

Lauren 00:06

Welcome to the LDA podcast, a series by The Learning Disabilities Association of America. Our podcast is dedicated to exploring topics of interest to educators, individuals with learning disabilities, parents and professionals to work towards our goal of creating a more equitable world. Welcome everyone to the LDA Podcast. I'm here with Dr. Jessica Broitman and Dr. Jack Davis. They're both coauthors of "Nonverbal Learning Disabilities and Children: Bridging the Gap Between Science and Practice." So thank you both so much for being here.

Dr. Jack Davis 00:37

Welcome.

Dr. Jessica Broitman 00:38

It's a pleasure.

Lauren 00:39

So just to start off, could you guys give our audience just a little bit of your backgrounds?

Dr. Jessica Broitman 00:44

So I've been involved in nonverbal learning disorders for about 25 years, something like that. 20 something years, Jack a little longer than me. I'm sure he'll tell you about that. And I've been very interested in understanding everything I could about it, where it comes from, how do we treat it? What are the best techniques for working with kids? How do we understand how to research it? And my background is that I'm a psychoanalyst, and I've been in practice for many years in that world. And this was a shift for me into being very involved in working with families who have children who have learning disabilities, which led me to the Nonverbal Learning Disorder Project, the NVLD Project, where you met me.

Dr. Jack Davis 01:38

I started out as a school psychologist, and its clinical training, and worked a lot of different places. But where I came into contact with NVLD was through Byron Rourke, who's one of the godfathers of NVLD, and went to some of his workshops and got interested. And then I wound up running a school for kids with learning disabilities. And as typical, it was primarily for dyslexic kids, because that's what everybody knew the most about. But I started hearing stories about kids who are being dumped in toilets and trash cans and bullied and started to take a closer look at those kids and tried to build kind of a subroutine program for them, and got involved with the predecessor to the NVLD Project. And I went to a bunch of their conventions and presented about what we were doing and have kind of stayed with it ever since. Just because there's an underrepresented group and part of our schtick has been trying to get the word out there about these kids.

Dr. Jessica Broitman 02:49

So we started trying to get agreement on a definition, which turned out to take us 10 years to get the main players around the world who are studying this disorder, to finally agree on a criteria for research. Because we realize that unless we were all talking about the same thing, and researching the same things, we couldn't really make any conclusions about what worked or didn't work. And we've gone on

to write many, many books since that first book that you're referring to, I think we're on five books and a bunch of chapters in other books with collaborators around the world.

Lauren 03:26

So I know you just mentioned that it took a while to get the definition of NVLD down. So just so we have a starting point to jump off of, what is the definition of a nonverbal learning disability?

Dr. Jessica Broitman 03:37

Well, it's a neurologically based learning disorder, that we now can tell you that we believe it affects 3% of the population. One of our most recent research work with Amy Margolis was on prevalence and trying to actually figure out how many kids in the world or at least we now know, in North America are likely to have it. And it's about 3% of the population, which was astounding to us, we had assumed it was much less. And it was very compelling to realize so many people were affected by it.

Dr. Jessica Broitman 04:12

And what kind of challenges that our kids have are visual, spatial, organizational and executive functions, academic, motor, and social skills, but not social skills in the same way that you think about it for kids on the autistic spectrum. And we consider the visual spatial and the executive function deficits the primary components of NVLD. And just to give you a little bit more of fleshing out what it might look like, the motor deficits could be poor coordination, some early balance problems and difficulty with graphic motor skills. And we think of it as a spectrum disorder. So they can have mild symptoms of some of these categories, and not so mild symptoms of others and it can be really quite different from child to child. And you can also have some of these characteristics, but not to the extent that it causes a functional impairment. So you might not actually be eligible for any kind of accommodations or modifications, even though you have some of these characteristics.

Dr. Jessica Broitman 05:14

And there are a lot of strengths. And I want to make sure to mention what they are. These kids have great verbal skills, they very frequently have very early speech and great vocabularies. They can be early readers and have good early spelling skills, especially with rote learning skills, where there's factual things that you can recall outside of necessarily understanding the context, they can have fabulous memories, they can remember all kinds of details almost perfectly from stories, and then express themselves and tell you all about it in great detail or quite eloquently. And sometimes, they'll get those early reading skills, spelling skills, and the challenges don't necessarily come up too much later in their life.

