The Talking DLD Podcast Transcript

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S04 E03 – DLD and ADHD

Did you know that Developmental Language Disorder (DLD) can also co-occur with other disorders? Studies of children with DLD suggest some disorders co-occur more often. These include emotional problems, dyslexia and ADHD. “Comorbidity” refers to the presence of two or more disorders in the same person. These disorders can occur individually or link together. It takes a team of specialists to figure out if a person has DLD by itself or has additional disorders. In this episode of The Talking DLD Podcast we’re talking with Professor Sean M. Redmond about DLD & ADHD.

00:00 - Nat (Host)
Talking DLD, developmental Language Disorder One in 14.

00:06 - Shaun (Host)
DLD the DLD Project, the Talkal DLD Project.

00:12 - Nat (Host)
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00:15 - Shaun (Host)
Hi everyone. It's Sean here. Did you know that Developmental Language Disorder can also co-occur with other disorders or conditions? Today I'm joined by Professor Sean Redman for a deep dive into DLD and ADHD. Welcome everyone to this month's episode of the Talking DLD podcast. I am really excited to be joined today by Professor Sean Redman. Sean, welcome to the Talking DLD podcast.

00:43 - Professor Sean Redmond (Guest)
Well, thanks for having me.

00:45 - Shaun (Host)

Sean, can you tell us a little bit about yourself and your connection to Developmental Language Disorder?

00:50 - Professor Sean Redmond (Guest)
Yes, so my secret origin story right.

00:53
Yes, please. So I'm the oldest of four children and I'm the only one of my siblings that didn't go into speech therapy as a child. So I was aware of speech language pathology from the services my siblings were receiving, and it is the case that my siblings had profiles. They had speech problems, speech sound disorders that were worked on and fluency issues, but there's more than a little bit of language creeping around there in my family tree. My dad was one of those sort of late talkers that had like a family myths around you know, deciding not to talk until something wasn't acceptable. And then they started complaining and my siblings all went off into areas that really didn't place demands on their language abilities. So one of them is a math teacher and there's a computer graphics designer. So that's how I got into speech pathology.

02:07
Another thing that was part of my early experiences was when I was putting myself through college. One way to work weird hours and get reasonably good wages was to work in institutions and group homes, and so I had exposure to folks with communication disorders or different kinds for different reasons, in a non-educational context, so focusing on leisure living skills and community engagement sorts of things, daily living hygiene. So I had that background experience. These were usually young adults and adults with developmental disabilities that often included intellectual disability as part of their profiles, and so I had a familiar background with some of the issues involved with those populations. And then I started getting interested in the research side of things, moved over to the University of Kansas to study under Mabel Rice. Mabel Rice was at that time running an experimental preschool program for kids with specific language impairment. The term the predates developmental language disorder and is a little more exclusive than the more inclusive DLD designation. But part of what happens when you do that and you work with those kids, you sort of diminish the contributions of intellectual limitations and see what a language impairment can, how it can impact children's lives on its own. And so that was an interesting combination, because what I started to see was that these were really very different groups of kids behaviorally, although when I read our literature at that time there was a sense that these things were being sort of like collapsed into a very grim portrait of lots and lots of problems.

04:29
And so I became interested in the issue of getting a better handle on what are some of the sort of social, emotional and behavioral consequences of having a language disorder, and that led me to poke around on like well, how do you measure a social emotional behavioral problem? So I did coursework in clinical psychology and developmental psychology and one of the things that stuck out to me immediately was just how language biased the instruments were. And so, especially at that time, there wasn't a deliberate segregation of language symptoms from social symptoms or behavioral symptoms, and you would regularly

see on these scales, talks and complete sentences as an item that would penalize a kid with the scales being filled out on, as having a social emotional behavioral disorder. And so that became a real interesting challenge. Because how do you differentiate between these things when in the classroom context it can look the same? So a teacher sees a child who can't follow directions consistently, who has having problems with their peer interactions and are academically underachieving. Those classroom signs are identical for both ADHD and developmental language disorder.

06:18
So that started a whole research enterprise. Getting into the issue of differential diagnosis, which has been very neglected in our field, at one point I did a survey of our pre-professional training textbooks to see how much coverage there actually was in differential diagnosis when it came to language disorders. And there isn't much to really, and it stands in stark contrast. If you are going through a program in speech language pathology and you go through your coursework in aphasia or your coursework in speech sound disorders or fluency for crying out loud, there's all these schemes and protocols for differential diagnosis, but we really haven't presented that to our pre-professionals when it comes to language disorders. So that's how I got interested.

07:22 - Shaun (Host)
And it's such an interesting process to go from that familial experience, work-based experience and what drove you through to be investigating this? Because often we forget that, potentially, that there are people out there experiencing this, whereas that's a part of your, as you've said, your origin story as to why you do what you do, and you've already touched on this as a researcher, you've just investigated so many different facets of living with developmental language disorder and you've touched a little bit on this next question, but I'd love to delve into a bit more. What drew you to investigating ADHD and DLD?

08:07 - Professor Sean Redmond (Guest)
Well, there's an opportunity to make a contribution here because the evidence base is quite, on the one hand, it's been sustained and there's been lots of research consisting of very large study samples, but the measurement schemes that have been brought into on the question haven't really given us much detail. So at one point I was interested in finding out what was the characterization of kids with ADHD from a language sample perspective. What I was able to track down at that time were characterizations of the number of syllables Kids were speaking in their language samples. There wasn't any real consideration of grammatical complexity or the sorts of things that a speech language pathologist would be interested in. The number of utterances, I remember was a major interest for people working in psychology. I think what they were interested in were things like speaking rate, because individuals with ADHD can't have a tendency to be Very verbal, yes, as opposed to what we typically see with kids with developmental language disorder was where they don't speak as much as the not as low, quacious as their peers with ADHD. But it was really hard to get, to get a real clear characterization from like a speech pathology perspective, you know, of what was going on in terms of number of different words and MLU and metrics of grammatical complexity. It just wasn't there.

