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What is JAACAP Connect?
All are invited! JAACAP Connect is an online companion to the *Journal of the American Academy of Child and Adolescent Psychiatry* (JAACAP), the leading journal focused exclusively on psychiatric research and treatment of children and adolescents. A core mission of JAACAP Connect is to engage trainees and practitioners in the process of lifelong learning via readership, authorship, and publication experiences that emphasize translation of research findings into the clinical practice of child and adolescent psychiatry.

Why do we need JAACAP Connect?
The field of child and adolescent psychiatry is rapidly changing, and translation of scientific literature into clinical practice is a vital skillset that takes years to develop. JAACAP Connect engages clinicians in this process by offering brief articles based on trending observations by peers, and by facilitating development of lifelong learning skills via mentored authorship experiences.

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All students, trainees, and clinicians who are interested in child and adolescent mental health will benefit from reading JAACAP Connect, available online at www.jaacap.com/content/connect. AACAP members will receive emails announcing new quarterly issues.

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A Recommitment Ceremony

As I and many clinicians, researchers, and educators in our field prepare for the 64th Annual Meeting of the American Academy of Child and Adolescent Psychiatry (AACAP) in Washington, DC, I find my excitement building. Since I first attended the AACAP Annual Meeting as a trainee, I have viewed it as an opportunity to immerse myself in the past, present, and future of our field—in its clinical wisdom, its rapidly expanding science, and its passionate community. As a card-carrying introvert, I appreciate the intimacy of both our field and our community, though I also recognize the sobering fact that there aren’t enough of us to meet the demand for our clinical expertise and that we must resist any tendencies towards insularity and continue to advocate on behalf of those we serve. Each year, I leave the Annual Meeting re-energized and recommitted to learning, educating, advocating, and delivering the best possible clinical care to our patients and their families.

This issue of JAACAP Connect represents for me a similar experience of recommitment, as it reflects beautifully the purpose and mission with which this publication was established. In recognition of the rapidly changing field of child and adolescent psychiatry and in support of the skill development necessary to critically appraise the scientific literature and translate high-quality science into clinical practice, I am thrilled to introduce the inaugural column of what will be a regular recurring series by David Rettew, MD. His column, titled “Lab to Smartphone,” will tackle hot-topic issues within the field, including those controversies that stem from the all-too-common pseudo-science that potentially confuses us and our patients/families, alike. Read his column (p. 4), and consider joining him in the “lab-to-smartphone” movement!

Underscoring the JAACAP Connect mission to engage clinicians in learning throughout the lifespan via experiences that emphasize translation of research into clinical practice, the authors who have contributed articles to this issue represent multiple stages of professional development (trainees in MD, MD/PhD, and clinical fellowship programs, early career psychiatrists, and established clinicians, researchers, and educators) and address a variety of topics of clinical pertinence. Slat and Glowinski (p. 6) address the clinical and biological factors that contribute to an observed sexual dimorphism in youth with autism spectrum disorder (ASD). Harrison and van Schalkwyk (p. 9) review the problem of adolescents with ASD being bullied, the current limitations to better understanding this problem, and several ways that this bullying can be addressed. Building on a previous JAACAP Connect article, Sinyor (p. 13) highlights the potential utility of J.K. Rowling’s Harry Potter series as a message of hope and resilience in the face of trauma and suicidal impulses. Closing this issue, Giles (p. 17) reviews coprophagia, a high-risk complex behavioral disorder that can have various etiologies and, as a result, be difficult to treat.

As I approach the second half of my term as Editor, I am particularly grateful for both the spirit with which JAACAP Connect continues and the authors, Editorial Board members, and JAACAP staff who make it possible. I very much look forward to joining many of you in Washington, DC, and to (re)affirming our commitments to one another, our profession, and the vital work that still needs to be done.

Oliver M. Stroeh, MD
Editor

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Welcome to the first column of “Lab to Smartphone,” a new and regular feature of JAACAP Connect that is devoted to educating and engaging our child psychiatry community on practical, contemporary, and controversial topics that are on the minds of both child psychiatrists and the greater public at large. Let’s face it: child psychiatry is poorly understood and often profoundly misrepresented in the media. While I could be wrong about this, my sense is that the annual meetings of, say, dermatology organizations generally don’t attract nearly the number of protesters that we do. And though it certainly is true that our profession has made some missteps along the way, much of this antagonism comes from our allowing of other groups to define us.

Ironically, in this age of endless information, people are more confused than ever, especially when it comes to a topic as complex as the developing human brain. Yes, there are fascinating and cutting-edge research studies being conducted worldwide every day, with some of them appearing in JAACAP, but what good is a groundbreaking article on attention-deficit/hyperactivity disorder (ADHD) going to do for a family that has been convinced that ADHD doesn’t exist? How is a new evidence-based approach to psychotherapy going to reach the patient who has just seen an antidepressant commercial and now believes that getting well involves no more than taking a pill to correct their “chemical imbalance”?

The ability to translate behavioral science into useful and operational knowledge challenges even those of us in practice for many years. For trainees such as psychiatry residents and child psychiatry fellows, it can be especially difficult to distinguish between substance and hype, the limits of psychiatry’s knowledge from the limits of your knowledge, or between the topics that are controversial among the public versus the topics that are controversial within the field.

With these principles in mind, the two primary goals of “Lab to Smartphone” can be summarized as follows. The first is to provide dependable and useful information on a variety of child mental health topics that are of current interest and are often not covered by more traditional journal formats. Many of these topics will relate to controversies that are being debated outside of the proverbial ivory tower. Potential topics could include psychiatry’s role in being true mental health professionals rather than just mental illness professionals, the new world of open-access journals and conferences, or why so many people don’t believe ADHD actually exists. These columns will at times challenge and confront not only groups that seek to undermine child psychiatry, but ourselves, as well. The second goal of this column, frankly, will be to encourage other child psychiatrists, and especially trainee and junior-level folks, to “get out there” and engage the broader community in both spreading reliable and helpful information about child mental health while refuting nonsense wherever it is found. As part of that effort, this column encourages especially less-experienced writers to contribute to “Lab to Smartphone” by either co-writing a column with me or with another senior mentor. Information about how to do this is at the end of this article.