Dr. Jessica Broitman 05:59

But the deficits or the challenges are usually in the visual spatial reasoning area, they have a lot of problems with visual recall, image formation, spatial perceptions, and executive functions. Sometimes they'll have problems with awareness of where they are in space bumping into people, not knowing how close to stand to someone. They're often seen as messy eaters, sometimes they'll just, they don't always quite know where they are in space. graphs and charts are frequently problematic for them. Their math skills are often a little bit difficult for them, they have trouble with fractions, especially geometry and word problems. And you see a lot of difficulties in their executive function skills, decision

making, planning, initiation, priority sequencing, emotional regulation, problem solving, impulse control goals, there can be quite a bit of a challenge in that particular area. And sometimes in language, even though they are very eloquent, they may have trouble understanding the sophistication of pragmatics of language. So you might see kids not quite understanding jokes, what you're saying, humor, it can be a bit of a problem. Writing, in terms of handwriting, can be a problem. Their reading comprehension can be a problem, especially in more advanced work. And sometimes there's quite a bit of social skill deficits with understanding nonverbal communication, transitions, novel situations, social judgments, social interaction, peer relations, reading social cues, test instructions, and interpretations. And those idioms, humor and sarcasm are not usually easy for them to pick up. And gross motor skills, you might say that they have problems with throwing balls, riding bikes, doing things in gymnastics, or fine motor skills, scissors, shoelaces, pencils, things like that, you might see problems. And some of our kids have problems in the sensory modes, with hearing, taste, tactile, smelling, they just may tend to have more sensitivities to sensory issues.

Lauren 08:26

Okay, so that sounds like there's a lot of components that can make up NVLD. So how can you recognize or how can somebody recognize that maybe this is NVLD? What are some signs that you could pick up on either in the classroom or at home? And how does this differ from another learning disability? I know there's a lot of overlap with other learning disabilities. So how do you differentiate it?

Dr. Jack Davis 08:49

One of the things that's a little bit different about NVLD, especially apart from ADHD and autism, is it was really found, discovered...whatever we do with these things, through neuropsychological assessment, not behavioral observation. And so one of the difficulties we've had, especially getting it working together in the DSM, is the DSM is a behavioral disorder book, not a neuropsychology book. So we've been trying to translate the neuropsychological data into things that could be observable behaviors. And that's the stuff that we worked on to submit to the DSM. We've submitted one draft to the DSM, got some feedback and we're collecting some more data.

Dr. Jack Davis 09:42

Again, the core is the visual spatial. And you can see that within early development, usually the first person who comes into contact with NVLD kids are an occupational therapist or physical therapist, because they're the ones that notice where the difficulties are. Keeping track of and organizing things to the executive function, their rooms can be a little messy at times, or they can seem a little bit obsessive because they can't remember where things are so they have to put them in the same place all the time. So that can confuse things sometimes. One of the reasons they tend not to get diagnosed or found out early on is because the executive function demands, so the kinds of math and executive function demands that they have difficulty with often don't occur until fourth or fifth grade, where dyslexic kids usually get screened in kindergarten or first grade if we do it right, which we don't usually. And, as Jessica was saying, the idioms of pragmatic language are tough, advanced reading comprehension skills, and from summarizing, bringing things together, kind of that sort of piece visualization. These kids aren't visual thinkers.

Dr. Jack Davis 11:10

You can see some social skill stuff, and there's still some disagreement. Some people will still kind of put NVLD on the autism spectrum, not people who are NVLD people, but people who are autism people, we tend to think of it as coming from different causes. You know, that's one of the things about neuropsychology is you're really looking at the underpinnings of the behavior, not at the behavior. And so when we look at autism, you know, we usually think of theory of mind difficulties, kind of putting themselves in the person of somebody else. Whereas with NVLD, we tend to think of body language and being able to track visual spatial facial features and the way that they get miscommunicated.

