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## **BMC JOURNAL**

The monthly newsletter of Behavior Management Consultants



# ADHD in women: Symptoms develop in childhood, but the signs are often missed

A national shortage of the drug Adder<mark>all has</mark> spotlighted a spike in demand for med<mark>ications that</mark> treat the disorder, especially am<mark>ong women.</mark> A growing number of adult women in the United States have been diagnosed with and are seeking treatment for ADHD, a development experts attribute to a long history of psychologists, parents and teachers overlooking symptoms in young girls. The national shortage of Adderall, a drug that treats attentiondeficit/hyperactivity disorder. or ADHD, is also spotlighting a spike in demand for medications that treat the developmental disorder. especially among women.

The gender disparity is clear on TikTok, where videos list "signs you might have ADHD" or women showing their messy rooms and sharing how they forget to do things, showcasing what it's like to live with the condition.

The hashtag #ADHD has over 18 billion views, and "#ADHDinwomen" has over 2.3 billion views. The one for men – "#ADHDinmen" – has just 8.3 million views. Many in the TikTok videos are careful to say they're not doctors. But the messages are undoubtedly connecting with women. For years, Melanie Kitto, a bread route distributor from Brighton, Colorado, thought about starting her own business but couldn't muster up the confidence. There were too many responsibilities involved - too many phone calls to make, appointments to keep and receipts to file.

"I didn't think I could keep on top of everything all the time," said Kitto, 41. "I mean, I lose my keys every day."

Things changed this past spring when Kitto received a formal diagnosis of ADHD from a nurse practitioner.

"When I got diagnosed and started meds, I finally felt like I could do this," Kitto said. "I believed in myself enough to run my own business." What is ADHD?

ADHD is complex а neurodevelopmental disorder that childhood. beains in Delaved diagnoses for adults, however, have been on the rise for years, experts say. In one analysis, the rate of adult ADHD diagnoses more than doubled from 2007 to 2016, according to 2019 Kaiser Permanente research on more than 5 million adults in Northern California.

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### There's a witticism, 'ADHD in young boys shows up in the classroom, but ADHD in young girls shows up on the playground.'

J. RUSSELL RAMSAY, UNIVERSITY OF PENNSYLVANIA

Even in other research on ADHD diagnoses in adults, there isn't clear data on the breakdown by gender. But support groups and doctors report more women seeking help.

"There's been an increase in women diagnosed with ADHD over the last several years because of an increasing recognition that it's not just the disruptive, impulsive behavior of boys that leads to a diagnosis," said Dr. David Goodman, a psychiatrist and an assistant professor at the Johns Hopkins University School of Medicine.

Membership with the



Attention Deficit Disorder Association.

or ADDA, a nonprofit education and support organization for adults with ADHD, more than doubled from 2019 to 2021, said board member Jolanda Kieda, an ADHD coach.

Kieda – herself diagnosed at 49 – suspects some 70% of ADDA's members and 80% of her own coaching clients identify as female. ADHD symptoms can vary widely, but young girls with the disorder tend to be more inattentive and distracted than hyperactive and impulsive. Research from the Centers for Disease Control and Prevention shows that boys ages 3 to 7 are more than twice as likely to be diagnosed with ADHD than girls.

That's because teachers and parents are more likely to recognize classroom behaviors and refer young boys for testing, said J. Russell Ramsay, director of the Adult ADHD Treatment and Research Program and a professor of clinical psychology in psychiatry at the University of Pennsylvania.

"There's a witticism, 'ADHD in young boys shows up in the classroom, but ADHD in young girls shows up on the playground," Ramsay said.

Dr. Ned Hallowell, a psychiatrist specializing in ADHD, said girls with undiagnosed ADHD are "the quiet dreamers who sit in the back of the classroom lost in their thoughts."

"Their brains are very busy, but they're not showing it with disruptive behavior the way boys can," said Hallowell, founder of The Hallowell ADHD Centers, which provides diagnosis, treatment and support groups at five locations across the country. A 2006 study in the American Journal of Psychiatry found that the ratio of adult men diagnosed with ADHD to adult women diagnosed with ADHD was about 1.6 to 1. According to experts, the breakdown has increasingly become more balanced.

"More women are presenting as adults relative to men, and more women are being diagnosed as adults relative to childhood," said Dr. Lenard Adler, director of the Adult ADHD Program at NYU Langone. "We certainly see that in our program."

