

70| ADHD – With Dr. Robb Mapou

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Speakers: Robb Mapou, Ryan Van Patten, John Bellone



Intro Music 00:00



Ryan Van Patten 00:17

Welcome, everyone, to Navigating Neuropsychology: A voyage into the depths of the brain and behavior, brought to you by INS. I'm Ryan Van Patten...



John Bellone 00:25

...and I'm John Bellone. We have a quick update about CE credits through INS. Each new episode that's made available for CEs will now require a couple of code words and a few multiple choice questions. We had previously stated that only the

code words would be required, so we apologize for the confusion. But we are happy to announce that several new episodes are now available for CEs. So please visit navneuro.com/INS to check them out. Again, that's navneuro.com/INS.

Ryan Van Patten 00:57



Today we speak with Dr. Robb Mapou about ADHD across the lifespan with a focus on adults. Robb is a board certified clinical neuropsychologist in private practice. He has extensive experience working with people with ADHD. He's written papers on the topic as well as a book called "Adult Learning Disabilities and ADHD: Research-Informed Assessment". As you'll see, he's a great person to talk to about this topic.

John Bellone 01:24



ADHD is the most common neurodevelopmental disorder in children and we probably don't need to convince you, our listeners, about its importance to neuropsychologists. According to Dr. Jerry Sweet's surveys of over 1500 neuropsychologists, both pediatric and adult practitioners see people with ADHD at high rates, so this condition is relevant to all of us. ADHD, like I mentioned, is a neurodevelopmental disorder in the DSM, which means that the symptoms begin in childhood. It can be diagnosed as predominantly inattentive type, predominantly hyperactive-impulsive type, or combined type. Inattentive symptoms include things like making careless mistakes, trouble sustaining attention for long periods, difficulty with organization, and distractibility. Hyperactive-impulsive symptoms include frequent fidgeting or squirming in a seat, blurting out answers inappropriately, trouble waiting for one's turn, and frequently interrupting other people, among others.

Ryan Van Patten 02:30



This is a longer episode, but it's filled with great content so we hope you'll stick around for the full conversation. At the end of the discussion, Robb talks about his own personal and professional journey, which I found to be very inspiring. So, with that, we give you our conversation with Robb.



Transition Music 02:45



Robb Mapou 02:54

So, it is important to note I'm wearing an aloha shirt and I have my ukulele underground. So we have to keep that official, you know. [laughs]



John Bellone 03:07

You know, I wasn't kidding. If you want to do a ukulele solo for the outro music, we're open to it. [laughs]



Robb Mapou 03:14

Yeah, I probably like that better than the current outro but that's another story. We'll talk about that later. [laughs]



Ryan Van Patten 03:23

All right, we are here with Robb Mapou. Robb, welcome, and thanks for making the time.



Robb Mapou 03:27

Oh, thanks for inviting me. Glad to do it.



Ryan Van Patten 03:30

So we're talking about ADHD, and we'll lean towards ADHD in adults for this conversation. To start us off, we know that ADHD is a neurodevelopmental disorder at its core, but symptoms can persist into adulthood with some people continuing to meet diagnostic criteria and others experiencing subclinical attention and impulsivity problems. There was a good review paper in 2018 by Barbara Franke and colleagues and this idea of ADHD as a lifespan condition. I'm wondering what you think about ADHD lifespan trajectories.



Robb Mapou 04:04

Well, I would totally agree that it's a lifespan condition. Many years ago, everybody thought, "Oh, when kids grow up, ADHD goes away," and then there started to be longitudinal studies looking at persistence of symptoms over the lifetime. Studies have been done by Russell Barkley at two locations. One, his longitudinal study at the Medical College of Wisconsin in which they followed kids diagnosed as young as age 6 up until age 27, and then a study of adults at the University of Massachusetts where they looked at individuals who were diagnosed as adults but they got information about childhood history. The estimates that I typically quote are from 50 to 66% of kids with ADHD continue to show symptoms as adults. There is