Dr. Jack Davis 11:55

And also a way where they have difficulty with pragmatics because they're so easy to tease, you know, what you say is what they hear. And if you do it with a tone of voice or a roll of the eyes, they don't pick that stuff up. And that can get them in trouble and get them teased a lot. And then, probably not different than a lot of kids with nonverbal, dyslexic or ADHD issues is they tend to suffer secondary emotional issues, they get anxious because they don't know what's going on, they get depressed because they fail, they can have reduced self esteem. And so like pretty much everybody else, it would be nice to find earlier ways to identify these kids. So they don't have three or four years of struggling under their belt before we understand what's going on for them. But I think those are probably some of the things that parents could observe. And hopefully talk to pediatricians, and pediatricians are frontline on this stuff. So we've, we hope we get things out to them as well, if they have time to read about something that's not measles, or you know, sore throats. Because if we can get these kids out early, we can stop some of the secondary socio emotional consequences.

Dr. Jack Davis 13:25

And just one last thing about it is, the other thing that we're working on, the whole group, the Columbia group is working on, is really seeing it as a developmental disorder not a learning disability, because it's more than just can't do math or can't do handwriting, there's all these other things that impact the child and family and impact the child in school and wherever else the child goes, where the child goes the child goes with them. Right? So that sort of thing. That's sort of a quick, another quick review of what Jessica said...

Dr. Jessica Broitman 13:58

We wanted to give you a developmental look, though, of what these kids might look like at various stages of their life. So if that'd be okay, we'll take you through some ideas that we have about it. And it's also a disorder that has a lot of comorbidity with it. I know Jack wanted to mention that.

Dr. Jack Davis 14:22

Yes, the comorbidity rate, our best guess of the comorbidity rate with ADHD, if you looked at the different studies, is somewhere between a third to two thirds, which is a fairly significant level of comorbidity. These kids develop diagnosable anxiety disorders usually 10 to 15% of the time, obviously, math disorders, because that's part of the thing so that they can qualify under specific learning disorders format frequently.

Dr. Jessica Broitman 14:53

So when you look back at a child with NVLD, and again, we have to remember that there's no one way to have NVLD, every kid is going to have a different set of strengths and weaknesses. But in general, when you look back, what you hear people say about their kids when they're infants is that they never moved, all they did was talk. You know, there's many stories that you hear about house proofing, and child proofing your house like crazy for not because the kid never moved, they were essentially sedentary. They did not explore physically, but they did it by asking questions, talking about things, pointing, shouting, and very early verbalization. However, there's a great deal of discrepancy between the early verbalization and how precocious they seemed, and their motor development. So they often would be the kid who would not go to baby gym, who was not going to do much puzzles, not play, not do coloring books, no drawings that's going to be pretty notable.

Dr. Jessica Broitman 16:01

As they go on into early school schooling, they're going to, you're going to start to notice math problems first, that's the most common thing that we'll see. And certainly, by later schooling, it really becomes apparent often in the very early years of schooling, it's mostly about memorization and rote. And they can do fine as we mentioned during that time, but as it becomes more complicated, and we have to put more things together and understand the kind of mathematically dimensional components to it, it gets a lot more complicated. And by third grade...

Dr. Jack Davis 16:39

Simple stuff, I mean, just, you know, putting the numbers where they're supposed to go and that's kind of the disorganization around too many numbers. And they can become a little overwhelmed and distracted by that sort of stuff as well.

Dr. Jessica Broitman 16:53

So by third grade, fourth grade, you're starting to notice that it's going to stand out even more, it's pretty consistent that our kids have problems in the math area. In particular, that's a pretty consistent finding. And some of them are going to need help with the non phonological reading issues and tracking. And then their social problems in early schooling years are going to start to show up, they're going to start to be the kids who aren't necessarily going to be invited to other kids birthday parties. Some schools make it a rule, you have to invite everybody. And unless that rule exists, a lot of our kids are going to find themselves on the sidelines, least likely to be picked for the gym class, which is of course going to start developing some serious psychological issues, which really need to be addressed because they're starting to feel like there's something wrong with them and they don't know why. And because they're so verbal, everyone has these expectations that they're brilliant, because they seem so advanced. And it's starting to set up a pretty dangerous combination of factors.

Dr. Jack Davis 18:01

Quick aside, in play, since they're not very good with the interactive and social pragmatic stuff, they tend to do parallel play for a much more extended time. At the school that I ran, I remember talking to two kids who are kind of running around with lasers and stuff like this, you know, like across the playground from each other. And I asked each of them, what are you doing? And we said, well, we're playing Star Wars. And it's like, well, you're a hundred yards apart, you know, what is this? But they were having fun, because they had a friend that they were playing with.