10:08

Meanwhile, there was this very consistent, blanket message that kids with ADHD are almost certainly going to present with language disorders was kind of what the main message out of these studies was coming out with. Those were those were for the most part, but not exclusively, coming from like clinical samples. So the caseloads of psychiatrists and psychologists would administer a battery of language tests. Sometimes they were reasonably good and sometimes they were off the mark from our perspective. And there was this indication that there was elevated risk of an unidentified language disorder in many kids with ADHD receiving services for ADHD.

11:03
Then you've got you know, and those are either clinical samples that were just referring to the norms from the test or they were clinical samples compared to kids with typical development.

11:18
But you really you really didn't see for a while, for a long time, a comparison of three groups. So kids with developmental language disorder, kids with typical development and kids with ADHD usually had a clinical group and then a normal comparison. And the problem with those kinds of studies is that you kind of I've already answered your question before you collect the data, because you've allowed one group to vary on the dimension that you're interested in, so, for example, language and kids with ADHD. But the kids with typical development aren't allowed to vary in their language abilities. They have to have normal language abilities to be in your study and then you find differences and it's kind of unexpected and that got me interested in the measures that were being used to identify ADHD. That also forced me to reconsider some of our assumptions when we measure language and how. Sometimes when we think we're measuring language, we might be measuring other things, especially with some of our more demanding protocols in terms of sustained attention and time, Whereas what's been interesting?

12:38
so I, when I came into sort of maturity in my research, the interest in the late 90s, early 2000s was really on. Is it possible to have a theory of specific language impairment? Right, we haven't had a theory of specific language impairment up until that time. And when you start getting into well, how do you test different predictions from different theories? You realize that so much of it depends on how robust your measurement systems are. And so then we as a field got really interested in clinical markers that we've we're starting to see were sort of very robustly separating kids with language disorders from kids with typical development. So it was no longer the case that you had to pick an arbitrary cutoff on your clinical marker. You would essentially get two piles of scores with a clear differentiation between the two, and these tended to be measures that were quick, right. So things like non repetition or sentence recall or an elicitation tasks that drills into grammatical weaknesses like tense marking or complex syntax, these could be done relatively quickly, as opposed to something like a vocabulary test, which can take a very long time, because kids, many kids, take extra time to reach the ceiling of their skills. So we, we, we brought those language measures over to kids with ADHD, and I think part of their virtue of being quick and dirty in that sense is that we can get in there and measure the child's abilities and be done with it before they have too much time to be distracted or go off task.

15:02
And we also did studies, and we're doing studies where we've got a group of kids included that have both conditions, with the question of whether, if you have both, does it make your symptoms worse, and so far we're not finding any evidence of that.

15:27
So so, going back to theories, right, that shouldn't be true.

15:33
If there's something about attention that is increasing children's risk for language disorder and it makes perfect sense that it should be the case that if you really have difficulty sustaining attention and inhibiting yourself from looking at other things which is kind of the other side of the coin of distractibility symptoms then you're going to kind of miss all of that rich language input that's supposed to be helping you develop your language system, and so one prediction would be that if you had both, then that would mean you should have worse symptoms.

16:20
On these clinical markers, it also suggests that if you have ADHD or other reasons to have weaknesses in these areas, then your performance should be sort of like subclinical or, you know, maybe splitting the difference between language disorder and typical development, and we don't see that usually in our study samples, and it's nice to see that other people are reporting the same thing, so it's not just something weird about kids growing up in Salt Lake City or whatever, and so that that's encouraging because that suggests that if we lean in on these clinical markers and use them for differential diagnosis and for the presence of a language disorder, then we may not have to worry too much about whether or not we have, like confounds or, you know, measurement error in those particular measures.

17:30
Even though these have been around for a while, they still they still. From my perspective that still feels like they haven't really caught on among speech language pathologists. I think part of that is it's sometimes hard to see how those weaknesses translate into functional deficits and if we're interested in addressing and we should be interested in addressing functional deficits, then maybe the enthusiasm for their value as you know, their diagnostic utility kind of like gets overlooked.

18:06 - Shaun (Host)
I think you've raised for those people listening in probably can't see me nodding.

18:10
Well, I know that you've raised a really important point that often in language assessments we assume that we're evaluating language only, and those people that have participated in my training before know that I talk about the fact that I don't think we could put our hand in the heart and say that, you know, completing a omnibus language assessment just assesses language only because you need sustained attention.

18:33
You're drawing on cognitive, you know disabilities like working memory and all of these other facets. So if we're not open to the idea that children with the LD can, can and do present with other needs, then what may actually not be considering the whole child as a part of our assessment process? It's interesting that you know you're thinking about these children with DLD and ADHD and I probably hadn't thought of it exactly the way you've worded it before, that you'd expect their language skills to be significantly poorer because we use, utilize attention to engage in language acquisition. Learning language, and so that's I just thinking about what you're saying is a really interesting finding. I think it's quite more, but do you have a sort of sense of the moment as to how many children so have ADHD?

19:28 - Professor Sean Redmond (Guest)
Well, so at one point and one of my presentations I I laid out on a scale from zero to 100, with 100% being complete overlap or comorbidity between the two conditions and zero being very limit.

19:47
You know, being absent, and did a survey of the existing literature at that point and and what I found is that you could find very low values of comorbidity and very high values of comorbidity, and one would hope but it didn't happen that the values would cluster around a particular value, but it seemed to be a pretty equal spread across reports, and I combined reports of Of how much how many kids with DLD also have elevated symptoms of ADHD and how many kids with ADHD elevated symptoms of language disorders. So it turns out that if you separate those two sets, the, the risk for language disorder is relatively higher for kids with ADHD than the risk for ADHD for kids with language disorder. Does that make sense? Yeah, yeah, so. So they're not. They're not like mirror compliments of each other. And it seems like the, the, the relative risk, is about a two fold increase Set to the population level, general population level.