some variation in that depending upon whether you look at subclinical symptoms versus full diagnostic criteria for ADHD. Fewer people meet full diagnostic criteria, but that's also led to some adjustment in the symptom levels needed to diagnose ADHD in adults. The big issue is whether the symptoms continue to be impairing, whether they're subclinical or full diagnostic criteria. That's the problem. Barkley, Murphy, and Fischer's book, "ADHD in Adults: What the Science Says" summarizes both of their longitudinal studies. It really shows that, when ADHD symptoms persist, this is one of the most impairing psychiatric disorders in terms of multiple areas of life functioning. People who truly have ADHD really do struggle. They struggle with jobs, they struggle with family relationships, or just holding on to relationships. Barkley and colleagues, in these studies, really looked at these multiple domains. So there's no doubt that this is a lifespan disorder. There are some people who do get better over time. My thought and the thought of others is that, for these folks, with the maturation of the frontal lobes - the development of myelin in the late teens into the late 20s and the impact on frontal lobe functioning - this may enable people to be less impulsive and more attentive. I have seen in my own practice a few folks who, as kids, most definitely met criteria for ADHD and then in their early to mid 20s really pulled their lives together and went on to do very high level things. So the symptoms do remit in some people and they go on to be quite successful.

Ryan Van Patten 06:57



Right, we've got a lot to get into with the rest of this conversation. But as we're talking about ADHD as a lifespan condition, I want to say that there's a large amount of research on ADHD in children and a pretty good amount of research in adults, but very little that I've seen on ADHD and older adults even though people with this condition do grow older, just like the rest of us. So what do you think about aging in ADHD? What do we know?

Robb Mapou 07:23



That's absolutely correct. We don't know a lot. I am not aware of studies that really looked at older adults. I can't recall the upper age limit in Barkley's study of adults, but we're typically talking in adult studies, I think, of people in their 20s to 40s. I can't cite a specific study that looked at, say, adults with ADHD in their 60s or their 70s. One might expect some interaction between the symptoms of ADHD and what we know about how frontal lobe functioning changes in those later years. We might expect things to become worse in someone with ADHD. But the bottom line is, at this point, we don't know.



Ryan Van Patten 08:10

Yeah, and we do see older adults who may have had ADHD as children. Of course, diagnosing ADHD back 60 or 70 years ago was different than it is now. But I say that to emphasize that this is important.



Robb Mapou 08:24

Yes. 60 or 70 years ago - well, we didn't really have ADHD 60 or 70 years ago. We went from minimal brain damage, probably back in the 40s when they were talking about this, to hyperkinetic disorder of childhood, to attention deficit disorder with or without hyperactivity, and then to attention-deficit/hyperactivity disorder, primarily inattentive type, primarily hyperactive-impulsive type, or combined type, to now, primarily inattentive presentation, hyperactive-impulsive presentation, or combined presentation. So, if we go back that far, there just was very little known about the disorder.



John Bellone 09:08

Yeah, the DSM-II in the late 60s, I think, was the first to call it hyperkinetic childhood disorder. Then the DSM-III actually said attention deficit disorder. So this doesn't go back too far. And so, because of that, these older adults would not have been evaluated or treated for ADHD because the diagnosis didn't exist, for some of them at least. Is that right?



Robb Mapou 09:34

True. It's interesting, I'm in the midst, actually - For a patient I saw yesterday who the referral question was cognitive change because she's 75 years old, my own observations from the time I first talked with her on the phone was that she shows many of the features that I see in adults with ADHD. That is, talking on at length in detail, becoming tangential, difficult to interrupt. I subsequently learned that her son had been diagnosed with ADHD. Even just this morning when I was talking with her, she has repeatedly been unable to locate papers, things I've asked her to sign, even though she confirmed previously that I sent them and she told me that her desk is very disorganized.



John Bellone 10:30

This happens a lot for me, too. I see a lot of older adults with memory-related concerns and they say, "Well, I think I would have met criteria for ADHD. But no one ever told me that." How do you parse out those symptoms? I mean, is it possible to parse the ADHD, if it was a true diagnosis, from a neurodegenerative process?

Robb Mapou 10:50

Absolutely. I did a - it wasn't exactly a webinar. Rick Green, who's a comedian in Canada, after being diagnosed with ADHD really began to focus on getting the word out about adult ADHD. For a while he was doing an Internet TV program about ADHD in adults and the segment that I did a number of years ago was titled, "Is it ADHD or Alzheimer's?". I think it's fairly straightforward because we know the patterns that we see in Alzheimer's disease - poor learning, poor retention and retrieval, difficulty with recognition. Sometimes difficulties with awareness - that when you give a word list, the person says, "What list?" Those types of memory problems do not occur in ADHD. What you see in ADHD on testing are weak organization and weak attention, which then leads to weak encoding. But pretty much what got in was retained. There's sometimes even better recall after a delay and recognition demonstrates what got in as well. So that's one thing. The second thing, if we're looking, for example, at frontotemporal dementia, you don't see personality change in ADHD. We know that personality change - changes in language functioning, changes in behavior, and changes in adaptive functioning are key things that you want to look at, of course, in any dementia - but with frontotemporal, you're more likely to see personality or behavior or language changes. Again, you would not see that in ADHD. What you would be looking for is a persisting pattern of difficulties with attention, organization, and planning that have impacted life over the course of the lifespan. That's really where the big difference is. So I don't think it is very hard to parse out which is which. I've seen several people where that indeed has been the question of people in their 70s. In some instances they know they've had ADHD all along but are concerned about a change in their functioning. And, in others, like the woman I'm evaluating right now, it's kind of crossing my mind as I see the clinical presentation.