Dr. Jessica Broitman 18:34

And it's fine, but it's gonna start to look a little different. They're going to look like they can't do simple tasks like cutting with a scissor, using crayons and pencils. Teachers are going to notice this, that they're not the same as their typically developing peers. And then as you get on into later, elementary and middle school, as academic subjects are becoming more abstract, and more independent work is being expected, they're going to stand out even more and look as though they're having greater difficulties, their capacity to make quick transitions is going to be impacted, and they're going to look stranger, they're going to look like they're struggling more. The executive function problems that we mentioned, are going to come into bear much more because they're needed much more and much more demands being placed on them. The social skills have much more demands by sixth grade. Kids are really developing peer relations in a much more complex and sophisticated fashion and our kids tend to run a few years behind in their development, and they're getting more anxious and uncomfortable, which then makes everything more difficult and keeps adding on and getting harder when you get off to college.

Dr. Jessica Broitman 19:55

If you've kept their self esteem intact, and help them with dealing with their different struggles, they can do way better. In college, you have the option of choosing which subjects that you would like to be involved in, and our kids do way better when they get to stay away from the math and sciences that might be more problematic for them. And if they're not overwhelmed by the executive function, challenges of colleges, they can do quite well and have successful happy lives going forward. The trick is to make sure you treat the psychological issues, as well as accommodate the academic issues.

Lauren 20:37

You touched on it a little bit here before, but why isn't NVLD in the IDEA or the DSM-V?

Dr. Jack Davis 20:44

Well, it's not in the IDEA because it's not a recognized diagnosis. So that's a little tautological there. But you can certainly get a specific learning disability diagnosis through some of the symptoms. So they can have a math disorder, they can have a writing disorder, they can have a pragmatic speech, social pragmatic disorder. So there are different ways not in and of itself, is it eligible for IDEA, but if the symptoms are severe enough, they would be eligible for IDEA. As for the DSM, it's just been harder to get people together to come up with a definition. And if you know DSM, you know, that we went from autism and Asperger's to spectrum disorder. And so there was a lot of argument around that through a lot of people. And it was Melodien used to call them clumpers and splitters. You know, there are people that want to put as many kids together as they can into one disorder. And then the splitters are the fine tuners and say, well, this little thing is a little different than this little thing. And so with that shift to DSM-V, more clumping happens. So towards the end of Byron Rourke's career, he worked with autism people at Yale, and also began to wonder whether NVLD may have been part of Asperger's. So that got confounded a little more there.

Dr. Jack Davis 22:40

So we always think of it as the blind man and the elephant, kind of depends on where you touch what you think an elephant looks like. And what we're trying to do is to get everybody to see the elephant. And to generalize from that. And, you know, we'll see, it certainly makes it much more difficult for parents to not have it as a recognized disorder, number one, because they don't hear about it, and they don't get sent for help around it. And number two, insurance won't cover it. And so trying to get these kids the help they need becomes more problematic. And I think that's one of the big pushes for us is to try to make sure help is affordable. Wherever the kid needs it, not just for people who can afford a lot of money to do all the different things. Because if you think of all the symptoms these kids have, that's a lot of professionals. And it's a lot of money. And if you were to do it, right, and this is one of Jessica's big pushes, you really need a collaborative team. And to designate who's going to manage it, and when you're going to talk about it is more time to collaborate. And I don't know if you've ever sat in an IEP, but one of the things that I struggle with sitting in IEPs is to try to get them to write collaboration time into the document. Because if it's not there, it's less likely to happen. And so just a lot of time, money, and professional knowledge that goes into trying to help these kinds of kids that if it were better known, and we were all speaking the same language, we think that there would be fewer and fewer kids that would slip through the cracks.

Lauren 24:31

When would you be able to tell us about your work to get NVLD into the DSM-V?

