a mental health provider is appropriate. Parent training should be considered,[7] if available, and could be offered while medication changes for ADHD are in progress.

The electronics obsessions and the resistance to the parents' limiting use of the electronics use may be partially related to ADHD and oppositional symptoms. In this context, there may be improvement when the ADHD behaviors are adequately addressed. Attending to those first and reassessing electronics-related behaviors later would be an acceptable approach, but parents may feel the need to begin to address their concern about excessive electronics use simultaneously. At the present time, there is controversy about whether excessive use of computer games and media is an "addiction" or a primary disorder.[8] A good place to start would be addressing specific media and electronics behaviors of all family members (e.g., what is adaptive and what is dysfunctional).

Working with parents to start to set limits and demonstrate what they believe to be appropriate media and electronics-related behaviors may be a useful approach. If the parents make a sincere assessment of Bryan's behaviors, set clear expectations with a clear understanding of what happens if those expectations are not met and work on consistency, it may be enough to see some improvement. If it is not, a referral for behavioral therapy that uses similar approaches found in parent training for ODD may be useful.[7]

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"Addiction" or Parenting?

Bryan's disruptive behaviors are common among children with ODD, a diagnosis often comorbid with ADHD.[1] Such behaviors are associated with the absence of parental monitoring[2] and ineffective contingencies, where positive behaviors are frequently ignored and negative behaviors are reinforced by desirable consequences (e.g., getting to stay up late, getting out of chores, etc.).

Bryan's obsession with electronics is consistent with everyday connotations of "obsessed;" however, it would not be considered a clinical obsession unless there is also an inability to control his thoughts about electronics. Furthermore, although parallels can be drawn between Bryan's use of electronics and addictive/impulse control disorders, more information is necessary to accurately conceptualize his problematic electronics use. Importantly, Bryan's parents do not describe family time or activities other than watching TV. From a social learning perspective, appropriate use of electronics and other prosocial behaviors have not been modeled in the household. Bryan's disruptive behaviors may be exacerbated by his excessive use of media as suggested in recent studies that have found that time playing video games may predict attention problems and impulsivity[3] and is negatively associated with social success.[4] Given these issues, the question becomes whether the parents or child's behavior should be the target of treatment?

We would recommend a combination of parent training in behavior management to improve interactions at home, and behavioral therapy to target disruptive behavior.[2,5] Initially, Bryan's parents should be trained in behavior management techniques including positive reinforcement and rewards, setting rules and limits, and principles of time-out for disruptive behavior.[5] Bryan's parents should create a behavior plan, starting with easier goals to make small and gradual changes and include 1) clear time limits for daily access to electronics (decreasing time slowly and replacing with alternate activities); 2) clear rewards earned for following time limits (preferably not related to electronics); and 3) consequences for not following the behavioral contract. It is important to track daily progress on a chart and reinforce gradual success (e.g., 1-2 good days the first week) with immediate verbal positive reinforcement. Positive reinforcement will not only reinforce appropriate behavior versus disruptive behavior, but it will also strengthen the family relationship. Bryan's parents also should expect things to get worse before they get better, such as an initial increase in disruptive behavior. His parents should be warned against giving in at the height of bad behavior as well as informed that once Bryan learns his tantrums will not result in access to electronics, his behaviors should gradually decrease. Furthermore, the family needs to attempt to spend time together and in activities without the TV to create an environment that is not dominated by electronics. This may provide more opportunities for Bryan to expend his energy and to engage in prosocial activities with his family and peers. Lastly, it may be necessary for treatment to include Bryan's teachers in his behavioral plan and include social skills training in his treatment plan to improve peer interactions.[2]

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Challenging Cases in the *Journal* are written to demonstrate diverse clinical perspectives about diagnosis and treatment. The commentaries in Bryan's case were written by a developmental-behavioral pediatric fellow (Brown), a child-adolescent psychiatrist (Sharf) and 2 psychologists (Bustos and Chavira). There was general agreement about the diagnosis—an ODD associated with excessive time watching media and playing computer games and exacerbated by a significant deficiency in limit setting by the parents. In addition, the first 2 commentaries addressed the probability of ADHD. Although treatment recommendations were similar (parent education/training and behavior modification; the physicians also recommended a medication trial), there were important differences in thematic emphasis. Dr. Brown focused on the contemporary epidemiology of media and computer use among children and its effect of the health and development. He also addressed the challenges of guiding parents to make behavioral changes in the home. Dr. Sharf addressed the importance of an accurate diagnosis of ADHD and evidence-based pharmacological treatments.

Drs. Bustos and Chavira addressed the concept of social learning (appropriate use of electronics and other prosocial behaviors have not been modeled in the household), parent training in behavior management and behavioral therapy to target disruptive behavior. A recent meta-analysis of randomized controlled studies of behavioral therapies for disruptive behaviors in children concluded that they are effective with a sustained effect. The most frequently studied evidenced-based programs were Parent-Child Interaction Therapy, Incredible Years, Helping the Noncompliant Child, and the Triple P-Positive Parenting Program. These programs use behavioral modification techniques in group settings to train parents to increase positive feedback for appropriate behaviors, to ignore mild disruptive behaviors, and provide consistent time-outs for noncompliance.[1]

Pediatricians who counsel parents about behavioral problems will benefit by reflecting on the concise description of behavior modification provided by Drs. Bustos and Chavira. It can be helpful when developing behavior management strategies for families. I appreciate the reminder that guidance in behavior modification is most effective when the behavior plan starts with easier goals to make small and gradual changes. A previous Challenging Case addressed similar issues.[2]

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