How did I get this gig? That’s a good question, and I’m not sure I completely know the answer. Like many child psychiatrists, my career has taken some turns. I started out primarily as a researcher, doing studies in child temperament and the associations with psychopathology. My colleagues and I published a number of what we thought were pretty interesting studies, but few people seemed to be reading them, and the ones that were already knew a lot about the subject. Originally, I had thought that my job ended once a paper was published; now I realize that the work is just beginning. The people I really wanted to reach—the parent trying to do right by their kid, the pediatrician drowning in patient mental health problems, the child psychiatrist too busy to read...
through an entire journal article—were finding answers to their questions but in other places, namely blogs, social media, websites, and the occasional trade book. The problem with that was that much of that information was simply wrong and often written by people with little experience in either research or patient care. Some of these online experts were terrific, but too often the focus was less about translating science and more about selling a new type of untested psychotherapy, nutritional supplement, or book about how horrible psychiatry is.

About 5 years ago, I was invited to write a blog for primary care clinicians as part of my day job at the University of Vermont Larner College of Medicine. This led to being asked to write a blog for the general public on the Psychology Today website called “ABCs of Child Psychiatry,” which now has been viewed close to a quarter of a million times. From there, I found myself doing more and more media appearances for radio and television, now including a monthly segment on our local news. While I’m far from being anything close to a celebrity, this exposure has generated quite a bit of positive and grateful responses, as well as my fair share of trolls and detractors.

Overall, this attempt to represent child psychiatry to the public and explain what is actually known about improving mental health has been a fascinating journey, but we need to increase our numbers. In my 20-plus years working in psychiatry, perhaps the most important lesson I have learned is this: the most challenging part of our work is not coming up with a plan that will help a patient and their family get better; it is motivating, inspiring, and supporting them to enact that plan. To accomplish this requires connection, trust, and an ability to articulate what we know into language that is understandable and compelling. Unfortunately, there are not enough child psychiatrists around to be able to have these direct professional relationships with all the patients and families who need them. This means that to extend our reach to the broader population, we have to go beyond the office, the scholarly journal, and the scientific conference to the places where people are actually looking for information and encouragement.

In Vermont, like in many other states, there is a strong farm-to-table movement that strives to provide an integrated system of getting food from a local source to the consumer with maximum efficiency and minimal processing and manipulation. When it comes to the flow of reliable science-based information from the lab to an individual’s smartphone (and then to their brain, hopefully), much of that hard-earned evidence is unfortunately lingering at the farm or with a few interested neighbors while hungry diners elsewhere are gobbling down the scientific equivalent of Twinkies. It’s my hope that this column will be a small step towards improving that distribution network, and I invite you to be a part of it.

References

Participate in the Lab to Smartphone Column
To suggest a topic for this column or to inquire about co-writing a Lab to Smartphone column with Dr. Rettew or another child psychiatry mentor, please send an email to david.rettew@med.uvm.edu.

About the Author
David Rettew, MD, is program director of the child and adolescent psychiatrist fellowship program at the University of Vermont Medical Center and an associate professor of psychiatry and pediatrics at the University of Vermont Larner College of Medicine. He is the author of the book Child Psychiatry: New Thinking About the Boundary Between Traits and Illness and the “ABCs of Child Psychiatry” blog on the Psychology Today website. He is on Twitter as @PediPsych.

Disclosure: Dr. Rettew has received royalties for his blog for Psychology Today.
AACAP AWARD SPOTLIGHT:
Myo Thwin Myint, MD

2013 AACAP JUNIOR SCHOLAR AWARD

I enjoy the opportunity to learn, reconnect with mentors, as well as collaborate and exchange ideas with colleagues at each Annual Meeting. I received the award as a result of being accepted to give an oral presentation at the Resident as Teacher, a program tailored for trainees. The luncheon was great and allowed me to engage and learn about the amazing interests of other AACAP Junior members.

2012 AACAP ADVOCACY DAY TRAVEL SCHOLARSHIP
(now known as the AACAP Legislative Conference)

This award showed me the importance of advocacy and sparked my commitment to attend the legislative conference each year. AACAP staff prepared us so well that we were able to stay on message and advocate effectively. I’ve been attending the legislative conference almost each year since then, and continue to encourage my colleagues, fellows, residents, students, patients and families to attend the conference. More than ever, our advocacy is essential!

2011 AACAP EDUCATIONAL OUTREACH PROGRAM FOR CAP RESIDENTS

The Annual meeting is a great forum to learn, meet other colleagues to share ideas, mentor and be mentored. Attending the Mentorship Program, the Career Development Forum, as well as encouragement to attend Resident as Teacher along with AACAP Committee meetings, propelled me to get more involved in AACAP. Without this award, I’m unsure if I would have found all that Annual Meeting has to offer, including support to not only be involved in planning many of those activities for subsequent meetings, but also the privilege of leading most of them.

ABOUT DR. MYINT

JOINED AACAP:
JULY 2010

WORKS AT:
TULANE UNIVERSITY

POSITION:
ASSISTANT PROFESSOR;
PROGRAM DIRECTOR OF TRIPLE BOARD RESIDENCY AND CAP FELLOWSHIP TRAINING PROGRAMS

INTERESTS:
TRAINING AND EDUCATION, LGBTQ HEALTH

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Boys’ Club: Sexual Dimorphism in Autism Spectrum Disorder

Emily A. Slat, BSc, Anne L. Glowinski, MD, MPE

Autism spectrum disorder (ASD) is a complex and heterogeneous disorder of development. Its heterogeneity presents a challenge for the creation of diagnostic criteria that will encompass all affected individuals without misdiagnosing other developmental disorders, or missing individuals entirely. Our current definition recognizes a spectrum of persistent deficits in socialization, communication, and restricted interests/repetitive behaviors.1 Even though DSM guidelines for diagnosis of autism have changed over time, there is a persistent sexual dimorphism in the ASD population, with far more males receiving the diagnosis than females. Sex ratios vary from one study to the next, with an average 4:1 male-to-female ratio across the spectrum.2 However, there is great variation in this sex ratio when patients with ASD are subdivided based on level of function. The high-functioning ASD population, formerly diagnosed with Asperger’s disorder, has a male-to-female ratio of 10:1,3 while children with intellectual disability in addition to ASD have male-to-female ratios much closer to 1:1.3,4 Many explanations for this sexual dimorphism have been proposed, but no single factor can account for this phenomenon.