Dr. Jessica Broitman 24:36

Sure. We're very excited that we're...it's taken years and years and years. This is slow work, sadly. I mean, it's kind of obscenely slow work I'm so sorry to say, but right now we're at a very exciting point. Because the NVLD Project in 2017 funded a real collaborative project between Columbia University and collaborators around the world and brought together many of us to agree on a definition, agree on how to present it and where to present it. It's actually going to be, it's been proposed for the neurodevelopmental disorder section of the DSM. And under the work of prudence Fisher and Amy Margolis, we have come to rename it. Nonverbal learning disorder is about the worst name you could possibly have for this particular disorder. Because as people who are familiar with it understand, it has very little to do with your verbal skills, there may be some pragmatic issues, but primarily, verbal skills are what's intact, and to name something by what it doesn't affect is stupid. Just like, I don't know how anybody came up with it... was it Rourke who did that? Why did anybody call it a nonverbal learning disorder? But instead, we are now renaming it as a developmental visual spatial disorder. Developmental visual spatial disorder, that's the new name. And I'm sure in just a little bit, Jack will take you through the definition that we've come up with for it, I think that will be something that'd be interesting to your readers.

Dr. Jessica Broitman 26:29

And it was our initial proposal that was submitted to the DSM committee. And they were positive about it as a concept, but wanted some additional research to be done, in which we could prove how clinicians around the world would use it. How would this help with differential diagnoses? So we're currently in the last stages of a research project to try to show examples of various clinicians utilizing our definition and showing that they have an internal validity and reliability that would make it worthy of being included. And we're very hopeful that this will get done, and that we will finally have a way for

people to get reimbursed for insurance, which is really critical. As Jack was saying, this stuff is expensive. And it's hard to get schools to pay attention to it. It's hard unless forced, even parents don't quite understand it unless it has a little bit more consistency and how it's being utilized and referred to, so our consortium of researchers and clinicians are very excited that we've gotten this far. As many years it's been just even in the final stages.

Lauren 27:45

Well, and I agree with you entirely on the name change. I think that's going to be very helpful. Jessica, you had mentioned this a little bit earlier about how sometimes babies won't move around. If they have NVLD, how early can NVLD be detected?

Dr. Jessica Broitman 28:00

I think that there are good...When you look back in time, you will say there were signs from very early on. I'm not sure what you mean by detect, are you talking about criteria for diagnosing it? Yes. So remember that there's no official diagnosis for it, which is crazy. So there are signs that you're going to notice, especially between the differences between verbal and nonverbal abilities, you're going to see that from a very early, early time, you're going to see them have those troubles with maps with directions with puzzles. Our kids do not put puzzles together, that's just not going to be what's fun for them, you're going to see them having problems losing track of their belongings, remembering appointments, completing things, they're going to have problems with those jokes and metaphors and things you're going to notice, you're not going to be able to make a diagnosis, our kids often don't get even identified. I think the right term is 'identified' as having NVLD at this point, because we're basically diagnosing the three or four components that you know will end up resulting in what we call NVLD, but not usually until third fourth grade. I don't think I know of many kids who are going to get...well the thing about children, which is beautiful and wonderful is that many children develop at different paces. And even if a kid seems delayed within a couple of years, they might just catch up on their own. That's the good news and the bad news. The bad news for our kids is that very frequently, a parent or teacher will say well, just let's not do anything about it right now, because it'll probably all work out fine. And that's true for some kids. It's not usually true for our kids and earlier intervention is better, but it's a catch-22 because sometimes they do grow and get bigger and because of that we really needed to hone in on more specific ways to diagnosis and there's a couple of ways that we've come up with, to do that both the research way, and then the way that we've written up for the DSM. And Jack is going to take you through explaining in detail, both of them if you'd like.

Dr. Jack Davis 30:13

But, as an aside, if we could harness the pediatric and the occupational therapy community, we would be able to pick these kids up earlier. Because two and three year olds are trying to put shapes in boxes and kind of those things about that, and picking up pencils, but, you know, the pediatric mantra is frequently, you know, what, let's wait and see, well, they'll outgrow it sort of, but they don't take any baseline data and check every six months or 12 months to follow it up. It's really the observation and monitoring that will reveal the strengths and weaknesses of these kids. Not the one shot, set them down sort of thing. And, you know, occupational therapists should be our best friends. At four, five or six, if you go into PT or OT, you should be asking questions like these, to know whether we should red flag them and monitor them. But, you know, getting busy professionals to take time to take a baseline of

data and actually monitor it is hard, it's really hard. So I think we could do a better job at early identification.