21:13 - Shaun (Host)
Right, so if we.

21:15 - Professor Sean Redmond (Guest)
if we round things up to, like you know, 10% of either DLD or ADHD and the general population, then 20 to 30% within those groups is what you'll see. The presence of the other conditions. The presence of the other condition is about what it looks like. So the risk is there, but it's it's.

21:42
It's a mistake to kind of think of it as to actually the, the, the, the relative risk for both of this, does both of those disorders, for reading difficulties is higher than their overlap, and so for kids with developmental language disorder it's like on the order of what five times?

22:09
And then for kids with ADHD it's about three to four times the risk for reading difficulties. And in fact there was some work done by Bruce Tomlin where he articulated the idea that the reading disability or reading difficulties was actually the bridge between language

disorder and ADHD and he suggested an interesting premise that it was, it was the kids with language disorder who also had a reading disability, and that because of the reading disability and the sort of academic and social consequences of that that led to the behavior problems in the classroom, and the behavior problems in the classroom started to drift into concerns about co-occurring ADHD. So it's almost developed out of the inability of the academic context to kind of address the reading difficulties in a way for kids with language disorders. The kids with with language disorders that didn't have a reading disability weren't at elevated risk for ADHD in the in that study sample.

23:29 - Shaun (Host)
I think I've seen ranging from, as you said, sort of as like 20%, which is about double the you know prevalence in the typical, you know general population, right through to some studies that are, you know, 70 or 80%, but it has been really much on it. Does it depend on how you define ADHD and your diagnostic criteria? And I think, just moving forward, how would you define ADHD?

23:52 - Professor Sean Redmond (Guest)
So sometimes I don't and I just use the existence of an independent diagnosis of ADHD from a qualified healthcare professional Somebody like a pediatrician, for example right, or a clinical psychologist.

24:11
There's, there's a couple of categories of nurse practitioners that also have a psychiatrist, also have the capacity to A diagnose kids with ADHD and then also use reading skills. So it's it's not so much who diagnosis ADHD, but how they diagnose ADHD, and what you find out is that there there's much more enthusiasm or consensus on the value of standardized rating scales, filled out primarily by a parent, but sometimes supplemented with teacher input and then a sort of behavioral measure of inhibition or attention, and the reason for that is because those measures have been notoriously unreliable and they they always map on to these clinical symptoms reported by parents and teachers, and so roughly only about half of the kids with a clinical diagnosis of ADHD actually perform poorly on continuous performance tests or executive function assessments that are based on on a behavioral response. And it's very different already from like how we go about identifying language disorders, where we're kind of apparently I didn't appreciate this until later and a bit of a privileged position, because language disorder falls out of a kid's mouth and so actually is there unequivocally in the quality and complexity of the sentences they're producing. They're producing ungrammatical sentences, right, and you know you need a little bit of training for as a speech language pathologist, to pick on the nuances of this. And it's pretty clear. You know there's no, there's no issue of getting inter-rater reliability on whether a kid did or didn't say something correctly.

26:42
That's it's a much more challenging proposal proposition to find out whether a child is behaving in a way that exceeds developmental norms in terms of their inattention, to be able to identify whether it's a child's ability or impulsivity, and those, those ratings can be highly context dependent, right?

27:11
So you might expect, depending on the demands of the of the environment, a child who might be able to do well on and recess on the playground with the in those areas, struggling in the classroom when the demands are a little bit different. So you know it's not like there's a gap between home and school environment, but an ungrammatical sentence is going to be produced in the classroom, on the playground and at home. So that's the other thing I started to appreciate is that you know we can. We can not only bank on like, yeah, inter-rater reliability in a way that these psychiatric measures can be used to help, but psychiatric measures can't. There's a lot of variation between parents and between mom and dad and self-report by the child and then what the teacher reports at school, you can get like four different stories in terms of these clinical measures. One thing that does seem to be true is that if a parent endorses a lot of clinical symptoms of ADHD, you can almost always count on the teacher Also endorsing them, but the reverse isn't always true.

28:36
So, sometimes we don't see that, so in my work for that reason, we rely heavily on parental reports that characterize the severity of the ADHD symptoms in our kids.

28:54 - Shaun (Host)
Sean, this might be a good time, then, to jump in and say what might be some of the signs or symptoms that a person with DLD might have ADHD for some of our families who might be listening in and thinking well, what are we looking for? Yeah, particularly when they've already got a condition. You know, we've described the language difficulties associated with DLD, so what does ADHD even look like in a person with DLD?

29:19 - Professor Sean Redmond (Guest)
Well, I wish I could speak with more certainty, because it's not like we have a very broad database to work on and, as I mentioned, the symptoms in the classroom can look very similar.

29:38
The challenges where things are a lot harder to disentangle are between the symptoms of language disorder and inattention and the symptoms of pragmatic deficits and some of the common sort of behavioral consequences of being impulsive in peer interactions and things like that.

30:05
They can very easily mimic each other's symptoms. The one dimension where there isn't necessarily a well, there could be, but secondary interaction. But in the domain of hyperactivity symptoms, we can't imagine a child with a language disorder that is not hyperactive, and in fact most of the kids with language disorders don't have that as part of their profile. And so if, in particular, if you're noticing a lot of hyperactivity and pulsivity Now in the classroom, if the level of instruction is not matching the students' abilities to benefit from what's being presented to them, they can disengage and get bored, and then that can lead to what looks like hyperactivity. And so there's some realities about these two conditions that are worth talking about. One is everyone doesn't look out for ADHD. That's

kind of like the default framework for why kids would struggle in the classroom, but it's still not on everybody's radar to look for language disorders as a contributing factor.

