

## An exploration of abusive, unnecessary research conducted in the Journal of Applied Behavior Analysis

Let me start this post by telling you all that reading the journal article I'm about to share made me extremely upset, to the point that I started hitting myself in the head. So needless to say, if you're an autistic person who went through ABA as a child, you're probably gonna want to keep scrolling. If that wasn't clear: consider this paragraph a GIANT content warning.

Now, let's get into it. What am I talking about? I'm talking about a [study](#) that was conducted in 2018, and published in the Journal of Applied Behavior Analysis. The study is called **“Sound attenuation and preferred music in the treatment of problem behavior maintained by escape from noise.”**

Here are the basics of what they did in this study:

They used two autistic children, Lana (age 6), and James (age 15) as test subjects. *The goal of the study was to see if music-playing & noise-canceling headphones would decrease aggressive and self-injurious behavior in noisy environments.* Any random autistic person off the street could tell you that yeah, *of course* noise-canceling headphones will decrease aggression in noisy environments. The aggression is a result of overstimulation, so when the person stops being overstimulated, \*gasp\* the aggression goes away. What a revelation! /s

But apparently, the therapists who conducted this study were not aware of that information. Instead, they viewed aggression and self-injury as “problem behavior” that was “reinforced” by the children’s ability to escape the noise when they exhibited the behavior. And their reason for using music-playing and noise-canceling headphones in this study wasn’t to reduce overwhelming sensory input, it was to see if the headphones would decrease the likelihood that the kids would “act out” and try to escape the environmental noise.

So the premise that this study was built upon is fundamentally flawed. And honestly, it’s *baffling* to me that in 2018, the authors of this study were still viewing self-injury and aggression due to sensory overstimulation as intentional, manipulative behavior to escape the situation. But that’s the problem with behaviorism, after all. It only examines people’s actions, not the root causes.

Now, let’s get into what they actually said about these two children:

“Two individuals referred for the assessment and treatment of aberrant behavior participated. Lana, a 6-year-old female diagnosed with pervasive developmental disorder,

[ADHD], and obsessive-compulsive disorder... [and] James, a 15-year-old male diagnosed with autism spectrum disorder and profound intellectual developmental disorder...

“We treated both participants’ problem behavior under other environmental conditions prior to the study. However, caregivers reported that additional problem behavior continued to occur in noisy environments. Lana’s mother reported that Lana displayed problem behavior in loud restaurants and sporting events. James’ mother reported that James displayed problem behavior when she and James’ father argued loudly in front of him.”

Okay, deep breath. First of all, the definition of the word *aberrant* is, “deviating from what is considered proper or normal.” So the behavior they’re “treating” here is basically anything these kids do that isn’t standard neurotypical behavior. And if you’re autistic, I’m sure you can see exactly what the real problem is: **these kids’ sensory and emotional needs aren’t being met**. Somehow, it’s the autistic kids’ fault that they get upset and overstimulated when they’re forced into loud & aggressive situations?? I’m genuinely stunned by the fact that somehow *James* is the “problem,” when his parents keep arguing with each other in front of him! *Their* behavior should be treated!

But of course, the study gets more upsetting. As background, let’s go through the physical setup of the experiment:

“We conducted all sessions in a 3 [meter] by 3 [meter] padded treatment room equipped with a therapist, a stereo system, and two chairs.”

“Trained observers recorded data on the frequency of aberrant and adaptive behaviors in the presence of noise using laptop computers from behind a one-way observation mirror.”

Okay, so: the kids got put into a room with an ABA therapist and a stereo system, while being observed by strangers they couldn’t see, who were on the other side of a one-way observation mirror. Kinda like Eleven in *Stranger Things*. But I digress...

There were five different experimental conditions (scenarios) that the therapists created:

1. No-noise (Lana only): during this condition, the therapists were completely quiet, and didn’t play any sounds on the stereo.
2. Escape from various noises (Lana and James): during this condition, the therapists played sounds on the stereo system, unless the kids exhibited “target” behavior (aggression or self-injury). Whenever the kids started hurting themselves or others, the therapists turned off the stereo for 20 to 30 seconds, but then resumed playing it.
3. Escape from argue (James only): during this condition, two therapists who James knew had a staged argument with raised voices. Once James started hurting himself, the therapists paused for 30 seconds, but then continued arguing.

4. Standard headphones and music (Lana only): during this condition, the “escape from various noises” scenario was repeated, except this time Lana had unrestricted access to non-noise canceling headphones that played her favorite music.
5. Noise-canceling headphones and music (Lana and James): just like condition #4, the “escape from various noises” scenario was repeated, except this time both kids had unrestricted access to noise-canceling headphones that played their favorite music.

And before we discuss the results, here’s one quick thing y’all should know:

“For Lana we set the volume of the noise at 101 decibels... for comparison, all of the following produce an approximate 100 decibel acoustic level: a jet take-off at 305 meters, use of outboard motor, power lawn mower, motorcycle, farm tractor, jackhammer, garbage truck, Boeing 707 or DC-8 aircraft at one nautical mile before landing.”

This is the part where I started hitting my head. **Are you kidding me!?** They put an autistic 6 year old girl without protective ear coverings in a room with a stereo system that played at the same volume as a JET ENGINE?? Construction workers wear earplugs and ear defenders when they’re working with jackhammers!! And they put a *child* with *known auditory hypersensitivity* in a situation where they *knew* she would become extremely distressed... for what? For science!?

This is what they wrote about that in their section about the study’s “limitations.”

“According to the World Health Organization, the 101 decibel noise level used in the escape-from-various-noises condition for Lana could be potentially harmful with extended exposures. The Occupational Safety and Health Administration (OSHA) begins to set limits at noises above 85 decibels.”

They then went on to say that “noise exposure for Lana never exceeded the recommended maximum exposure time of 15 minutes.” So sure, the study was technically within the boundaries set by government organizations. **But that doesn’t mean it wasn’t incredibly harmful.**

The results of the study were *entirely unsurprising* to anyone who knows anything about autistic people: both kids started injuring themselves or others during the conditions where they were exposed to loud noises and/or arguments. When they were given headphones with music but no noise-canceling qualities, their aggression decreased only a little bit. **When they were given noise-canceling headphones that played music, their aggression decreased dramatically.**

And the reason for that is not, as the study suggested, that “[noise-canceling] headphones and preferred music functioned to abolish the value of escape as a reinforcer, and decrease behavior that was previously evoked by noise and reinforced by noise removal.” **The reason is that the noise canceling headphones blocked the overwhelming auditory stimuli, which calmed the kids down because they weren’t being overloaded anymore.**

It’s so f-ing simple. And it makes me so angry that autistic people’s “aggressive behavior” is still seen as a manipulative tactic that gets encouraged when our caregivers remove us from overwhelming situations. Our “aggressive behavior” is an involuntary response to our bodies being overloaded with painful stimuli. *That’s it.* These so-called therapists wouldn’t have to torture kids in studies anymore if they would just listen to autistic people about our experiences.

To all you ABA therapists out there: listen to autistic people when we tell you that what you’re doing is wrong. Listen when we tell you that you’re participating in a system that does not value us as full human beings, unless we conform to NT ideals and stop exhibiting “aberrant behavior.”

**This has to stop.**

~Eden 🐸