John Bellone 13:30

Yeah, it's helpful to differentiate those. So, ADHD is highly heritable. I've seen that 5 to 10 fold increases in risk for first degree relatives of people with ADHD. But, you know, the environment can also play an important role. Can you tell us about genetic and environmental risk factors here?



Robb Mapou 13:52

Genetic factors are much more important. Barkley covered this in a chapter in his 2014 book and he looked at both genetic and environmental factors. It's clear that genetics played the biggest role. First of all, he points out that ADHD is one of the most heritable psychiatric disorders, perhaps equalled or exceeded only by autism spectrum and bipolar disorder. The heritability is higher than you see in depression



or anxiety. So the genetic factors are what seem to make the difference. I believe twin studies showed in monozygotic twins concordance rates of like 75% - really, really high. If one twin has ADHD then the other does. Among family members where there's one family member who has ADHD, I think there's some 50% likelihood of another family member having ADHD. Again, it's very high. Whether you look at children of parents who have been diagnosed with ADHD or parents of children who have been diagnosed with ADHD. Quite commonly, a parent begins thinking about their difficulties when their kid is diagnosed. They start saying, "Hmm, you know, Doc, that describes me really well. I'll bet I have this," and then they pursue assessment as well.

Environmental factors clearly play much less of a role. The most common environmental factors are actually going to be things that happen pre-, peri-, and postnatally to the central nervous system. So, for example, kids who are of low birth weight are more likely to have ADHD - that places them at risk. It places them at risk of other learning disorders as well. Then there are questions, "Okay, what might affect these prenatal factors?" One factor that's been linked to ADHD has been maternal smoking. But maternal smoking has a relationship to low birth weight, which in turn has a relationship to ADHD. So which is it? Of toxins in the environment, the most common toxin that has been linked to ADHD is, of course, lead. But even there the studies seem to be mixed. They don't always control well for parental background and for parent ADHD. So there are a number of methodological problems with that. Other things that have been like ADHD include cocaine, mercury, and pesticides. But in all of these cases, the question is, these are correlational studies, are these factors causal? And, so, I think that the genetic factors are really much more important than the environmental factors. Now, of course, in the past, there were concerns about food additives, about sugar - none of that panned out. There is no evidence that food additives or sugar causes ADHD. You know, parents will swear that when they took their kids off of anything with an additive or sugar, the kid's ADHD went away. We don't really know.



Ryan Van Patten 17:20

Maternal alcohol consumption is another risk factor, right? Children with FASD, I believe, are a bit more likely to have ADHD.



Robb Mapou 17:27

Yeah, that's true. But of course, FASD has very broad effects. Certainly the reason for diagnosing ADHD in someone with FASD or autism or another much more global disorder, is that you want to treat it. That's the main purpose. At one time, for

example, autism was a rule-out for ADHD. That changed in the DSM-5, now you can have both. It was that recognition of that. There's also - kind of as an aside - there's an increased rate of ADHD in kids with seizure disorders. Again, that's entirely independent of the attentional problems that may be due to the seizure disorder or the meds. They truly meet criteria for ADHD. So, again, you want to treat it. There have sometimes been concerns that stimulant medication will make a seizure more likely. My understanding is actually some of the stimulants make seizures less likely - they raise the seizure threshold. We were actually looking at this way back when I was involved with rehabilitation of severe TBI and we began treating attentional problems with Ritalin. We talked about the question of, "Does this make them more likely to have a seizure?" We learned from looking at the literature, no, it actually may make it less likely.

John Bellone 18:56



As we mentioned earlier, ADHD is a neurodevelopmental disorder so there must be childhood symptoms for a DSM diagnosis. But the literature also contains descriptions of so-called secondary ADHD. We could talk about this. Symptoms may appear after a brain injury, for example; maybe you've alluded to it in terms of perinatal trauma. There's also something called adult-onset ADHD that sometimes you'll read in the literature. Again, these are not established diagnoses, but can you give us an overview of these concepts and your thoughts?