### Covid's impact on ADHD diagnoses and meds

According to the health data company Trilliant Health, Adderall prescriptions for 22- to 44-year-olds rose 15.1% from 2020 to 2021, double the 7.4% rise seen from 2019 to 2020. This same growth wasn't seen for children or teens.

Covid lockdowns meant many parents began caring for kids at home, while at the same time trying to keep their jobs, adapt to remote work and protect themselves from Covid.

Big life changes can lead women to recognize overlooked or misdiagnosed symptoms, said Stephen Faraone. а research psychologist at SUNY Upstate Medical University. who studies ADHD and its genetic underpinnings. "The demand to regulate thoughts, behaviors and emotions increases around these changes," Faraone said.

Women, of course, weren't the only ones facing intense change. But psychotherapist and ADHD coach Terry Matlen said those with undiagnosed ADHD were among those hit hardest.

"A lot of women reaching out lately are falling apart and shutting down," she said.

Matlen, who runs a 36,500-member Facebook support group for women with ADHD, said the number of women reaching out to her for help has doubled since the pandemic started.



It will take time for public health researchers to gather, analyze and publish post-pandemic data, but the CDC reported a 344 percent increase in privately insured adult women who filled an ADHD medication prescription from 2003 to 2015.

Abby White, a 26-year-old from St. Petersburg, Florida, was diagnosed with ADHD in June. She spent most of her adult life convinced her intense mood swings were hormonal. Because White always pulled off good grades, her parents and teachers didn't suspect she might have ADHD.

About a year and a half ago, White's doctor referred her to a clinical psychologist, who gave her a series of tests and in-depth evaluations over the course of three hours before diagnosing her with ADHD.

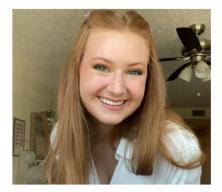
Psychologists and clinical social workers, among other professionals, can diagnose people with ADHD and provide counseling and behaviorbased therapy, but only psychiatrists medical doctors can and issue prescriptions. White is still waiting for an appointment with a psychiatrist. In the meantime, she received a prescription for the nonstimulant Strattera drug through а membership-based telehealth company last month.

## Telehealth and access to ADHD treatment

The proliferation of telehealth services during the pandemic, especially for mental health care, has played a big role in more women being prescribed ADHD medications, experts say.

ADHD stimulant medications such as Adderall are controlled substances regulated by the federal Drug Enforcement Administration. Since March 2020, the DEA has allowed doctors to prescribe controlled substances to patients they've never evaluated in person, a move that is scheduled to continue as long as Covid is considered a public health emergency.

"The positive to telehealth is that it has tremendously increased access to care," said Goodman, the psychiatrist from Johns Hopkins "Not only is it convenient, but it's relatively inexpensive."



Abby White said her ADHD symptoms became more apparent after college, when she found herself unable to keep a marketing job. Abby White

Telehealth services can offer comprehensive treatment over video calls, while others might involve short, impersonal surveys and chat boxes. However, with some telehealth companies, getting meds is "a little too easy," Goodman said.

"The downside to telehealth, when it comes to ADHD, is that many companies aren't doing comprehensive psychiatric evaluations," he said. "I would be very reluctant to prescribe medication to someone if I hadn't done a comprehensive review."

### Is it really ADHD?

Others worry that doctors working through telehealth companies may not have the training to identify misuse.

"If I have a 21-year-old college student coming in for a first-time ADHD diagnosis and that person doesn't have a clear history of childhood difficulties, is it possible they're faking the diagnosis to get the prescription stimulant?" asked Dr. Margaret Sibley, a clinical psychologist and researcher at the University of Washington and Seattle Children's Hospital.

Beyond screening tests and behavioral interviews, formal diagnosis requires a comprehensive medical history to rule out other conditions, NYU Langone's Adler said. It might also involve interviewing family members.

Sibley is also concerned that some women who relate to symptoms discussed on social media and decide they, too, have ADHD could be "barking up the wrong tree."