31:31
So it's almost like you have to, unfortunately, exhaust the theory that the premise that this is ADHD and before people will start considering something else going on.

31:47
We have here in Utah a developmental assessment center which does things a little differently than what I think a lot of places do, and that is they screen for language first.

32:01
It's an interdisciplinary team and the way their flowchart works is that the kids see the speech therapist first and then the speech therapists recommendations, observations, assessments, inform what follows afterwards, and they've reported that that was that was a game changer in terms of making things much more efficiently and being able to, because you can get kind of in these like spinning cycles of like finding confirming evidence for what you thought was going on.

32:38
One of the things that I think isn't a connection that people are making is that if you have a language disorder, that means that sometimes you figure out how things are working and you're able to do things that keep up with your peers, and other times you can't, and it's those times when the other sources of information that aren't verbal are getting you past that right. There there's enough redundancy and other streams of information that you're able to figure out what you're supposed to do and sometimes that isn't there. You have to rely only on verbal information and you can't pull it together. So from a teacher or a parent perspective, that looks like the child is inconsistent and that must mean things like motivation or inattention, because sometimes they do it right, sometimes it do it incorrectly, and it isn't until you get them into an assessment session where you really drill into the language abilities right. They can't escape this is all language that you can find.

33:45
you can find the weaknesses, so the compensate for another environments, but the compensation is probably exhausting from the child's perspective and it only works some of the time. And so that's also true for for ADHD symptoms. Right, it's not the case that a kid with ADHD is always impulsive or always inattentive, but when other supports in the environment or there, they're able to keep things in check and pull it together. And so if you had both, I think your life would be spent trying to get people in your environment to appreciate that it's not because you're lazy or because you're unmotivated or you know all these other reasons for why you're not performing academically, because there could be limited appreciation for the dynamic reality of verbal and executive function and language and attention. Those things are always sort of contributing with each other. That wasn't well articulated, but I think you get the gist that it's complicated, is what you say.

35:11 - Shaun (Host)
Well, and it's and it's.

35:12 - Professor Sean Redmond (Guest)
You can't always count on the, on the, on the limitation, always leading to a direct consequence. Right, yeah, so it can be context specific.

35:25 - Shaun (Host)
Exactly I think it links back to an earlier point you said was that if parents identify it, it's likely that it's present across multiple occasions and settings. It's likely to be something that the teacher's noticing and the parent is noticing. Perhaps. If it's just happening at school, I would and I'm putting on my research here is starting to think maybe we need to look at adjusting the educational environment. If it's just occurring at school and we're not seeing any of those inattentive or hyperactive behaviors within the home or community settings, we might want to think about what's happening at school then.

36:05 - Professor Sean Redmond (Guest)
Exactly, exactly, and the literature is interesting because it runs both ways. So if a child is in the gifted range and the instructional level is not at their level of engagement, their disengagement can lead to symptoms that mimic ADHD, in the same way that a child with a learning disability isn't able to keep up with instruction. I mean, it's the same outcome that what you're getting is not set to your level. And one of the things that happened with the diagnosis of ADHD is that the whole concept of situational ADHD, where a kid only had ADHD when they were in school, like from 8 to 3,- you know, Only for a fun period of time.

36:58
Monday to Friday. Yeah, Not over summer vacation was abandoned and as part of the differential diagnosis of ADHD, you have to rule out a learning disability as a possible explanation for a child's inability to attend in the classroom.

37:22 - Shaun (Host)
I'm not sure if we stated this explicitly yet, but it also goes without saying. You can clearly have ADHD without DLD or alone, you know, and you can have DLD without ADHD. I think that what we're really trying to identify here is that children with DLD can be at greater risk, as we've already talked about. You know there's a greater co-occurrence of ADHD and DLD. But also trying to pick apart, sometimes parents will say to me or clinicians will say to me, how do I know which bit is the DLD and which bits the ADHD? And I guess what we're trying to say here in this conversation is you know it's very closely intertwined, you know, and we can actually separate out, you know, one part of a person from another part of a person, that they will inform each other.

38:11
I think your point around academic success, and reading is really pertinent to that.

38:17 - Professor Sean Redmond (Guest)
Yeah, I mean, I think on the one level, as a field, we could get to a place where we have a diagnostic protocol that is like ADHD proof that if you have ADHD and you don't have a language disorder.

38:36
You should do fine on this protocol, and I also think it's going to be possible to be able to screen for ADHD in a way that would be DLD proof. That's going to take a little bit more time and engagement from the research community, but I think it's doable. So the diagnostic question could probably be settled about whether it's one or the other or both, but then again, the question is always addressing the functional impact of either or both of those conditions, and that's the place where things get sloppy and tangled. And so Charles is having difficulty reading and they have both a language disorder and ADHD. Yeah, so how do you plan to address both of those issues in the context of improving their reading skills?

39:38 - Shaun (Host)
Well, that segues nicely. Sean, then into what? Are our treatments options for someone with DLD and ADHD.

39:46 - Professor Sean Redmond (Guest)
So what is disappointing, I think, is in both fields interventions have been kind of moving along with limited consideration to comorbidity. So we develop intervention protocols for kids with developmental language disorder, but we don't include in our intervention studies. Very often kids who have both ADHD and developmental language disorder ask does that impact their response to intervention or does the intervention need to be adjusted in a way that optimizes the outcome for that particular case? And then the same thing is true for interventions behavioral interventions for ADHD which are often framed within the general scheme of cognitive behavioral therapy, because the primary issue with ADHD is sustaining your attention and not letting your attention be captured by environmental distractors.