When trying to understand what may underlie the sexual dimorphism of ASD, we must look at sexual dimorphism within the general population. The Social Responsiveness Scale (SRS) surveys quantitatively measure deficits in reciprocal social behavior.5 Across multiple studies, SRS scores from unaffected and affected individuals demonstrated a mean score 3 points higher for males (0.17 SD) than females.6,7 This difference may seem trivial, but a small shift toward the pathological end of the spectrum in males combined with an absolute threshold for diagnosis of ASD across both sexes creates a significant difference in the number of males diagnosed with ASD relative to females. Normalizing the data based on sex differences may help to correct for this bias. This baseline difference in reciprocal social behavior between the sexes may explain part of the sex difference seen in ASD-diagnosed populations, but it is clear that other factors contribute to the sexual dimorphism of this complex disorder.

The female protective effect (FPE) is a widely held theory that females are inherently protected from certain ASD traits, leading to reduced rates of ASD diagnosis in females. Genetic studies support this theory by revealing a higher burden of de novo mutations in females with ASD compared to males with ASD.8,9 Constantino et al. used ASD multiplex families (i.e. two or more family members meeting criteria for ASD diagnosis) to look at whether common allelic variations in the pseudoautosomal region of the X chromosome might serve as protective factors for females (relative to males) when present in a homozygous state. No single allele met a threshold for genome-wide significance for such a protective function. Constantino et al. were able to demonstrate a sex difference in the distribution of autistic trait scores among siblings of affected individuals in multiplex families. Their work revealed a bimodal distribution in the female ASD population, in contrast to a unimodal distribution among males, demonstrating that a protective effect may exist among multiplex females.10 Similar bimodal distributions of affected females have been identified in other research in ASD multiplex families, reproducibly demonstrating two distinct populations of females, separating an affected group from an unaffected group.11 The nature of sex-specific reduction in phenotypic expression of genetic susceptibility to autism is further qualified by findings of Dworzynski et al., which demonstrated a significantly higher rate of ASD diagnosis in girls when they also had intellectual disability or behavioral problems.12 These data suggest that some highly deleterious genetic influences may override the protective phenomenon unique
to females. Further research will be required to elucidate the specific biological mechanisms that protect females; discovery of such mechanisms may aid in the development of more effective diagnostic tools and therapeutic interventions in the future.

Familial inheritance of autistic traits supports the existence of a strong genetic component to ASD, but we must also acknowledge the impact of clinical practice on diagnosis. The higher rate of ASD diagnosis among males may be influenced by a community diagnostic bias against females. Dworzynski et al. demonstrated that boys with ASD have a higher rate of comorbid behavioral abnormalities, thus preferentially bringing more boys with ASD to clinical attention than girls with the same level of ASD symptom burden.12 Even after controlling for symptom burden, boys were more likely to be given a community diagnosis of ASD compared to girls.10,13 Addressing this bias is not likely to lead to complete resolution of this sex difference, but it is important to acknowledge and address its contribution.

To address the issue of community diagnostic bias against female diagnosis of ASD, a number of studies have attempted to identify and quantify differences between male and female ASD phenotypes. Some studies demonstrate higher rates of restricted interests and repetitive behaviors among males14,15 or greater social deficits in males.16 In contrast, other studies demonstrate no statistically significant differences between ASD phenotypes of males versus females.17-19 This inconsistency across studies may reflect the heterogeneity of ASD and subsequent differences in the populations studied by each research group; however, it is more likely that the difficulty to identify unique “feminine” or “masculine” autistic traits reflects an absence of genuine subtypes based on sex. Therefore, efforts to create ASD criteria that are unique to each sex may not be particularly helpful.

Instead, we are more likely to diagnose ASD with higher specificity and sensitivity by acknowledging that this disorder spans a heterogeneous spectrum, and following a few simple guidelines. First, increase the use of quantitative measures in the context of multidisciplinary, biopsychosocial diagnostic assessment to limit clinical bias and subjectivity of diagnosis. Second, acknowledge that male and female populations do not have equal distributions of ASD traits and use sex-normed thresholds for diagnosis based on the distribution of autistic traits for each sex. Third, continue to study the roles of biological mechanisms that contribute to ASD inheritance or protection from inheritance. By increasing our understanding of the biological and clinical factors that contribute to the sexual dimorphism of ASD, we can improve the accuracy of diagnosis and develop novel therapeutic treatments, thus improving outcomes for all people along the autism spectrum.

**Take Home Summary**

On average, boys outnumber girls 4:1 in the diagnosis of autism spectrum disorders (ASD). This is likely due in part to sexual dimorphism at the level of basic biology. However, it is also likely influenced by biases that exist in the way ASD is clinically diagnosed. Understanding the clinical and biological factors that contribute to this sexual dimorphism in ASD prevalence among boys and girls will help us improve the accuracy of diagnosis.

**References**


About the Authors

Emily A. Slat, BSc, is an MD/PhD candidate in the Medical Scientist Training Program at Washington University School of Medicine in St. Louis. She plans to pursue an academic research career in child and adolescent psychiatry.

Anne L. Glowinski, MD, MPE, a member of the JAACAP editorial board, is a professor and directs the education and training program in child and adolescent psychiatry at Washington University School of Medicine in St. Louis. She is a member of the Psychiatry Residency Review Committee (2014-2020) and is a passionate educator involved in the training of medical or research students, as well as postgraduate MD, MPH, or PhD students.