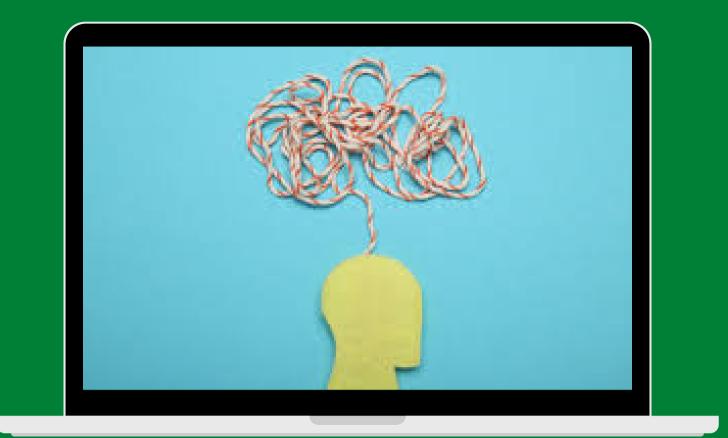
"It's really an opportunity cost danger," she said. "It could be they had an undiagnosed thyroid issue, and there could be other ways of medically addressing their symptoms that would be a better fit than a stimulant medication." Goodman warned about the potential for abusing the medications. "You can develop an addiction to them, whether it's psychological or physiologic," he said.

The drugs can cause weight loss and have been linked to higher risks of strokes, high blood pressure and other heart problems. These dangers are greater for people with existing heart conditions. Ultimately, ADHD experts are encouraged by adult women seeking treatment, in part because untreated ADHD can carry its own serious risks, including substance abuse, car accidents, eating disorders or divorce. In 2018, a study in the Journal of Attention Disorders found untreated ADHD could slash 13 years off of life expectancy, though diagnosis and treatment could reverse that danger.

Kitto credits the ADHD diagnosis for helping her move forward with her life. "When I first took the meds for ADHD, I was like, 'Holy cow, this is what people feel like?" she said. "I never felt like a normal person before."

## HAPPY NEW YEAR 31 HEALTHY HABITS + STARTS

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 Try this affirma- tion: "I release the old habit because I prefer the new habit. And this is the new me." additu.de/habit	2 Pair something you're dreading (folding laundry!) with something fun (Netflix!). additu.de/pair-up	3 Set a "go-to- bed" alarm 30 minutes before you want to be in bed.	4 Try a free, online note-taking app like Notion, Craft, or Evernote. additu.de/ note-apps	5 Sustain your focus and motiva- tion by breaking a large task into bite-sized chunks. additu.de/ add-focus	6 To weed out clutter, ask your- self: "Would I buy this today?" additu.de/ decluttering	7 Ask Alexa to remind you to put the clothes in the dryer.
8 Unplug totally from the Internet one Sunday each month. additu.de/unplug	9 Lay out tomor- row's outfit before bedtime tonight. additu.de/rituals	10 Find an accountability partner. Agree on a check-in schedule. additu.de/shadow	11 Try triangle breathing: Breathe in for four, hold for four, and exhale for six. additu.de/ breathing	12 Reduce procrastination by specifying where and when you're going to do a task. additu.de/reduce	13 Incorporate sunlight and sunset into your days to sync up your circadian clock.	14 Show curiosity in conversations by asking open-ended questions. additu.de/ask
15 Take 15 min- utes to go through the fridge and throw out expired items before each grocery run. additu.de/ throwaway	16 Practice saying "no" to commitments driven by guilt or 'shoulds.' additu.de/nope	17 Designate a day of the week for recurring chores—laundry on Tuesdays, meal-planning on Thursdays, etc. additu.de/chores	18 Check your personal email just three times a day. additu.de/ike	19 Name emo- tions as you feel them to speed their release. additu.de/ name-emotions	20 Ask yourself: What would my future self think of this decision? additu.de/ future-self	21 Stop. Think. Act. Recover. Try this to manage big feelings. additu.de/recover
22 Don't hide your most nutritious foods in refrigera- tor drawers.	23 Narrow down your to-do list to five things. Finish them. Repeat. additu.de/5things	24 Pay attention to what's working in your life—not what isn't. additu.de/ payattention	25 Set alarms to help pull you out of hyperfocus or distraction. additu.de/alarms	26 No excuses: Take 250-500 mg of omega-3 fatty acids every day. additu.de/big3	27 Use a binaural beats playlist to promote focus. additu.de/breathe	28 Stop compar- ing yourself to others. Just think about where you were 10 years ago vs. now. additu.de/ reflect
29 Volunteer with a school or another local organization to meet more neighbors. additu.de/ volunteer	30 Use the Pomodoro method: 25-min work chunks with 5-min breaks. additu.de/ pomodoro	31 Tell yourself you are enough, just as you are.	"Take a moment, be it weekly or daily, to make sure your time includes actions that support your vision for a simpler life." —Linda Roggli, PCC			



# Did ADHD Evolve to Help Us? A perspective that can help us manage ADHD today.

Attention-deficit/hyperactivity disorder (ADHD) is often described by psychiatrists as a neurodevelopmental disorder, one marked by inattention, disorganization, and impulsiveness. In contrast, some psychologists, psychiatrists, and anthropologists see ADHD not as a deficit or dysfunction but as a distinctive cognitive style, one with its own strengths and benefits.