41:06
And so oftentimes, the behavioral regulation difficulties that kids with ADHD have has nothing to do with their understanding of how they're supposed to behave. They know how conversations are supposed to work. They know that these are the ways in which you're supposed to get along with your peers, and getting upset about someone cutting in front of you at the lunch line isn't what you're supposed to do. But in the heat of the moment those things fall apart for the child with ADHD and so a lot of this has to do with recognizing that those triggers are present in the environment. So it's very metalinguistic, very metacognitive, and historically there hasn't been much appreciation from people developing those interventions about how much of a burden is actually placed in the child's verbal abilities to be able to even understand what you're asking them to do and being able to kind of self rehearse or maintain that kind of internal dialogue or monologue with themselves. One example of this was which stuck out to me was a statement from one of these programs where the clinician is supposed to ask the child, after going through a series of hypothetical scenarios, what do you think your friends would think if they knew that you had answered that question the way you did? So to get to that kind of metacognitive metalinguistic space. I just needed to do five layers of syntactic embedding and for a child with a developmental language disorder you lost them after the second layer of embedding. And a child with a developmental language disorder is going to respond to that question with a very weird answer because they did not interpret, they did not parse that sentence in the way you intended them to.

43:26
That's an observation that's been around for a while and people have been working at trying to reduce the kind of grammatical load and vocabulary too, right, so some of the vocabulary items and this sort of mentalistic operations that kids are supposed to engage in with cognitive behavior therapy, it's going to almost require kids who are gifted verbally to be able to really engage in this and kind of like. For our kids with language disorders it's not really going to be much help, and so from that perspective, if I was a parent and my child was involved in these kinds of interventions, I would want to make sure that they were taking into account their capacities to follow the directions, even understand the vocabulary, and if the child didn't seem to be responding to the efforts, that it wasn't something about the child's motivation or their engagement or their interests or the theory of mind or whatever kinds of things they want to bring up. It could just simply be that they can only handle one layer of embedding right which clauses at a time facts, Considering their language abilities within any form of intervention.

44:51 - Shaun (Host)
I think this is a bit of a thread that seems to have carried us through today's conversation is, if you don't know that they've got language difficulties and I really respect your colleagues in the multi-disciplinary clinic nearby who were doing this work with language, first you don't know what you don't know and how to adjust it. And I think no more so than if you use strategies to support somebody with ADHD that are verbal based. I argue a lot that a strategy for anybody with DLD is about making language something they can interact with, something that's tactile and visible, whether they can read it or draw it over, there's a drawing of it. But I would say that some of that also helps with supporting their attention and having something to link back to. Particularly if they've got very fleeting attention, it gives them something that you can actually come back to, because it's really hard to come back to the word that's just sort of wafted off into the air in the classroom or you know it's hard to grab that back and put it in front of you, that's right.

45:55
I was just going to ask Sean, while I'm thinking about one of the other things that comes up around treatment options is medication, and parents often express concerns around medicating their child, and you know, we know, that there's a long history of research around you know, medication, what are your thoughts on that? Or what would you, you know, talk to, you know say to a family who's questioning whether or not to medicate their child?

46:20 - Professor Sean Redmond (Guest)
So this is such a personal decision that families make and it can be quite agonizing and it can also be a point of contention among family members, where some people are endorsing or encouraging medication and other family members aren't. So we see that happen occasionally in our families that we work with and there's there's lots of opinions out there, very strongly stated opinions, that families have to sift through to get to a place where they feel comfortable with the decision that they're making. So what I can bring into this consideration are a couple of observations that are supported by the evidence base, and so one thing that we do know about medications for the treatment of ADHD is their impact on ADHD symptoms are quite robust, and this is based on studies where they've had multiple

years of treatment and a control group where the kids over that same time span didn't receive any medications. And the effect sizes are large. For those of us that geek out on stats, there are around 1.0. So that's a whole standard deviation of improvement in primary ADHD symptoms. So inattention and hyperactivity and impulsivity will improve under medications, and we also know that, to a lesser extent and independent of the improvement on the ADHD symptoms, we can expect some significant improvements in executive functioning, so working, memory, planning, organization, those kinds of dimensions, response inhibition. And then when we get to like standardized test scores, we're on a less secure footing where there's lots of very small effects alongside null effects, where studies reporting that there's no improvement on, like an IQ test, for example, as a result of a child being on medication for multiple years, their standard scores tend to be around their standard scores before they were treated with the medications.

49:05
The one thing that has been pointed out by researchers is that being under medication will reduce measurement error, so it'll improve children's test taking abilities.

49:20
And so if you're concerned about a child with ADHD who's going into a high stakes testing environment so like in the United States, we have some achievement tests that are kind of brought into college applications and use as part of the determination of how competitive students are you would certainly want a child with ADHD to take those under their medication to optimize their performance, because it'll improve their performance a little, but sometimes a little bit is a big difference right in those like highly competitive environments. So I think that taking these medications could take a child who has a language disorder and get rid of that. Language disorder is quite remote. That would be remarkable if it was ever demonstrated, and so far it hasn't been demonstrated. So I think the main benefit for families of children with language disorder is that if your child also has ADHD and they take medications, that means all of the assessments that are going to be collected on that individual are going to be more accurate than they would be if the child wasn't taking their medications during the testing.

50:44 - Shaun (Host)
And I also had a really positive experience with a pediatrician once where they, you know this young person had what we now call developmental language disorder.

50:55
I'm old enough to you know this was back when we used SLI. This young person pediatrician actually said look, I suspect you know that medication might help and what he and I actually did was work with the family through a trial period, you know. So we actually collected really robust data before starting a medical treatment, you know, during the treatment, and then we compared the two just and as the pediatrician adjusted their dosage because actually that's something that I think we find, can you know, parents can find quite tricky is, you know, actually finding the right dosage, you know, can be quite individual to the to the person, and that can be a really daunting experience is actually setting it up as almost a really easy observational opportunity where you're collecting information so you feel more confident in making that decision. I really appreciate the pediatrician at the time stepping

myself and the family through it, because we've used I've used it a lot clinically since with families, with patients, is, you know, gone and looked at the data before and during treatment to see if we felt there was a robust.