The authors would like to acknowledge John N. Constantino, MD, Washington University School of Medicine, for scientific guidance and intellectual discussions pertaining to the content of this article.

Disclosure: Dr. Glowinski and Ms. Slat report no biomedical financial interests or potential conflicts of interest.

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Bullying victimization is defined as a repetitive and aggressive behavior that can be physically, socially, and emotionally harmful towards the victim. Prior research has identified that youth who lack positive peer interactions and have poor social skills are at greater risk of being bullied. However, there has been limited study regarding the nature of bullying specifically among children with autism spectrum disorder (ASD). ASD is a psychiatric diagnosis characterized by impairments in communication and in social interaction and reciprocity, and youth with ASD have been found to have significant challenges in building and maintaining friendships. Perhaps unsurprisingly given these challenges, children with ASD are about four times more likely to experience bullying in their lifetimes when compared to their typically developing peers. It is therefore vital that clinicians have an understanding of how to assess and address the problem of bullying in this vulnerable population of youth.

Beyond the clinical importance, the topic of bullying in adolescents with ASD is one that needs to be studied in greater depth, such that we might understand not only that being bullied is more common, but also what the specific risk factors might be and how these youth can best be supported. Existing research is mainly cross-sectional in nature and reliant on parent report. Little is known about the types of interventions that may support these individuals.

In this article, we will begin by discussing in further detail the epidemiology of bullying among youth with ASD. We then will outline challenges associated with assessing whether individuals in this subgroup are being bullied. Finally, we will describe some current approaches taken to reduce bullying risk in those with ASD, as well as the limitations of such approaches and suggestions for future research.

**Scope of the Problem**

Roughly one out of every 68 children born in the United States will be diagnosed with a form of ASD. According to Sterzing, Shattuck, and Narendorf, adolescents diagnosed with ASD experience a victimization rate of 46.3%, while the typically developing adolescent population has an estimated victimization rate of 10.6%. In this research, the term “victimization” included name-calling, teasing, other verbal forms of harassment, and being forced to do things like give lunch money. In a parent-report study composed of 192 parents of youth with ASD between the ages of 5-21 years old, 77% identified their children as victims of bullying specifically occurring within the prior month. Out of the 77% of parents who identified their children as victims, 20% reported that these children experienced some form of bullying exceeding a month, and 54% reported bullying exceeding a year. Similarly, in a self-report study consisting of 30 adolescents diagnosed with ASD, 73% of these adolescents reported victimization or bullying by their peers in their lifetime. Regardless of the sample size, both the parent-reported and self-reported victimization percentages are between 70-80% and about 4-7 times higher than typically developing individuals. As previously mentioned, this victimization ratio between typically developing adolescents and those diagnosed with ASD likely is attributable to their different social abilities in a general class setting, which may lead to isolation of students with ASD from their typically developing peers. Taken together, bullying victimization is both a prevalent phenomenon and one with unique determinants in youth with ASD, and thus warrants specific attention and research.
Recognizing What We Don't Know and Why We Don't Know More

Key deficiencies in our understanding of bullying in youth with ASD can be attributed to the methods of measurement and assessment most often utilized in extant studies. In the existing literature, the most commonly used method of measurement is a second-person reporting system or survey completed by a parent, guardian, teacher, or some person other than the direct victim. However, utilization of second-person report as a form of measurement has many limitations. For instance, parents’ abilities to report their children’s experiences with bullying may be impacted by developmental level. Parents tend to be more informed and involved in their children’s lives during earlier periods. As youth begin to reach their teenage years, they less commonly disclose their social experiences and interactions to their parents. Because the peak bullying period for adolescents extends from middle school through the transition to high school, parents of children within this age group likely provide less accurate data compared to parents of elementary school-aged children. Parents’ reports of their children’s experiences with bullying may be further influenced by parents’ own biases. Parents have been shown to be less likely to report bullying that may be occurring at home by a sibling or other family members. More broadly, it has been shown that parents of victims of bullying are more likely to participate in studies of bullying, as compared to those parents who have no prior knowledge of their children being bullied.

While second-person report methodology presents particular challenges to our understanding of the problem of bullying among youth with ASD, characteristics specific to youth with ASD also directly limit a greater understanding of this problem. The experience of being bullied or victimized by a peer is highly personal. Thus, to achieve the highest validity, such experiences are best explained by the victims, themselves. However, difficulties in communication and in social interaction and reciprocity—universal among those with an ASD diagnosis—may impede a child’s ability both to detect bullying (particularly if subtle) and report the bullying to someone else, challenges that would affect both self-report and second-person report methodologies. In a study completed by Fisher and Taylor (\( N = 30 \)), adolescents with ASD tended to reduce the seriousness of their peer victimization experience as evidenced by the tone and phrases they used to explain a specific bullying experience. Furthermore, in the same study, some participants with ASD provided idiosyncratic examples of physical forms of bullying, including poking, staring, and tying shoelaces together, suggesting that youth with ASD may experience different forms of bullying than typically developing peers.

It is therefore important that an assessment of bullying in youth with ASD take into account these limitations and challenges. Efforts are also needed to design and validate surveys for use in children with ASD that take into account the potential for concrete interpretation of bullying experience.

What We Can Do Now

Supporting the social experience of youth with ASD and reducing their risk of bullying relies on the key interventions of a modified educational environment, peer supports and education, adult supervision, and, where appropriate, clinical treatment. Schools typically support youth with ASD by providing education in specialized classroom settings. This practice is supported by the finding that there are higher rates of bullying in general education classes compared to special education. On the other hand, in the United States, federal law promotes educational inclusion and requires school districts to educate students with disabilities alongside their typically developing peers to the maximum extent deemed appropriate. Relatedly, although rates of bullying tend to be lower in specialized classrooms, inclusive classrooms promote the development of social skills and communication with typically developing peers, which is especially important for students with ASD and other communicative or developmental disabilities. It is also expected that integrated general education classrooms increase acceptance of students with disabilities by providing non-disabled students exposure to peers with a disability, and the opportunity for mutually beneficial friendships.
Peer support may increase the likelihood that an instance of bullying will come to an end. Schools may consider implementing peer support groups in which typically developing students along with disabled students learn to support and advocate for students diagnosed with a disability and then take that same knowledge and utilize it throughout the school day, especially in the classroom. In a study composed of students with a diverse set of moderate to severe disabilities (n = 152) and typically developing peers (n = 53) across 6 different schools within an urban school district, a similar peer support intervention called the Peer Buddy Program was implemented, and typically developing students reported feeling more comfortable and confident to intervene and advocate for their peers with disabilities directly following their participation in the Peer Buddy Program.