Robb Mapou 19:34



Yeah, they're two separate concepts. Let's start with secondary ADHD. I know there have been some papers that talk about secondary ADHD after brain injury. I really think that's a misnomer. ADHD is a developmental disorder. Can you have disorders of attention and executive functioning after brain injury? Of course. Those are the most common disorders after brain injury. I think it is mixing apples and oranges so to speak, if you've then labeled that as a secondary developmental disorder. That makes absolutely no sense to me. Now we do know there has been a small literature showing that stimulants can effectively treat that. But I would label that as a person who has these cognitive, behavioral, emotional changes due to brain injury, not due to ADHD. Now, the other complicating factor is that there is a high proportion of individuals who suffer brain injuries who have ADHD. That's because they do risky, impulsive things that can lead to serious injury. If they had ADHD prior to the brain injury, then that's still a relevant diagnosis. But again, I would never use that term in someone who did not meet criteria for ADHD before the brain injury or other neurological disorder.

Adult-onset ADHD became a thing in a JAMA Psychiatry journal issue in 2016. There were two papers that were published there, one from a group in Brazil and another from a group in England and Wales. What's interesting to me when I looked at these two articles - in the British study, they assessed kids at ages 5, 7, 10 and 12, and then they assessed them at age 18. So this was a large population study. The same was true of the Brazilian study, where they followed people at age 18 to 19 years of age. So these studies concluded that: first, there could be young adult onset at age 18; and second, that there was something different about this disorder. Now, here's what I see is the biggest problem, and there was an editorial that addressed a number of problems in those studies. If you look at Russell Barkley's summary of the Medical College of Wisconsin study in 2008, what they found is that onset can occur as late as age 16, and the impairments and characteristics of ADHD are exactly the same as if they were diagnosed at age 7. So Barkley, Murphy, and Fischer argued that maybe we should raise the age of diagnosis to age 16. But, in the DSM, they settled on age 12 - they moved it up from age 7 because 98% of cases are diagnosed by age 12. Those diagnosed at age 16 are more likely to have had higher IQ scores, to have shown inattentive symptoms, and so they were missed. Often it is girls who are missed rather than boys, because the boys tend to show the hyperactive-impulsive subtype and behavioral problems early on. So what struck me in looking at these two studies is that neither of them assessed at age 16. They both assessed at age 18 and 19 and concluded, "Oh, we have onset now." We don't know if that was when the onset was. In the one study, it could have occurred between age 12 and age 18. And in the second study, the same thing. They never discussed either of those possibilities.

If you have a kid who is really bright, the pattern that I typically see is that they sail through elementary school with good grades. There may be teacher comments about inattentiveness, maybe socializing too much, but they do well because they don't have to do any homework. Then they hit middle school, and they have to change classes, and there's more emphasis on independent work completion, and grades begin to drop a little but they still may do okay. They get to high school, more of the same - their grades may drop some more. Parents may step in, get tutors, get executive functioning coaches, and the kids do really well. So they might not be diagnosed yet. Then what happens? They get into a great college, they go off to college and, in November, at break, they're back in my office. Because they went to college and basically said, "Wow, this is great. I can just go to class and I have all of this free time in between", and they got none of their work done. Then they become overwhelmed and that further impairs their ability to get their work done, and they're failing the class by the break. That's a pattern that I have often seen. Is that young adult onset? No. Because I trace back - I look at academic

records, I get the parent report, I do a very thorough history review - and guess what, there were symptoms there all along. They were just, as the editorial states, subthreshold symptoms. Because of intelligence and scaffolding support, they did okay until they had to be independent. That's really the biggest thing with ADHD.

You know, Barkley basically said, as far back as 1997, that ADHD was a disorder of inhibition. It wasn't a disorder of attention. It was the inability to inhibit a prepotent response to something that's more interesting in the moment, so that you're drawn to other things that are more fun to do. We certainly know what that's like when we have to write a report and there are other more interesting things around us to do. But, in ADHD, they can't resist that. That seems to be what happens. So I don't like the term adult-onset at all. The editorial was by Steve Faraone and Joe Biederman at Harvard, and they actually say in the article, "If you treat adults, recognize that adult onset of ADHD exists." But, again, I've since talked to Steve Faraone about this and he's said, "No, ADHD doesn't start in adulthood. If you trace back, and you've ruled out other causes, you will see evidence of that." So again, I think it's a misnomer to call this adult-onset. I don't think there's any evidence that ADHD starts in adulthood. you have to tease this out by a thorough review of history and symptoms.