A recent review of the evidence by child and adolescent psychiatrist Annie Swanepoel and colleagues (2022) makes the case for the latter. They argue that ADHD traits likely evolved in early human environments that rewarded exploration, novelty seeking, and movement, such as nomadic and migrating communities.

If they're right, this has tremendous implications not only for education but also for how we talk and think about ADHD and other supposed "neurodevelopmental disorders." Instead of seeing ADHD as a deficit to be fixed, we should see it as a gift to be nurtured. Evidence for the Evolutionary Thesis

A little over a decade ago, anthropologist Dan Eisenberg and colleagues gathered evidence for the evolutionary thesis. They studied a largely nomadic population in Northern Kenya, the Ariaal. Traditionally, the Ariaal are nomadic pastoralists, but a minority have settled into towns and rely more heavily on agriculture and the market economy.

What Eisenberg found was that, in the sedentary community, those who had ADHD traits tended to be less well-fed and healthy than their non-ADHD counterparts, as measured by their body mass index (BMI).

Incredibly enough, however, among nomadic Ariaal, those with ADHD traits tended to be better fed and healthier than non-ADHD counterparts. He speculated that their fluid attention style would make them more vigilant to potential threats to their herd, to signs of disease or malnutrition, or to sources of food or water.



ADHD traits, such as novelty seeking, exploration, and vigilance, might have been an evolutionary benefit to our ancestors who had to move from place to place in search of new resources while being attentive to threats.

### ADHD and Early Human Migration

A second line of evidence for this evolutionary picture comes from the study of early human migrations. This research was led by Chuansheng Chen and colleagues in 1999 and corroborated in 2011.

The conventional view of human evolution is that modern humans evolved in Africa about 200,000 years ago. About 50,000 years ago, many began migrating out of Africa to populate the rest of the world.

Chen found, based on genetic methods, that ADHD traits were overrepresented in these early migrants. People with ADHD traits likely spearheaded the move to populate the earth. It's unclear whether that's because people with those traits were more likely to initiate migration, or whether they were better able to adapt to new places.

In particular, Chen studied the distribution of a certain gene variant that is consistently correlated with ADHD traits. He found that this gene variant, which codes for a subtype of the brain's dopamine receptor, tends to be more frequent in contemporary populations with a longer migration history.

Additional evidence for the evolved character of ADHD has come from a 2002 study showing that this particular gene variant has been under "positive selection" pressure for the past 50,000 years. What that means is that natural selection has worked to increase the frequency of the gene associated with ADHD, though it's not clear whether that is still happening today.



### **Evolutionary Mismatch or Complementary Cognition?**

The evolutionary account of ADHD supports what many psychologists have long suspected: Kids with ADHD tend to thrive when they're given more opportunities for movement and exploration than when they're compelled to sit still for several hours a day.

Based on this sort of research, Swanepoel and colleagues have used the notion of evolutionary mismatch to describe ADHD. A mismatch happens when a trait evolves in one environment because of a benefit, but then the environment changes in such a way that it's a detriment.

Perhaps ADHD traits were useful in environments involving nomadism and migration, but in modern society, with its demand on having to sit for hours a day and remain relatively stationary, it is a detriment.

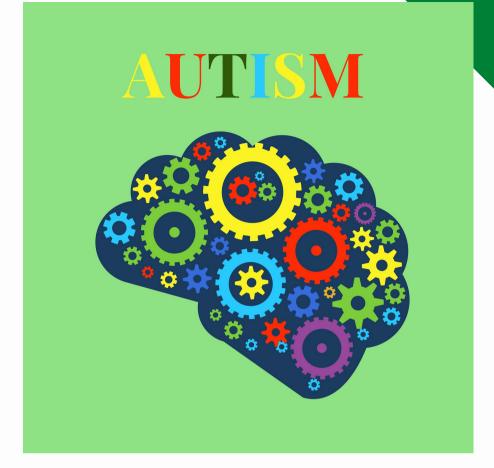
The idea of an evolutionary mismatch might be misleading for thinking about ADHD. That's because it might lead us to see ADHD as a kind of "vestige" of an earlier way of life. This might cause us to downplay or overlook the present-day value of ADHD traits.