Beyond peer support, directive support from adults is of importance when tackling bullying generally, but it is crucial when considering bullying amongst children with ASD. Parents and teachers have a major responsibility in the intervention of bullying in autism. First and foremost, parents are responsible for establishing an optimal home environment that promotes their child’s overall social and communicational development. Teachers play an equally important role by promoting peer support in both social functioning and education. Typically developing students’ interpretation of their disabled peers is based on their knowledge about a disability or lack thereof. Teachers may act to create an inclusive environment and provide students with the knowledge and confidence to avoid becoming a perpetrator of peer victimization, and to act as an ally and intervene. It is also the teacher’s duty to report any bullying incident that he or she has seen or that has been reported, as well as provide direct support to the victim. According to Fisher and Taylor, youth do not feel supported by teachers after a bullying incident, which prompts victims to have increased internalized emotions or the desire for retaliation. Students with autism need both immediate and long-term support when dealing with bullying, and it is important that teachers actively listen to reports of bullying.

It is also important to consider that youth with ASD who have been victimized by bullying may benefit from clinical support. In particular, children who experience chronic peer victimization and their families should be referred to a mental health clinician who specializes in the treatment of youth with ASD. One goal of the referral would be for the mental health professional to fully explore in a developmentally appropriate manner the extent and nature of the youth’s experience with bullying. Furthermore, a mental health professional may help the youth develop a framework for relationship building and healthy social interactions. For example, Fisher and Taylor suggest the use of videos to help children with autism identify different forms of bullying, a technique that could also be very useful in facilitating self-reporting. Combining both visual and verbal or written explanations is an additional approach by which to ensure that children with ASD have a full understanding. Ultimately, an important goal for clinicians is to help adolescents better understand what bullying looks and feels like, such that they may be better able to identify and report when they are being victimized.

In Conclusion

Bullying of adolescents with ASD is a prominent clinical challenge. Seemingly as a result of their difficulties with communication and social interaction, youth with ASD are at greater risk of being bullied. Furthermore, the communication and interpersonal deficits associated with ASD limit our current understanding of the problem. Adolescents with ASD may not recognize when they are being bullied and also may struggle to report it when it does happen. As a result of these and other factors described in this article, the current self-report and second-person report methodologies frequently used to study bullying in this population are inadequate.

Although further research is required, common-sense interventions include careful consideration of the educational setting, a home environment that fosters development of social skills, and clinical intervention when indicated. Further, peer support programs show early promise in empirical studies and should be implemented whenever possible.
Take Home Summary

- Adolescents with ASD are at greater risk for bullying victimization.
- Adult support is vital for reducing the risk of bullying and promoting positive social development and interaction in adolescents with ASD.
- Lack of knowledge and research on the topic of bullying in adolescents with ASD makes it challenging to collect accurate data and implement the most effective and appropriate intervention methods.

References


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Disclosure: Dr. van Schalkwyk and Mr. Harrison report no biomedical financial interests or potential conflicts of interest.

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The Boy Who Lived: Harry Potter, Suicide, and an Opportunity for Mental Health Literacy

Mark Sinyor, MSc, MD, FRCPC

Of course this is happening inside your head, Harry, but why on earth should that mean that it is not real?

– Albus Dumbledore, Harry Potter and the Deathly Hallows

It has been 20 years since the first of the Harry Potter books was published. In the interim, they have been translated into 73 languages and sold more than 450 million copies. It seems everyone knows Harry, even within the notoriously restrictive Guantanamo Bay prison. When I first read the books, I thought I knew Harry too, but I was missing something important that has significance for our field.

As our group recently published in JAACAP Connect, the third book in the series, Harry Potter and the Prisoner of Azkaban, presents Harry metaphorically overcoming depression using cognitive-behavioral therapy (CBT) skills mirroring J.K. Rowling’s own experiences in real life. In the book, Harry’s de facto CBT therapist, Professor Lupin, deploys cognitive restructuring, fear hierarchies, behavioral activation, and core belief work to help Harry overcome the dementors and his symptoms of depression. Azkaban is arguably the most fulsome depiction of psychotherapy skills in children’s literature. Yet, despite the book’s ubiquity for nearly two decades, it has remained an untapped resource for teaching CBT skills to youth. A framework for implementing a mental health literacy program based on the book is outlined in our previous paper, and more than 500 middle school students in Ontario, Canada are receiving a pilot curriculum in which they learn CBT skills along with Harry.

When I noticed that J.K. Rowling had embedded depression in her books, I wondered whether she might have done the same for the suicidal thoughts she has said she experienced while depressed. As a suicide researcher, the most surprising aspect of the series for me is its hidden function as a meditation on suicide from the perspective of someone with lived experience. Viewing the books with this in mind, it quickly becomes apparent that suicide not only appears in the Harry Potter books but could be considered a major theme in the series. I’d like to focus the rest of this article on the theme of suicide in Harry Potter, which may be just as important and similarly unrecognized as the themes of depression and therapy.