52:04 - Professor Sean Redmond (Guest)
Yeah, yeah, especially, especially if you go to the extra mile and actually make those assessments blinded. So when the person collecting the language testing doesn't know whether the child showed up medicated or not can be can be implemented pretty easily. One of the one of the things I started to appreciate working with families of kids with ADHD is is their level of openness to sort of like allowing assessments to be collected on or off medication. They are probably used to that titrating experience. I think many families that we work with Give children medication vacations Right.

53:05 - Shaun (Host)
So yes, breaks from the medication.

53:06 - Professor Sean Redmond (Guest)
Yeah, yeah, they're not under medical advice, but they they feel like it's something that they can turn on and off and look at the consequences across different contexts and decide, you know, whether for this context the medications are needed or is it these other contexts that are relaxed? And you know I get it. There's, there's real questions about authenticity, right? So which version of you is the real? You the one that's under medication or the one that isn't? That's something that an individual ADHD has to grapple with, and when you're a child you don't really have that capacity. But I mean, you know, children grew up to be adults and adults Bring his considerations into their self identities, and so it's. It's a very interesting dynamic that is quite foreign, quite different from what we typically experience. A speech language pathologist right, if we had a pill?

54:19 - Shaun (Host)
for treating as language disorder or a speech sound disorder. I think it'd be a whole different. Well, you know, a whole different approach, whole different consideration.

54:28 - Professor Sean Redmond (Guest)
Well, those things exist, but they're just. You know, there's vitamins for language development out there that are completely without any evidence base and in fact they've. They have studies showing that they don't work. Not just that they haven't been looked at right, the absence of evidence, this is truly like no evidence.

54:50
Yeah, yeah but families can access these things, unfortunately, and you know, they're always presented with the sort of stream of testimonials that can be quite compelling, because we're designed as humans to really be interested in stories and narratives and those kind of tap into that. Oh, we got kind of off track there, but I want to make sure on this podcast the message that I'm not suggesting that medications are likely to have an impact on a child's language development. That's not the case. Now, I mean who?

55:28 - Shaun (Host)

knows? Do you have any other advice or recommendations for parents who might be listening in, who are concerned that their child with DLD might also have ADHD and talk about some of the sort of signs and implications. But you know anything else you'd like to add for them?

55:49 - Professor Sean Redmond (Guest)
Yeah, I mean I don't. I don't work clinically with these populations, so I don't do intervention research either, for example, and so the reality is that clinicians working with kids who have both are kind of piecing this together from multiple sources or probably taking a look at what's going on the ADHD interventions and trying to adapt them to the limitations that are brought in by developmental language disorder and considering how our language interventions depend to different extents on the abilities for children to sustain attention and to benefit from them also need to be working. I mean, we're kind of in my lab. We're kind of in a privileged position because we more or less just rent the children's time and then we have our agenda. We figured out ways to keep the children engaged with our assessments and we don't have the burden extra burden of trying to teach them anything. We're just trying to measure what they're able to do and we do collect language tests from children with ADHD. We've learned to really relax any requirements. The child is actively displaying their attention or engagement. So kids can sit on the floor, kids can sit on their feet, kids can fiddle with things in their hands. So pencils and ripping up sheets of paper seem to be things that kids like to do. We have had kids do vocabulary tests where they pointed with their toes and, because we just want to find out what the child's underlying linguistic abilities are, we don't care about, we sort of let them do however they want to do it In the classroom context. You know, that would be a very different situation if a teacher allow their child to do all those things While they're engaging in their lessons, right, and so you can end up with dynamics that are kind of power struggles, where you're insisting on a particular set of behaviors before you the instruction or the assessments can begin. And so for speech language pathologists that could mean, you know, maybe, maybe not insisting that the child is sitting at the table when you're doing your therapy, or you know, or allowing the child to be distracted for for patches of time and then getting back to the activity once they've done so on their own inclination.

59:10
So I had, I had clinically an interesting experience early on in that language acquisition preschool.

59:18
So the language acquisitions preschool, which was the intervention program that made the rice designed for kids with specific language impairment, had an interesting mix of students in the classroom, so there was also a group of kids that were learning English as a second language and then model lingual kids without speech or language impairments, and what this meant was that the curriculum had to be able to be adapted at multiple levels simultaneously.

59:52
It also meant that we encourage a lot of peer to peer interactions In the preschool context and more than a couple of times we had kids that were receiving services in the pullout

clinic you know a one to one interventions with the clinician that had earned a reputation for being behavioral management issues that when they transferred over into the preschool context those behavioral difficulties went away. And there was a kid who was diagnosed with severe ADHD and when you made the transition into our preschool it took him about three weeks, maybe a month, to kind of stop zooming around the classroom and get calibrated into them, into the lessons. But he did, he did thrive in that environment and his language abilities were part of them, accommodations that were set up for them, and so it you. You can't have all these sort of secondary compensations and reactions to what could unintentionally become a heavy handed behavioral management approach and that are really exasperating, feeding those behaviors that can go away if you make adjustments that accommodate the child's language abilities.

01:01:37 - Shaun (Host)
And that's a really key point, sean, just thinking about the classroom environment, how can we adjust the environment to enable access? I mean, here in Australia we've got legislative requirements similar to the US where we have to legally make adjustments to the classroom with developmental language disorder or any disability or learning condition that enables them access to learning like their peers. But I think that unless we've got those supports in place, it can be really hard to then know what individualised needs are required and in fact some of our children might benefit from whole class space adjustments. You know I've worked with teachers who've said, oh, using this visual schedule it's actually been really good for all the children, not just the child with that's right.