Ryan Van Patten 27:03



Right, the symptom profiles could be very similar in an adult who had a TBI at age 35, and has problems with attention and executive functioning compared to someone with true ADHD. But we would not call that adult-onset. We would not say that they have ADHD because, by definition, they can't. It's a neurodevelopmental disorder. I've also been confused when reading about the idea of secondary or adult-onset ADHD and wondered, "Why don't they just call it something else?"



Robb Mapou 27:32

I think it should be.



Ryan Van Patten 27:33

Yeah.



Robb Mapou 27:33

I think it should be called something else in both instances.

Ryan Van Patten 27:37

Yeah, so this is great. I like how you emphasize the importance of removal of structural supports in young adults going off to college. I've also come across that and I think that happens a lot. It can masquerade as an adult-onset ADHD. But, like you said, if you're careful and you find out what this young adult was like as a child, if they truly have ADHD, you'll find subtle problems that parents and other supports may have been masking.



Let's move on and touch on a topic of comorbidity and ADHD, which is complex and interesting. I really like transdiagnostic constructs like impulsivity or, in particular, externalizing symptoms because they can explain so much comorbidity. Theodore Beauchaine has done a lot of great work on externalizing disorders, including ADHD, and how they're related. What this looks like is a lot of children with ADHD, especially boys with hyperactive symptoms, also have symptoms of oppositional defiant disorder and sometimes conduct disorder that can morph into substance use disorders as they get older, or sometimes antisocial traits. So that's that externalizing spectrum. But also in adults, and in both men and women, comorbidities can include LDs, depression, anxiety, autism spectrum disorder, and all of that can vary based on developmental stage and gender. Can you help us make sense of a comorbidity picture in ADHD?

Robb Mapou 29:12



What you said reminded me of a chapter in a 2011 book "ADHD in Adults: Characterization, Diagnosis, and Treatment". The chapter is entitled "ADHD Personality and Its Disorders"*. It's by - I'm probably not going to pronounce this because it's a Dutch name. Looks like van Dijk and Anckarsater. I don't know, I can't pronounce the name. Sorry. My Dutch is not very good today. [laughs]

*[Transcriber's note: The correct chapter title is "Adult ADHD and Personality Disorders"]



Ryan Van Patten 29:38

[laughs]



John Bellone 29:39

We have to ask Jacobus Donders next time. [laughs]



Robb Mapou 29:42

Yeah, that's a good idea. You pronounced his name very well there. We just call him JD because we can't pronounce it. [laughs]



John Bellone 29:49

That would be easier.



Robb Mapou 29:52

The author's premise was that, for kids who have oppositional defiant disorder and ADHD, that can then morph into antisocial personality disorder. This is far more likely in the hyperactive-impulsive or, I believe, the combined type of ADHD. So one externalizing disorder leads to another. In the kids with inattentive ADHD, they did not see that pattern. I think that if you look at the studies - if you look at the difference between, say, Barkley's longitudinal study and the study in adults who were diagnosed as adults at UMass - in the longitudinal study, the kids who got into that study got into it because they were having behavioral problems. So you had externalizing behaviors and, therefore, in that population you were more likely to see externalizing disorders including ODD, conduct disorder, substance use disorders. Whereas in the adult study, you were far more likely to see internalizing disorders. These were adults who had ADHD and were coping with it, but the coping difficulties were likely to lead to internalizing problems. So depending upon how the subject population was ascertained you see differences in the types of disorders in the populations.



John Bellone 31:32

So along those lines, Robb, you know, ADHD is often associated with a number of poor educational, occupational, and social outcomes. There's also potentially earlier mortality due to unnatural deaths, more risky behaviors. Can you talk a little bit more, just nail down a little bit more, in terms of those problems?



Robb Mapou 31:51

As far as outcomes, again, they differ between the two populations. So if you compare the longitudinal studies that Barkley's group did, they had lower educational attainment, lower IQ, as you might expect, more externalizing disorders, higher incidence of learning disabilities. If you look at the adult studies that they did at UMass, then you see higher IQ, higher educational attainment, and a lower incidence of learning disabilities. These were people who were much more successful despite having ADHD but still had impairments. In terms of mortality, Barkley's group was really one of the first to show that there are influences on

health outcomes in adults with ADHD because they don't have as healthy a diet, there may be more alcohol use or drug use, there may be more smoking, less exercise - just health-related behaviors they showed in their 2008 book were much poorer in the adults with ADHD. I believe there have been some studies since then that have essentially shown the same thing. I can't think of one off the top of my head, but I remember seeing something that confirmed not just more mortality but poorer health outcomes and poorer health-related behaviors in adults with ADHD. There's also evidence of poor money management in adults with ADHD. Actually, if I'm thinking back, I think this was within the last year or two, it may have been a paper in Neuropsychology about exactly that - looking at health behaviors and financial management in adults with ADHD.