Rowling has said that her books “are largely about death.” On a superficial level, this is self-evident, as many characters die in the series, while those who survive, most importantly Harry, are left to manage their grief and loss. Given that Harry spends most of the series fighting an evil antagonist, Lord Voldemort, to stay alive, one may rightly ask where suicide comes into play. A literal reading of the text points to Voldemort, and Harry’s other antagonists, as an external evil that has been compared to the Nazis. But what if we were to take a more interpretive stance and imagine the death impulse represented by Voldemort as existing within Harry himself? That is, if Harry embodies Rowling’s depression as she has stated, it seems fair to question whether his character also contains an allegory for suicidal ideation. There is at least some evidence to support this notion. As the story progresses, the boundaries between Harry and Voldemort become increasingly blurry, and Voldemort is presented as a kind of alter ego for Harry. In the final book, Professor Dumbledore reveals that “In the case of Harry and Lord Voldemort, to speak of one is to speak of the other...Part of Lord Voldemort lives inside Harry.” In this conceptualization, Voldemort can be viewed not only as perpetrator but also as residue of Harry’s original trauma. Harry is, quite literally, scarred by the childhood loss of his parents, an important risk factor for eventual death.
by suicide. One potential interpretation of his struggle against Voldemort could be as a metaphorical struggle to determine whether he will be able to overcome his past trauma or if it will set him on a path to destruction.

A careful read reveals numerous pieces of evidence supporting this interpretation. For example, Voldemort’s school house of Slytherin is connected to suicide. The Bloody Barron, house ghost and mascot of Slytherin, dies in a murder-suicide. Voldemort’s gift of a silver hand to one of his devoted followers is ultimately used by its owner to choke himself to death. Voldemort’s return to power and deepening connection with Harry in the fifth book coincides with Harry experiencing what appears to be suicidal ideation. In one scene, Voldemort enters Harry’s mind directly, and he reacts with a desire to be dead: “Let the pain stop, thought Harry ... Let him kill us.” In another, Harry discovers a stone archway that represents a boundary between the living world and death and feels “a very strong inclination to climb up...and walk through it.” When instead his godfather dies by falling through the archway, Harry finds the suffering unbearable, yelling “I’VE HAD ENOUGH, I’VE SEEN ENOUGH, I WANT OUT, I WANT IT TO END, I DON’T CARE ANYMORE.” He fantasizes about being dead so that he can join his godfather. These suicidal impulses are resolved in The Deathly Hallows, the final book in the series. It introduces the resurrection stone, a “hallow” that Harry most covets since it has the power to reunite him with his dead parents. The legend of the resurrection stone, however, is that it led its original owner to an ill-fated reunion with his dead lover after which, “driven mad with hopeless longing, [he] killed himself so as truly to join her.” The implicit question is whether Harry will suffer a similar fate. The novel culminates in a final battle between Harry and Voldemort. Notably, the entire penultimate chapter and arguable centerpiece of that struggle takes place as an internal dialogue within Harry’s head between himself and his dead mentor, Albus Dumbledore. The discussion is set in a train station where Harry is given the option to go one way or the other: he can return to his body and continue fighting or take a train away from life. In French, Voldemort means “flight of death.” The fundamental question of this chapter is in which direction Harry will fly, towards death or away from it. Summoning strength from his bond with Dumbledore, his teachers, friends, and parents, he chooses to affirm life and in so doing, Rowling makes a powerful statement about the ability of love and comradery to overcome what at times has seemed like intolerable pain.

Schools have a rich tradition of using popular fiction, novels like Animal Farm, The Great Gatsby, and Lord of the Flies, to teach youth about history and fundamental truths of the human condition. Fantasy novels are often dismissed as offering little educational value. However, The Lord of the Rings, the quintessential work in this genre, was a parable for J.R.R. Tolkien’s experiences in the trenches of World War I. The core message of that series was that the friendship and bravery exhibited by his soldier comrades was the only foil against the human impulse for power that threatened to destroy the world. From wise old wizards to Dark Lords to dangerous magical objects, J.K. Rowling borrowed liberally from Tolkien. In my view, the genius of Rowling, generally overlooked, is that she coopted many of the tropes Tolkien used to convey his geopolitical message and repurposed them to deliver a highly personal reflection on how someone suffering from depression, hopelessness, and suicidal ideation can find a path to resilience.

When I speak to the middle school students who are learning CBT skills by studying Harry Potter, a few notable themes emerge: they strongly identify with Harry, and they are able to see how his struggles are similar to theirs and their peers’. They are also universally surprised that the books have something to teach them about mental wellbeing. An emerging scholarly literature suggests that mental health literacy, taught in schools, has the potential to improve knowledge, decrease stigma, and even diminish suicidal ideation and behavior. Examples of resilience in the face of mental illness are an important component of these efforts. In 2010, my colleague Thomas Niederkotthen-thaler and his group demonstrated that media reports emphasizing “mastery” of suicidal crises, that is suicidal ideation followed by positive outcomes such as help
seeking rather than suicidal behavior, were associated with fewer subsequent suicide deaths in Austria.\textsuperscript{12} While we know that suicide can be contagious through the well-known “Werther effect,” put simply, resilience may be contagious too. We need both youth and adult role models to teach positive coping strategies, and in Harry Potter and J.K. Rowling, we have one of each. When Rowling herself was depressed and contemplated suicide, she has told reporters that “the thing that made me go for help was probably my daughter.”\textsuperscript{7} Clearly, Rowling was able to draw on her own strengths and reasons for living to overcome her illness, and that is an important message for readers. By failing to highlight her story and its commonality with Harry’s, our field and youth educators are missing an opportunity to teach mental health literacy.

It is a misconception that primary prevention of suicide entails education about suicide. To the contrary, school-based suicide prevention should focus on resilience education. However, in an era when youth may be exposed to graphic portrayals of suicide such as in the show \textit{13 Reasons Why}, teachers need better tools to communicate more realistic and helpful messages about suicide. Schools, especially those struggling to manage questions about suicide, could create literature units specifically asking students to think about Harry Potter as an allegory about suicide and to teach J.K. Rowling’s personal story of resilience as a model to be emulated.