01:02:26
And so in the classroom, in the classroom, and yet absolutely and it's impacted on the behaviors of other children who may or may not have diagnoses. You know, perhaps just because you don't have the label doesn't mean you don't have the condition. You know, you've got all these other children floating around in the mix that can benefit from adjustments within a whole class environment.

01:02:46 - Professor Sean Redmond (Guest)
Yeah, I mean that would to the extent that we were able to do this, to sort of to read, align the sort of flow chart of uncovering what is contributing to a child's difficulties when they're struggling in the classroom. If we could have language disorder at a higher priority than it seems to be, I think we would, would be in a much stronger position and I think I think we would be able to identify those kids who truly have both developmental languages, sort of ADHD, because what we've done is we've kind of exhausted the possibilities of what languages were on its own could contribute to the child's gender profile, and if language is improving but the behaviors aren't, then that's a strong signal that they need a different kind of intervention than what we're able to do. But oftentimes we start with trying to manage the behavior and then we start with trying to manage the behaviors rather than, you know, look for some contributions from receptive and expressive language.

01:04:14 - Shaun (Host)
Yeah, absolutely. I think it would be the you know, taylor's oldest time that a child has come to me with an ADHD, the auditory processing disorder or dyslexia diagnosis and then, as soon as we evaluate their language skills, we realize that they're just having a significant

contribution to their performance, either at home, in the classroom or both. So I think I hope one day maybe by the time I'm retired, who knows we'll have language right up there in priorities. But it seems to be. You know, these other skills get identified first, don't they?

01:04:52 - Professor Sean Redmond (Guest)
And you can imagine, even from a cost benefit perspective, starting with language disorders first before you move into these other, which could be potentially very expensive interventions that include behavioral interventions and pharmaceutical interventions. And if we started with a default premise that it could be a language disorder, if we work on the language skills and they improve and then the behaviors improved and that suggests that, yeah, that's what was really going on. But again, if the language improves and the behavior doesn't, then that would be a good candidate for something else.

01:05:40 - Shaun (Host)
Absolutely. I'm conscious of time, sean. I've kept you for longer than I promised, but I'd love to know, in your opinion, what, what do you hope to see in the future for DLD in the US or around the world, whether it's research or clinical work, or maybe even service delivery?

01:06:00 - Professor Sean Redmond (Guest)
So yeah, then that's. That's a deep question, I think.

01:06:06 - Shaun (Host)
Lots of deep questions today.

01:06:09 - Professor Sean Redmond (Guest)
Thanks I. I think that raising the visibility, raising the consciousness amongst parents and teachers and pediatricians that this thing called DLD exists and it can look like something else would move things significantly. Now, one thing that we struggle with the United States is speech. Language pathologists don't really feel empowered to use terms like developmental language disorder with families. They've received a message from the schools that school services don't require a diagnosis and so therefore we should avoid diagnosing. And it's almost like a dirty word to bring up the the terms disorder into IEPs and things like that. And, honestly, until we can move that dynamic into a better position, we're always going to be talking out of both sides of our mouth. Right, this is a serious problem, but I can't call it a disorder. But it's serious and we need to do something about it. But well, let's just focus on fixing the problem. And so families are left like well, what are you talking about?

01:07:37
and the conditions that you talked about earlier. So they go to speech therapists. The speech therapist dances around and uses fancy terms like morphology and syntax, receptive expressive strengths and weaknesses. All this stuff just gets described back to families and the families walk away with well, I don't, I don't remember hearing what this thing is. So then they go to an audiologist and the audiologist says I know what this is, this is a central eye tritide processing disorder. I see it all the time. Here's what I do about that. Well, that's like whiplash between those two professions. They go to a clinical psychologist and they say I know what this is, this is ADHD. And here's these rating scales and I can tell you how severe

it is. And here's a, here's a brochure about your treatment options and, if you're really interested, here are dozens of meta-analyses that can speak to all the contributing covariates and factors to response intervention.

01:08:45
So we were losing public trust on that front if we don't actually use developmental language disorder and tell parents that that's what this is, that as your child grows up and needs, needs services to address the consequences of that in reading and and then you know where it gets relabeled dyslexia or learning disability, one of the things that I'm concerned about and we're we have an active research project going on right now is if the diagnosis of ADHD floats in for families of kids with language disorders, because the schools aren't offering any other explanation or there's no others, so the services that evaporate. When a child becomes conversationally adept, the language disorder is still there. Right, you look in their writing samples and they're omitting the grammatical forms that they used to have problems with in conversation. The difficult, the difficult new line difficulty is still there. So ADHD seems to fill in that gap of of what the problem is, and so just makes sense yeah, yeah, it starts to make more sense.

01:10:14
And you know that the expressive weaknesses that are, we're so clear when the child was young, um, get replaced with significant receptive difficulties that are harder to interpret and detect. And it it, it just seems it could be a diagnosis of convenience, when the real problem is like a underlying receptive language problem in a few words.

01:10:45 - Shaun (Host)
I know you like that.

01:10:47
I, I never have a few words, obviously no, it's been uh great to actually expand on the topic because I think the the challenge and this is something that's come up just recently is, for example, a journal article that, depending on the journal, has a very defined number of words you know that you can actually use to describe what your research is, and so often that gets forgotten. And so having actual conversations, you know you go to a research conference and it's a 15 minute presentation, or maybe you get 30 minutes if you're really lucky on a, you know, on a particular topic. But really actually being able to have this sort of more than an hour with you to kind of explore the topic actually gives depth and robust robustness to actually discussing dld and 88.

01:11:37 - Professor Sean Redmond (Guest)
Yeah, that's that. It's true that podcasts like this one and other ones really fill in a needed gap for families and clinicians and researchers to get a better sense of what's going on out there.