John Bellone 33:43

Along with healthy lifestyle behaviors, sleep is another one of them. Sleep problems are pretty common in ADHD. What do we know in this area?



Robb Mapou 33:56

You know, I'm not up to date on the literature, but I will tell you what I observed clinically. The issue for sleep in people with ADHD seems to be self-regulation. So, it's poor sleep regulation - it's staying up really late, it's getting involved with video games or the internet into the late hours of the night. Hyperfocusing on that, not being aware that time has passed, and then not getting enough sleep, and being off in their timing. People with the inattentive type of ADHD, though, often complain that they can't get their mind to shut down at night. And not being able to turn that off, not being able to turn the thoughts off, causes difficulty getting to sleep. So that's why for some folks with ADHD, sleep meds are sometimes indicated to help them get to sleep. Although, you know, on a long-term basis, that's not such a great idea. But those are the things that I have seen clinically. I don't know more specifically about an increased incidence of sleep disorders that you might diagnose based on sleep studies, whether there's any literature on that or not.



Ryan Van Patten 35:03

Yeah, what I've seen is that there are subjective reports of poor sleep in people with ADHD but not a lot of polysomnography. So it's consistent with what you're saying, Robb. Another disorder or construct that is of interest and overlaps with ADHD is sluggish cognitive tempo. This is a bit newer and very interesting, but I think it would be helpful for our listeners to hear you differentiate ADHD from sluggish cognitive tempo.

Robb Mapou 35:31



The biggest difference between the two if you look at the symptom profile is just the sense of slowness. Inattentive type of ADHD might be associated with, say, slow processing speed on our measures, but the kids and adults who have sluggish cognitive tempo are sluggish - they're just slow. They take time to get started on things. They just don't move very quickly. Now, the question is, "Is that a different disorder?" There is not a whole lot of research on that. I believe Lisa Jacobson at Kennedy Krieger has looked at this in kids - she actually came and spoke to our practice a number of years ago - and Russ Barkley has looked at it in adults. You know, sometimes as part of my current ADHD questionnaire I use the Barkley Adult ADHD Rating Scale-IV, and that includes a section on sluggish cognitive tempo. Honestly, I've not seen many people with this disorder and I know that some of us in our practice have questions. "Does it really add anything useful? Is it actually a unique disorder?" I think the jury is still out on that.

John Bellone 36:55



You had alluded to earlier, there's a good amount of literature on gender differences in ADHD between boys and girls, I haven't really come across much literature on other important demographic moderators, like SES or race or sexual orientation. Do we know if ADHD differs in any meaningful way across these other groups?

Robb Mapou 37:15



Well, there was one study that I recall looking at differences between white and black students on ADHD diagnoses in a college setting. I don't think there were a whole lot of differences in the characteristics between the two populations.

There's certainly nothing that I'm aware of on sexual orientation. For that matter, I'm not aware of much literature on neuropsychological functioning and sexual orientation anyway. Some of the earlier studies that looked at differences in brain structure really have not borne out. So we don't know a lot, if anything, about if sexual orientation is a mediator for neuropsychological functioning.

Gender differences, actually, what the studies seem to show is that the inattentive type may be more common in women, and because of this, girls and women may be diagnosed later because they're not showing externalizing behaviors that get the attention of parents and teachers or get them into trouble. But, the level of impairment is the same. Now, there may be gender differences just from the point of view of gender roles. So that, for example, if the expectation is that a woman is expected not only to hold a full time job but also to manage the home, that places

many more demands on time management, planning, and executive functioning. So the problems may emerge because of that. Whereas the man with ADHD, if his job is only to go out and work and come home, and he doesn't have these other responsibilities, those same types of problems may not be as obvious. But when the studies have really looked at gender differences, they don't find a whole lot. Now, there are some people - for example Kathleen Nadeau, who has written about ADHD in adults for many, many years - who actually believe that our diagnostic criteria should be different and that's the reason why we don't see gender differences. That same argument has been made for autism spectrum disorder, because of differences in the presentation in boys and in girls. But until someone actually studies that, we don't have an answer. That really is speculation about that.