Dr. Jack Davis 31:28

If this really got out there and was part of professional training we came up with is using the DSM model, we have an A, B, and C categories. A is persistent deficits in spatial processing, spatial information. And how we've defined that are some subsets of data of visual spatial awareness, like self and space, visual spatial construction, putting blocks together, visual spatial memory, being able to recall where you put things, spatial estimation, being able to kind of guess how long, how far away something is, what you're gonna do with it, that sort of stuff. Three dimensional thinking or visualization. Integrating and interpreting information presented pictorially. And that's anything like maps or graphs or figures. visual spatial attention. And there are tests that look at visual spatial, the look of visual attention versus auditory attention, and visual spatial executive functioning, organizing things and putting them where they belong, and then remembering where they are. And that these visual spatial deficits, Part B, were present in early development, but may not have been caught until later on. And then C is visual spatial differences creates clinically significant distress or functional impairment of some sort. So that's kind of what went to DSM. In terms of trying to figure out who to research then you need kind of a research definition. The research definition is based more on the neuropsych or psychoeducational testing. And the research is based on having a difference or discrepancy between verbal IQ and performance IQ. The old terms, have greater than 15 points or one standard deviation, single word reading and tact, which means within normal limits or above the 16th percentile. And then to have the following: One is the child must have some fine motor difficulties, recommended typically as the grooved pegboard, which is a two handed task, math calculation difficulties, executive function, which you can do through behavior rating scales, or you can do through testing social difficulties, there are a number of different scales for that sort of stuff. And there has to be a rule out for autistic spectrum. And that's through, usually they use the autism spectrum screening questionnaire. And that's where I have the populations get differentiated so that we can collect other data on them that the DSM wants to have. And I'm pretty sure we'll get a decent rating scale out of this eventually. And then you can save the testing for those kids who still present a mystery after the rating scale data says these kids just are likely, it would at least be narrower than the amount of testing that would need to be done or the number of kids that need to be tested.

Dr. Jessica Broitman 35:07

But we're gonna still need the testing to tell us where to intervene in terms of what specific kinds of accommodations or modifications our kids might need, if any. And there's test batteries, assessment test batteries, that we can refer your readers to any of our books have examples of what a good test battery might look like, or there's a blog on it at on Psychology Today, we now have a blog going right now on these issues. So you can find it on Psychology Today.

Lauren 35:40

Oh, that's great. You know, because it's a little in depth for somebody like a parent or even an educator sometimes to go, and it can be a little intimidating. So that's great that there's resources out there.

Dr. Jessica Broitman 35:49

A lot of resources. Understood.org is great. And the NVLD project is fabulous for information. And we've tried to put everything that we think could be helpful out into either our books, or Psychology Today is now a new blog forum for it.

Dr. Jack Davis 36:09

The goal for the project is to become kind of the IDA, the International Dyslexia Association for NVLD, or visual spatial processing disorder. And hopefully, it'll get there.

Lauren 36:22

I know you mentioned that there's still some testing that needs to be done. And I'm sure that the same thing doesn't apply to everybody. But what are some common strategies that are used to help those with NVLD?

Dr. Jack Davis 36:35

Yeah, we've talked about this, we talked about a lot of things. But they're probably common, in terms of what would be helpful to parents, number one is, is using the child's strengths to verbal mediation. You know, these kids talk their way through everything. Sometimes it's out loud, which disturbs the other kids in class. And sometimes it's internalized, but they do use a lot of talking in terms of trying to manage and cope and deal with things. The other thing that we haven't talked as much about, for kids with spatial stuff is they have more difficulty in novel situations, you know, as Jessica was saying, one of the reasons they tend to do better in college is because they can do in depth learning. I always tell parents, there's breadth learning and there's in depth learning. For these kids, breadth learning is really where the stress is, and that's why middle school somewhat and high school is really yucky. But when they get into the depth stuff, then that's where they're good, because then they have the structure and the context and the organization. And they just add to it so they can become skilled at what they want to do and what they're good at, and it comes easily to them. So reducing the novelty of situations, using pre-learning strategies, planning for success, and doing reteaching. You know, I remember some of the parents we've worked with, we said ok, take the kid to the new school, walk them around the grounds, show him where their locker is, you know, to kind of get them to absorb it and be able to talk that through so they don't get lost, these kids get lost in their campuses. You know, these kids don't take buses...

Dr. Jessica Broitman 38:32

Not easily.