A concept I find to be more useful here is the notion of complementary cognition, developed by Helen Taylor, complex systems scientist at the Universities of Cambridge and Strathclyde. Think about a termite colony. Termite colonies have three different castes, whose bodies are designed quite differently. Those differences benefit the group.

Taylor has suggested that conditions such as ADHD, dyslexia, and autism might work the same way. From evolution's perspective, these aren't dysfunctions or diseases. They're differences that make communities thrive.

The notion of complementary cognition raises an urgent question for our society. How can we restructure our educational systems to ensure that kids with ADHD traits can thrive rather than be left behind?

I believe that research such as this is helping psychiatry move out of a paradigm that sees only deficit and dysfunction in mental disorders and toward one that also sees function and purpose.



# Investigators develop new therapy for autism subtype

A team of Northwestern investigators led by Peter Penzes, Ph.D., the Ruth and Evelyn Dunbar Professor of Psychiatry and Behavioral Sciences and director of the Center for Autism and Neurodevelopment, has developed a new therapy that could treat Phelan-McDermid syndrome, a subtype of autism spectrum disorder (ASD), according to findings published in Molecular Psychiatry. According to the Centers for Disease Control and Prevention, one in 44 children in the U.S. have been diagnosed with ASD and each patient presents diverse clinical and developmental symptoms, which may include delayed speech, motor skills and learning skills, epilepsy, poor eating and sleeping habits, and gastrointestinal issues.

Phelan-McDermid syndrome is known to be caused by a specific genetic mutation in SHANK3, a wellknown ASD candidate gene. Due to the heterogeneity of ASD, the development of effective targeted therapies has been extremely challenging, leaving patients with treatment options that improve disease management.

Based on the urgent need for new therapies, Penzes' team developed a derivative of an insulin-like growth factor-binding protein, IGFBP2, which is found in structures of the brain affected in ASD and has been shown to improve neuroplasticity and cognitive functions. In the current study, the investigators the IGFBP2-derived administered peptide, called JB2, to mice with SHANK3 mutations. Through advanced brain imaging, they found the drug that improved behavior neuroplasticity. impairments and cellular processes in the mices' brains.

These changes directly were correlated with improvements in the mices' learning and memory skills, motor function and communication ultrasonic vocalizations. through findings that could be translated to social behaviors in humans. according to Penzes.

"In patients with autism, speech doesn't develop at all, or it develops very late, or it's very simplified, so these ultrasonic vocalizations in mice are thought to somehow model that in mice," said Penzes, who is also professor of Neuroscience and of Pharmacology.

Using electroencephalography to measure the mice's brain activity, the team also discovered that JB2 normalized neuronal excitability, or how neurons respond to stimuli with an electric charge, and seizure susceptibility. While the drug is still in early stages, Penzes said, theoretically, routinely administering the drug into patients' bloodstreams while they are young either through regular injections or in pill form would be ideal.

"Because this is a neurodevelopmental condition, the brain still changes after birth, even into adulthood. The earlier one could intervene, the better. So, it would be preferable to start it as a pediatric medication, but those are more difficult to get approval for," Penzes said.

Penzes noted that initial clinical trials would involve participants with Phelan-McDermid syndrome and if successful, could eventually expand to include patients with other types of ASD.

"The assumption is that similar changes are happening in the brains of patients with other types of autism and in Phelan-McDermid syndrome, but these patients would have a better response," Penzes said.



**More information:** Jeffrey S. Burgdorf et al, An IGFBP2-derived peptide promotes neuroplasticity and rescues deficits in a mouse model of Phelan-McDermid syndrome, *Molecular Psychiatry* (2022). DOI: 10.1038/s41380-022-01904-0

Journal information: Molecular Psychiatry 🖸



# Is too much screen time bad for kids? It's complicated

During school breaks and holidays, children tend to increase their recreational screen time. As parents, we tend to worry, but do we need to? We asked UCSF Benioff Children's Hospitals' Jason Nagata, MD, assistant professor of pediatrics and screen time researcher, about links between screen use and illnesses such as obsessive-compulsive disorder and conduct disorder – as well as how children can use screens wisely.