Ryan Van Patten 39:54



So there are true differences between boys and girls, where boys are more likely to have the hyperactive-impulsive subtype. But when we move into adults, that's when it's more murky. Is that right?

Robb Mapou 40:05



No, I'm not sure I would put it that way. I would say the differences between men and women in adulthood in the manifestation of ADHD symptoms may be likely to reflect differences in gender roles that then lead to that. So I think men are more likely to show more externalizing behaviors, more substance use, and women are more likely to show more internalizing comorbidities, or co-occurring disorders. I don't really like the term "morbid" or "morbidity". I had this discussion with, I think it was my colleague the late Dan Eubanks, a number of years ago. I tend to talk about co-occurring disorders, because "morbid" just sounds morbid - like death. [laughs]

John Bellone 40:54



[laughs]

Robb Mapou 40:55



And yet there seems to be this preference for that term. But the co-occurring disorders, I can't cite them off the top of my head, but there was a nice study out of Scandinavia that illustrated exactly this and showed the differences in disorders between men and women. Where impairment levels were the same, but the manifestation was different.



Ryan Van Patten 41:20

Got it. Yeah. And overall, boys and men are more likely to have externalizing symptoms, whereas girls and women are more likely to have internalizing symptoms on average, which maps on to what you're saying.



Robb Mapou 41:31

Yes.



Ryan Van Patten 41:32

So in this long and interesting path through ADHD let's briefly touch on neuroanatomy, which could be its own discussion but we'll just be very brief. I've seen a few replicated findings in people with ADHD compared to controls, including smaller basal ganglia, anterior cingulate, and total brain volumes. Also, I've seen hypoactivation of those frontal-parietal attention networks and hyperactivation of the default mode network. Is that accurate? What's your take?



Robb Mapou 42:03

I would say all of that is accurate. I haven't kept up in great detail with neuroanatomy. When I was doing my book, you know, some now, how many years ago? It was almost 14 years ago when I started on that. In my workshops, I had originally covered genetics and neuroanatomy. When I first sent some of the chapters out for review, Jack Fletcher was one of my reviewers and looked at it and he said, "You know, the genetics and the neuroanatomical factors that you're talking about here? They're really way more complicated. So you need to do one of two things, either you need to expand these chapters and show all of the difficulties or you need to take them out." And, as a clinical neuropsychologist focusing really on assessment and trying to figure out how to best assess ADHD, my choice was to take them out. So I haven't followed the literature that much, especially looking at the default mode network.

But, that being said, we do think of ADHD as a disorder related to executive functioning, which is largely mediated by the frontal lobes. But the frontal lobes are highly connected to subcortical regions with feedback loops going back and forth into other areas of the brain - even the brainstem may be involved. So there are a lot of ways in which I look at attentional disorders, and executive functioning disorders broadly, as whole brain disorders. I think we have been able to isolate some regions like that, but again, my question is, "Okay, what does that tell us about how to evaluate it? And how to treat it?" I don't think the neuroanatomy gives

us as much information about that for these disorders, which is why I don't follow that literature as much.

Ryan Van Patten 44:06



Sure that makes sense. I think it's good that we just touched on it, but we'll stick with the more behavioral clinical questions. Along those lines, Russell Barkley has come up a number of times already in this conversation, appropriately so. He's done such great work, a lot of research in this area. I'd like to wade into this fascinating back and forth you had with him in the ADHD Report. These are 2019 papers on whether or not neuropsychological testing, or to be more specific, cognitive testing is useful in ADHD assessment. So my overall take, which I'll ask you to get into the nuance here, but my overall take is that he argued that cognitive testing, aside from IQ and academic achievement, is really not appropriate or useful in ADHD. While you argue that it's not useful in the diagnosis of ADHD, but cognitive neuropsychological assessment does have other important functions in some ADHD evaluations or all evaluations. Of course, I should caveat this to say that Russell Barkley is not here to defend himself, and we want to do our best to do his arguments justice. So let's start with areas of agreement between the two of you, and then talk about where you differ.

Robb Mapou 45:27



Well, Russ and I have had a lot of back and forth emails on the topic. I've actually found him to be one of the most accessible and responsive researchers I've ever communicated with because he responds quickly and in great detail and, of course, he's very knowledgeable.