Dr. Jack Davis 38:37

But if you put the extra loading in, and you teach it to them and go through it with them, step by step, it helps them. The other thing that it does is it helps manage cognitive overload. So that's the executive function, working memory stuff, when you have too much going on in your head, and you can't sort of figure out what to do next. And then you kind of stressed out and then you get anxious, and then it makes everything worse. So you know, breaking these things down into smaller steps. And again, the smallest steps allow you to teach sequentially rather than simultaneously. And it's just the simultaneity of novel situations that becomes overwhelming. So breaking it down and going step by step. And given all the stuff we've said about the potential difficulties that these kids have, the other is don't over,

remediate. Don't make their life a living hell by putting them in something that's frustrating all the time, trying to make it better.

Dr. Jessica Broitman 39:43

They are more than their disability, find their passions.

Dr. Jack Davis 39:47

And I have an old mentor at Berkeley who just said you need to remediate the strengths. I mean, that was kind of a joke, but what he meant was make sure you fuel these kids because that's what you're good at, that enhances self concept, not making up for what you do bad, that there are some other things that parents can do. And obviously getting your kid evaluated for special education and trying to get help through the school districts with OT and speech and language and resource different kinds of therapy, PT, OT, medication somewhat. It doesn't really deal with the core symptoms, obviously. But it can help with the comorbid attention and or anxiety. Parents are open to looking through that. And then making sure that any treatment plan includes accommodations, you know, things that can make the environment more conducive. And since, especially since a number of these kids, and again, we talked about overlap before, these hypersensitivities aren't just for NVLD, but also for autism and ADHD kids, too. But if you can enhance the environment, so it reduces the stress of the hypersensitivities, that can go a long way into making them just feel more comfortable.

Dr. Jessica Broitman 41:18

And less anxious. And then it all feeds upon itself.

Dr. Jack Davis 41:22

So those are kind of general guidelines.

Dr. Jessica Broitman 41:25

There's lots of specific guidelines for each kid depending on their strengths and weaknesses. And there's things you can do specifically at school, it's specifically for each of the problems, but I'm not sure we have the time to go into all those details. But we're happy to talk to you about just things like preferential seating at school, you know, notes in advance, everything going home, and the computer to somebody, they don't have to remember it, having the homework be very specific about what a rubric would look like with what's the correct answer. I mean, there are very specific techniques that parents and teachers can learn about and utilize.

Dr. Jack Davis 42:05

But the thing that all those are trying to prevent is that sort of American ethic of, you know, let them learn from their failures, you know, 'let them touch the hot stove,' these kids don't learn from their failures, you got to get in and support them from that. So that sort of wisdom just doesn't work for these little guys.

Dr. Jessica Broitman 42:24

And luckily there's a tremendous amount of apps out there now that are very, very helpful. And there's lots of wonderful lists of math apps and technology apps and executive function apps and writing apps.

And there are lots of resources available both on the NVLD Project. In our books, we have lists of all the various apps that we know people have found very helpful and not expensive. We're always looking for ways to help our kids without it being hundreds of dollars an hour for a tutor.

Lauren 42:57

So we definitely touched on this a little bit. But I just wanted to give you a chance in case there's anything else out there that you wanted to clear the air on. So what are some common myths and misconceptions about NVLD?

Dr. Jack Davis 43:07

The big one is what we talked about before is that these kids are not nonverbal. And just the title messes everybody up. And that's one of the really big reasons we want to change it in DSM is to really focus on what it should be focused on, the misunderstanding and misattribution that happens with these kids that they're not trying hard enough. If they get older, they're lazy you know, again, it's that the trouble we have of labeling a behavior and not really thinking about what are the processes that are underlying the behavior. So it's for kids that like this that are neurodevelopmentally complicated. A lot of behavior mod is just a little bit off base, you can't understand it just by observing it, at least when you're trying to think about how to remediate or to do something about it. As Jessica said earlier, they're often perceived as really bright because they had the high verbal IQ. And we tend to think of smart and not smart, depending upon verbal. You know, if you look at the other side, a lot of kids with dyslexia have some linguistic processing problems, and they're often looked at as less intelligent, but...

Dr. Jessica Broitman 44:38

Either can be either, you know, our kids are of average or above average IQ. They're not, they don't tend to be less than average IQ by and large.