The Harry Potter books and Rowling’s accompanying story are a largely untapped resource for teaching mental health literacy, positive coping skills, and resilience in the face of trauma, hopelessness, and suicidal ideation. After 20 years, the Harry Potter novels have rightfully earned their status as literary classics. Teachers and schools should give them the attention they deserve and, like all great books, use them to teach children about life.

### Take Home Summary
- Suicide may be an under-recognized theme in the Harry Potter novels.
- The series can be read to convey a powerful message of hope and resilience in the face of trauma and suicidal impulses mirroring the author’s lived experience.

### References


**About the Author**

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**JAACAP – November 2017 Issue**

It is November of 2017, and the Journal has nearly finished what is, at this point, a year-long transition in editorial leadership. Editor-Elect Douglas K. Novins fully assumes the responsibilities of outgoing Editor-in-Chief Andrés Martin with the January 2018 issue, although this handoff has been in the works for some months now. Dr. Martin’s tenure has been marked by his dedication to mentorship, and to building a pipeline of future editors, reviewers, and authors, not to mention record impact factors and the expansion of features such as cover art, podcasting, and continuing medical education opportunities. In his editor’s report from December 2016, Dr. Martin wrote of his successor, “Doug is a stellar scholar, clinician, educator, and administrator, and he is a kind, fair, and wise man...a truly inspired choice in a field of so many talented and worthy applicants. Doug is the perfect person for the job and will be superb at it” (2016;55:1099). As Dr. Martin passes the baton to Dr. Novins, readers of the Journal can look for the hallmarks of the publication to remain the same—continued coverage of groundbreaking science and incisive research, clinical, and policy translation—while also noting the advent of exciting new content and features. The flagship publication of AACAP is in good hands.
Join us for the first ever ONLINE Douglas B. Hansen, MD, Annual Review Course, one of the newest online education programs available from AACAP. Over a 6-week period, our newly redesigned course will allow you to connect with colleagues, interact with experts, and learn about the most sought-after topics in the field — all on your own schedule, in your home or office. Registration will open early December.

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QUESTIONS? Email CME@aacap.org
Review of Possible Etiologies and Treatment Options in a Teen With Coprophagia

Candace L. Giles, MD

Case: An 18-year-old, single, unemployed Bahamian male with a diagnosis of new-onset schizophrenia was treated with risperidone (Risperdal) on the inpatient unit, then discharged home to his family. Later that day, he became physically aggressive when family members attempted to prevent him from eating his own feces. They physically restrained him until police arrived, after which he was brought to a different hospital, given family members’ continued concerns that the patient was a danger to himself. At the hospital, the patient demonstrated signs of psychosis, including disorganized behaviors, internal preoccupation, and thought blocking. He was laughing and smiling as he spoke both of eating his own feces and of his earlier aggression towards his family members. Given his clinical presentation and concern at that time that he presented an acute danger both to himself and others, the treatment team decided that he required involuntary admission to a psychiatric inpatient unit.

Coprophagia, of which there are few reported cases, is a complex behavioral disorder that can have various etiologies, each of which might warrant a different treatment or management approach. Coprophagia comes from the Greek copros, feces, and phagein, to eat. It is the act of consuming feces, whether directly from the same individual (autocoprophagy), other individuals (allocoprophagic), or other species (heterospecific), and is considered normal behavior amongst certain invertebrate and vertebrate animal species. Invertebrates such as dung beetles, worms, and flies often consume and redigest the feces of large animals. Termites consume one another’s feces as a means of aiding digestion. There are some vertebrate herbivores (e.g., rabbits, hamsters, guinea pigs, mole rats, horses, tortoises, gorillas, etc.) that need to consume their own feces to help digest their food and extract sufficient nutrients such as vitamins. Some vertebrate mothers eat the feces of their newborn young to prevent alerting potential predators of their location. Other vertebrates (e.g., the young of elephants, pandas, hippopotamuses, koalas, etc.) are born with a sterile gastrointestinal system, and they obtain the necessary bacteria by eating the feces of others in their herd in order to digest vegetation. Coprophagia has also been reported in dogs, chimpanzees, and even early humans, but it is unclear if homo sapiens have ever routinely engaged or still engage in coprophagia.

Although coprophagia represents normal biological functioning in some vertebrates, it currently is considered abnormal behavior in humans, particularly given the risks associated with this behavior. Coprophagia in humans can result in E. coli infection, hepatitis A, hepatitis E, influenza, pneumonia, polio, chronic gingival infections, chronic lesions of vestibule mucosa, infections of the salivary glands (sialadenitis), intestinal parasitosis, and gastrointestinal obstruction (which can cause death). Although fecal matter has been used in humans for fecal bacteriotherapy (patients suffering from intractable diarrhea caused by Clostridium difficile—bacteria that affects the gastrointestinal tract—can undergo fecal microbiota transplantation), in instances such as these, the fecal matter is administered via nasogastric tube, enema, or in a capsule form to decrease the risks associated with oral fecal ingestion.

The literature available to guide clinicians to appropriate treatment for patients with coprophagia is limited, due in part to its complexity and the relatively small number of occurrences. Understanding coprophagia in humans is critical—particularly given the potential negative health sequelae of this complex behavior. This article reviews possible etiologies, key work-up strategies, and several
treatment options to consider when working with patients with coprophagia.

**Coprophagia and Its Comorbidities**

Coprophagia in humans is typically associated with either a medical or psychiatric disorder. Frequent comorbidities of coprophagia include mineral deficiency, neurological dysfunction, disorders of development, intellectual disabilities, psychosis, anxiety, and affective instability. Coprophagia commonly is considered a variant of pica (the persistent and developmentally inappropriate eating of nonnutritive substances), which itself is frequently associated with either a medical disorder (e.g., iron-deficiency anemia) or psychiatric disorder (e.g., autism spectrum disorder and intellectual disability). Haoui et al. found that the majority of psychiatrically hospitalized patients who demonstrated pica also were diagnosed with either a disability of mental impairment (48%) or developmental delays (26%). Sharma et al. found that coprophagia and other forms of pica occur in individuals with mild to moderate dementia and mixed (iron deficiency and macrocytic) anemia. Josephs et al. conducted a medical record review at Mayo Clinic from 1995-2015 that identified 12 adult patients with coprophagia; half of the patients had neurodegenerative dementia, two had developmental delay, and one each had a history of seizures, steroid psychosis, frontal lobe tumor, and schizoaffective disorder. Individual case reports also have suggested associations between coprophagia and psychosis, obsessive-compulsive disorder (OCD), mood disorders, personality disorders, and paraphilias.