### What does research tell us about screen time's effects on children?

The more time teens spend on social media, the less connected they feel to others. They are also more likely to compare themselves to unrealistic body ideals, which can develop into an eating disorder. Binge watching shows can lead to binge eating, resulting in weight gain and guilt.

For preteens, excessive screen time can lead to conduct disorder and oppositional defiant disorder, which are behavior disorders. A recent study found that playing video games and watching YouTube videos is linked to developing OCD (obsessive-compulsive disorder).

### Is YouTube more harmful than TV shows or movies?

YouTube uses algorithms to keep you watching, which can hook kids into a narrow subject area that may not be healthy, such as content about dieting or mean pranks. Historically, with TV and movies, the time and content was set – you could only watch the show you like on Sundays at 8 p.m. Even now, with on-demand, you can binge, but the content is curated and professionally done, so there is quality control. On YouTube, anyone can post.

### And kids can watch other kids doing things on YouTube. Is that significant?

think so. In traditional Hollywood movies and TV, you only see a limited number of children who are celebrity actors. But on social media and YouTube, anyone can become an influencer, and that adds a layer of pressure and even stress to be like them: Maybe \*I\* could become famous or make lots of friends too.



#### How much screen time do you recommend?

The American Academy of Pediatrics used to recommend less than two hours for ages 5 and up. Now they are moving away from giving specific hours, because the reality is that most kids spend far more than two hours a day on screens, and not all screen time is equal. Now they recommend creating a plan based on what makes sense for your family given your kids' screen habits and your family's situation.

### What should a screen plan include?

It might include a daily time limit on overall screen use, or on certain types of screen use such as video gaming. Consider setting screen-free times, such as before bedtime or at family meals, and "screen-free zones," such as bedrooms and bathrooms. Screens in public areas are easier to monitor. And of course, there are also parent controls on devices that limit time on screens or restrict explicit content.

The American Academy of Pediatrics and Common Sense Media can help parents create media plans.

### How often should parents talk to their kids about screen use?

Natural transition times, such as holidays and summer breaks, are good times to set expectations about screen use. Parents can create a schedule for that temporary time period, and it can include solo use but also ways to connect and interact such as playing online games together as a family, or making video calls to relatives who live far away.

## So the takeaway is: Keep an eye on what your kids are doing and how they are reacting, and modify their use accordingly?

For sure. Screens themselves aren't inherently bad and they are here to stay. We need to learn to live with them. You can still watch movies and have great discussions with friends about them. You can interact with people by video in real time. It's more about how screens are making you feel, and whether screen time is displacing things like physical activity.

It's important to know that if you or your child need help with screen addiction, you should consult a pediatrician, family doctor or mental health professional.



IMPORTANT NUMBERS	IF YOU NEED HELP, PLEASE MAKE THE CALL	GET THE SUPPORT YOU NEED	YOU ARE NOT ALONE
National Suicide Prevention Hotline: 1-800-273-8255	National Domestic Violence Hotline: 1-800-799-7233	Runaway and Homeless Teen Hotline Help: 1-800-246-4646	
Coalition for the Homeless: 212-776-2000	Drug and Alcohol Hotline: 800-622-2255	Food and Hunger Hotline: 866-888-8777	- Aller
Homeless Services Hotline: 212-533-5151	Rape Crisis Hotline: 212-227-3000	National Child Abuse Hotline: 1-800-422-4453	
National Teen Dating Abuse Helpline: 1-866- 331-9474	Crisis Lifeline for LGBTQ Youth: 1-866-488-7386	Boys Town National Hotline: 800-448-3000	
	American Pregnancy Helpline: 866-942-6466		

Behavior Management Consultants believes that, "No Child is Born Bad". Our mission is to educate, mentor, and assist parents, caregivers, and professionals to cope with, socialize, and identify values important to today's youth.

The goal is to serve public and private social service organizations including, but not limited to:

- Residential Treatment Facilities (RTFs)
- Juvenile Detention Centers
- Residential Treatment Centers (RTCs)
- Public Schools
- Community Based Organizations (CBOs)

We are confident that we will meet our goals thereby ensuring that our clients are being kept abreast in the ever-changing landscape of Human/Social Services.

### <u>Quote of the Month</u>

"Many people don't focus enough on execution. If you make a commitment to get something done, you need to follow through on that commitment."

- Kenneth Chenault

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