Dr. Jack Davis 44:48

And then, you know, it's a neurodevelopmental disorder. It may get somewhat better, but they're not going to outgrow it. There will be vestiges that will have to be managed. And this is another thing that happens in schools a lot, it makes it difficult for these more complicated disorders. If the kid has an IEP, they think a year at a time, you know, and that's the legislation. It's like, every year you have to rethink this, you gotta think years down the line, right? You know, and say, here's the red flag, here's a red flag, who's gonna monitor this, who's gonna monitor that, because if you don't do that, then that's where the cracks come in.

Dr. Jessica Broitman 45:28

Often people think that our kids can't do sports, or can't do anything that requires motor coordination. And it's not actually accurate, they can develop splinter skills, if something is important enough to them, they can put in the time and energy to master it. It may take them longer, but they can excel. And we've known lots of kids, that was what they wanted to do. And they did it. It took a while, but they could do it. One of my favorite stories is the juggling story of a kid who had heard he was going to be able to have a role as a playing juggler in a play. And there was no way in hell this kid could juggle, but give him a year of practice. And he was proficient, absolutely proficient to this day, still can juggle. But it definitely took...it was interesting, because he did it in a group class initially. And all the other kids mastered it

within a few weeks, and it took this kid a year to really master that juggling, but he was motivated. And if our kids are motivated, they can learn most anything, they are going to figure out their own strategies on how to do it. And it's going to look different, potentially. And yet, it can be done. Don't give up on your kid. You know, your kid as a student or your kid as a teacher.

Dr. Jack Davis 46:55

But it's also the other caveat to that is it's hard sometimes to transfer and generalize. So for instance, I remember a kid in my school, who was a it was very good foul shooter, he loves basketball, so he could sit there and you know, I mean, he was 80% went in the hoop, you put him with three other kids, he didn't know where to go. You know, the spatial overwhelm of everybody moving around and passing is that he couldn't do that. If we had a designated free shooter like they do in baseball, designated hitter, right. Free shooter.

Lauren 47:33

What would you like educators and parents to know about NVLD?

Dr. Jessica Broitman 47:37

So the most important thing I want them to think about is that their kids can be successful, that it will take assistance, that understanding their specific deficits or specific challenges as well as their strengths is critical. And then getting them the help they need for that, especially paying attention to the psychological underpinnings for how it's impacted them to have this disorder. And that's the first thing. The second thing is that this is a lifetime. And it's going to take a team, and that the sooner people are aware of that and sort of figure out their own way to work with that, the better it'll be for their kid, there gonna be a lot of different professionals that are in and out of this child's life. And every family has to figure out what a plan will be for them that works financially, that when they bring somebody on, you can't do everything at once. So there's going to have to be a real understanding about what has the highest priority at a different time in a child's life, according to what their challenges are, what their developmental level is, what is most important to the child and what would make the child feel most comfortable. Some of our kids, even though they're terrible at sports, they really want to focus on those sports, because that's how they get their self esteem. So you have to come up with a team that will help to evaluate what's the priority for the child at that particular time and not burdening the child with too many tutors at the same time. You can't remediate everything at once.

Dr. Jessica Broitman 49:19

And you're going to need to have someone who's designated as a team leader. It's really important. It could be any member of the team. It could be the school psychologists could be learning specialists, could be the parent, but somebody has to keep everyone informed about what's going on with this child and be able to help to discern what should be focused on in each semester and each in each school year. And the kinds of people that might be involved with you could run the gamut of a child psychiatrist, developmental pediatrician, occupational therapists, physical therapists, speech and language therapists, a neuropsychologist for assessment cycle theory. therapist, a coach, social skills specialist, an educational therapist, special education teacher or consultant, tutors in math, written expression reading comprehension, and advocate might help you to figure out what schools would be best for your kid or a college counselor, or a vocational rehabilitation consultant, depending on whether child wants

to go the college route or not. And all the family members, that could be the siblings, it could be the child themselves, as age appropriate. And of course, the parents and I've listed them kind of in the order, you might find them. Because what happens is, as your kid grows and develops, you start to see more challenges in different areas. So these people might come into your life to help you as you're recognizing these challenges. But you can succeed if you keep their self esteem intact, and you keep from your own financial circumstances from being too impacted. You can make a package that works and leads towards a happy healthy kid.

Lauren 51:11

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