**Work-Up of Coprophagia**

Treatment modalities are constructed to address the underlying etiology for a disorder (see Table 1). As just described, deciphering the etiology of coprophagia can be a difficult task depending on the patient’s cognitive limitation and presentation. All patients should receive a thorough medical work-up upon admission to rule out any medical causes. Tests that should be ordered include complete blood count (CBC) with differential and iron studies (e.g., serum iron, total iron binding capacity [TIBC], and serum ferritin) for causes of iron deficiencies, comprehensive metabolic panel (CMP) and urinalysis (UA) for abnormalities causing cognitive impairment, thyroid stimulating hormone (TSH) for causes of affective instability, urine toxicology for causes of decision impairment, brain imaging for any malformations, and electroencephalogram (EEG) in cases of seizure history. If the patient’s medical work-up comes back within normal limits, then consideration of psychiatric causes is warranted. To help guide clinicians in diagnostic clarity, it is recommended to conduct an in-depth search for collateral information to better understand the timeline and presentation of the coprophagia. If the patient is communicative and medically stable, then neuropsychological testing can be helpful to determine the patient’s IQ score as well as to detect any psychiatric disorders. Although the medical and psychiatric work-up of coprophagia can be extensive, the findings are often negative or contribute minimally to understanding the etiology in most cases.

**Treatment**

In general, effective diagnosis and treatment of underlying medical and/or psychiatric conditions is the priority, because coprophagia often resolves with the improvement of other comorbid symptoms. Ing et al. (2011) completed a functional analysis in a six-year-old female with autism and demonstrated that her coprophagia was driven by automatic reinforcement (the behavior itself produces its own reinforcement); providing noncontingent access to alternative stimuli decreased coprophagia for her.

In cases where coprophagia is secondary to mineral deficiencies such as iron, altering the diet of the patient to include the missing nutrients has been shown to resolve the secondary behavior. Bugle and Robin (1993) wrote about three cases of individuals with profound intellectual disabilities, coprophagia, and nutritional deficiencies. In each case, the individual was given twice the doses of a daily oral supplement of an “elemental diet,” which would provide all the nutrients necessary for sustenance. The frequency of coprophagia was
When coprophagia is caused by mood and anxiety disorders, treatment of the underlying depression or anxiety can resolve the coprophagia. Beck and Frohberg (2005) did a case report on a 77-year-old male with mild intellectual disability who was evaluated for sudden-onset of coprophagia, which revealed an underlying depression that responded to sertraline 25 mg daily with resolution of symptoms.7 A Zeitlyn and Polivy (1995) case report showed that an adult male with normal cognitive function but who suffered from severe posttraumatic stress disorder and compensatory OCD behaviors could have remission in coprophagic behavior with the treatment of his OCD. The male had remission after initiation with a behavioral treatment program comprised of exposure and response prevention.16

Pharmacotherapy to treat comorbid conditions other than mood and anxiety disorders has been shown to be beneficial, as well. A Pardini et al. (2010) study showed improvement in a 29-year-old male with high-functioning autism on aripiprazole 15 mg daily dose after 4 weeks.13 Similarly, antipsychotics have been used to treat coprophagia in patients with schizophrenia. A Lingeswaran et al. (2009) study showed complete resolution of symptoms for a 19-year-old South Indian male with schizophrenia on olanzapine 10 mg daily with no relapse 3 months after initial evaluation.14 Another study conducted by Harada et al. (2006) described resolution of symptoms for a patient with schizophrenia who suffered from medication-refractory coprophagia on perospirone.15

The goal of any treatment plan is for the resolution of symptoms. If the various treatment modalities prove ineffective to decrease coprophagic behaviors, then consideration for long-term placement for continued treatment should be discussed with the patient and family.

**Conclusion**

Coprophagia is a variant form of pica that, despite being necessary for survival in other species, can be harmful.
in humans, causing diseases and infections in the body. It requires immediate assessment to determine the root cause of the behavior, which is either medical or psychiatric in nature. A full work-up will reveal if there are any disorders or deficiencies that can explain the coprophagia and lead to a treatment plan. Although coprophagia literature is limited, it appears to be related to mental illness, neurodevelopmental disorders, or mental impairments because cognitive limitations prevent individuals with these conditions from understanding the risks of coprophagia. In these instances, treatment involves a comprehensive analysis to construct a behavioral management plan that will decrease the coprophagia and replace it with a positive behavior. Additionally, coprophagia can be present in individuals with schizophrenia, which is a psychotic process that also affects executive functioning, reasoning, and decision making. Psychotic disorders are best treated with antipsychotics and have been proven to decrease coprophagia in prior case reports. Coprophagia is a critical abnormal behavior that should be investigated emergently to provide treatment. In cases where the mainstay of treatment does not provide improvement on an inpatient unit, individuals may need a longer course of treatment in state facilities prior to reintegration into the community.

### Take Home Summary

Coprophagia is a variant form of pica where individuals will consume feces. It is a complex behavioral disorder that can have various etiologies; because there are few reported cases, it presents a challenge in putting together an appropriate treatment plan. However, it is critical to determine a treatment plan because coprophagia is a dangerous behavior that can lead to infections and medical complications that can result in death.

### References


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Candace L. Giles, MD, is board-certified in general psychiatry. She holds memberships in APA, AACAP, and AAPL. She is currently completing her forensic psychiatry fellowship at Emory University and was previously with Johns Hopkins Hospital, Child and Adolescent Psychiatry.

Disclosure: Dr. Giles reports no biomedical financial interests or potential conflicts of interest.
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