01:11:55 - Shaun (Host)
Yeah, so, as I draw to a close, I've just got one more question. At the dld project, we try to focus on self-care and finding time to breathe that whenever we can. In our busy day as a researcher, what do you do to look after yourself? There's always a question show.

01:12:10 - Professor Sean Redmond (Guest)
I know it is, so there's there's the idealized version of myself where I would say oh, I, I regularly go on hikes and make sure that I exercise multiple times a week and I honestly that's aspirational, but I do, I do try and do that and and living in in Utah, there's lots of recreational activities, outdoor activities with great scenery so beautiful scenery yes, so when the toxins build up with too many um uh uh flight fight or flight reactions to imagine threats, right like deadlines and writing papers and dealing with reviewers and writing presentations, yeah, going out into nature has always been a very um uh nourishing activity.

01:13:17
Yeah, um, and then and then the other. In addition to nature, engaging in social um uh dynamics is healthy and I try to make sure that I do that and I like to do this through a variety of board games that.

01:13:36
I I regularly, um, engage them with different levels of competitiveness. I do that and then along that same line. So I grew up during the age of video games and Dungeons and Dragons and I have revisited both of those and I made sure that I play both of those, and about the only thing I do consistently is a weekly session of Dungeons and Dragons with my son, who lives in Minneapolis, my brother, who lives in Las Vegas, and we do this all through something that's very similar to this, like zoom platform well, with all this added stuff, and spend way too much time doing that.

01:14:26 - Shaun (Host)
But, um, that's me geeking out um great and and, in revisiting those childhood yeah passions, because those are also very nourishing yeah, I was going to say there's a new Dungeons and Dragons movie coming out. I see the cinemas. Hopefully it won't disappoint the resurgence of Dungeons and Dragons, um, um players since uh Stranger Things was released, however many years ago this I was going to say most of. I've learned a lot about Dungeons and Dragons from my clients who I have definitely spent many a therapy session on character design.

01:15:06
Um, for those of them who are new to the uh, to playing, it's a very intense part of the early stages, I believe, is what your character is and isn't and how they'll perform within the game.

01:15:21 - Professor Sean Redmond (Guest)
So I've learned a lot yeah, great, fantastic.

01:15:25 - Shaun (Host)
Well, few final key. I guess, if we were to sum up our discussion today is there's sort of a couple of key points you'd love listeners to take away. This is just a great audio grab as well, so you know, what sorts of things would you like people to take away from our conversation?

01:15:44 - Professor Sean Redmond (Guest)

so I guess one thing to take away is if, as a as a practicing clinician, if you feel like you are behind the curve and trying to figure out how to deal with um language disorders and ADHD, um and how to differentiate them from each other and what to do with them where they're both in the same client, um, that feeling is real.

01:16:12
The the evidence isn't there to really support your work in the way that it should, and so the programs of research really need to catch up on giving clinicians stronger tools, um and and moving forward with our interventions. Taking into account how um different aspects of a child's profile might impact on their response to our interventions um is something um to look forward to. Um. The other thing is that I I I do believe, as speech language pathologists, sometimes we aren't as assertive as we could be in these interdisciplinary treatment design sessions where um we, we are the advocate for people, including accommodations to poor language skills, um, and that goes for the behavioral issues that children might exhibit in the classroom, but also, you know, with those sort of cognitive behavioral therapies where people are really um wanting to move things um those are so verbally dependent that it's going to be in their best interest to make those accommodations if they want their interventions to work.

01:17:39
Yeah, and.

01:17:40
I guess just sort of embrace the messiness of it all um, that there's lots for everyone to learn about um all these different conditions, it we haven't gotten to a place where there's a lot of cross talk between the fields, which I would also. Going back to your earlier observation, that would be a nice thing. Moving forward, I? I did have a very revealing um interaction when I gave a talk to a, a room full of um doctoral students in clinical psychology, um, and I asked about what kind of exposure they had had to developmental language disorders in their training and they said that they they go through the DSM, which is the American version of the ICD. Um, but yeah, they would go through it chapter by chapter.

01:18:42
And when they got to the chapter on communication disorders, they skipped it and said that's what speech pathologists do, so you don't need to know that. And so, appreciating the fact that the most informed person in the room on communication disorders, language disorders, is the speech pathologist, um, the other people in the room don't know nearly as much as you do um, and you can't take for granted that you know that the psychiatrist or the pediatrician even knows what this is. I've been, I've heard that in med school pediatricians might get a lecture on developmental disabilities with a paragraph on communication disorders, and that's it so. Well, Shaun, thank you so much for your time today.

01:19:33 - Shaun (Host)
I greatly appreciate it. I'm sure our listeners will get a lot out of it, um, and I'm sure we'll be in touch in the near future excellent, I appreciate it, our time thank you, professor Redmond, for that amazing deep dive into ADHD and DLD.

01:19:50 - Nat (Host)
If you want to know more about DLD and ADHD really exciting news we've actually got a new short course about to launch. On June 7 there'll be a live event. You can join Natalie Manley speech pathologist, psychologist and director of capable kids for two hours to discuss current research and functional strategies to support people with DLD and ADHD. This course is for families, health professionals, educators, anyone with an interest in DLD and ADHD. You can jump online now and register at the dldprojectcom. It's only 49 dollars, australia, which converts very well for our international friends. Thank you for joining us on the talking DLD podcast. I do have some homework for you, because Sean did say that you can't take for granted that the cycle the pediatrician will know anything about DLD and that when you're in the room, the person with DLD and definitely the speech pathologist will often be the most knowledgeable person in the room on DLD. So let's get out there and let's have lots of conversations with people about DLD. Let's make them aware. Let's have an impact. Have a great week. We'll talk to you next month.