So ADHD is a behavioral diagnosis - you base it on the presence or absence of symptoms, the clinical course of those symptoms, and whether they are impairing for the person. You don't need neuropsychological tests to do that. You can do that by a good clinical history. But you also want to have developmental information. So that would include speaking to parents, reviewing academic records, getting current information from another informant - a spouse, a partner, or a close friend, roommate. This isn't always possible. And so, to make that diagnosis, you have to have all of this clinical information and you don't always have that.

But that really isn't the issue in terms of testing. The issue for me is that it is a rare person I am referred where the sole question is, "Do they have ADHD?" The clinical question is typically, "Do they have ADHD? Or is there another psychiatric disorder?" Okay, it's another psychiatric disorder, we need at least to do an MMPI

or MMPI-3 and we have to have some information on that side of the picture. Often there's a question of learning disabilities, and as we know, there's a high co-occurrence of learning disabilities in people with ADHD. You can't do that without academic testing. The other question might be, "Is there a mismatch between the person's skill set and what, for example, they've chosen as a profession?", which then leads to their concern that they may have ADHD. By looking at neuropsychological tests, we can determine, for example, "Are language skills weaker in someone who is expected to be doing a lot of reading and writing and speaking?" "Are visual spatial skills low in someone who is supposed to be doing a hands-on job?" My view is that a more comprehensive evaluation can answer the most common clinical questions.

Now, when I'm seeing someone just for a screening, as I've actually done a number of times here in Delaware, I have taken a more streamlined approach. But I still like to do a few of the tests - for example, Tower of London to look at planning, for sustained attention a CPT to see if there is an attention problem, which could be due to a sleep disorder. I'd want a little bit of information about cognitive functioning. Do I make the diagnosis on the basis of that? No, I don't. But, to me, that provides useful information in the diagnostic process, and so I tend to do this. Folks have asked me about a streamlined battery and I've developed that for people who cannot afford a full comprehensive evaluation or don't really have questions about, say, a learning disability or something else.



Ryan Van Patten 49:13

It sounds like you're focusing more on the ecological validity of our neuropsych tests as opposed to their diagnostic utility for ADHD.



Robb Mapou 49:22

Correct. But then again, Russ's argument has been that our tests don't have a lot of ecological validity. However, other people have been looking at this. It was just a TCN issue, I think maybe the May issue that Yana Suchy edited, on ecological validity of executive functioning measures and how some of our measures may be better than everyday tasks in predicting everyday functioning. She has done a lot of work, not necessarily in ADHD, but in terms of, "Do our tests predict something?"



John Bellone 50:16

In addition to the executive functioning measures, we also have some scales, both self report or other reports. Can you talk about the clinical utility of these rating scales for ADHD?

Robb Mapou 50:30



I think they're helpful. I think you always need an informant. My go-to rating scales now are, even though they're old, the Wender Utah Rating Scale. Paul Wender was one of the first people to look at the issue of ADHD in adults. He was a psychiatrist at, I believe at Harvard, and he developed the Wender Utah Rating Scale and the Parents' Rating Scale, and both of these are scored. I can tell you a funny story. The Wender has key items that you score, you don't score the whole thing. A number of years ago, a psychiatrist referred a patient to me because he said, "Well, I just did the Wender and this guy had a score of..." - I'll give you an arbitrary score - "...of 104." And I said to him, "You know, Joe, you can't get a score of 104 on the Wender! Did you score the whole thing?" And he said, "Yeah."



Ryan Van Patten 51:23

[laughs]

Robb Mapou 51:24



So on the Wender, what they found was that scores below 36 were not found in people with ADHD. Scores between 36 and 46 could either be due to depression or ADHD. And scores above 46 were more significant for ADHD. On the Parents' Rating scale, I believe the cutoff was 13 from the parent. So I use that and the Barkley Adult ADHD Rating Scale for the childhood symptoms, and, again, I have the patient and a parent complete those. The difficulty with the Barkley scales is that the normative data are only for self report - they did not collect data for observer report, but you can make a comparison of the two. For current functioning, the Conners' Adult ADHD Rating Scales - which are in revision and I believe there's supposed to be an update coming out next year on that, or maybe even later this year. I use the long version, because the long version gives you several factor scores: inattention/memory problems, hyperactivity/restlessness, impulsivity/emotional lability, and problems with self-concept, which is really a self-confidence scale. Then there are three ADHD symptom scales that are adult wordings of the inattentive, hyperactive, and the hyperactive-impulsive symptoms and a total score. And there is an ADHD index that discriminated between those diagnosed with ADHD independently of the task and those who did not have ADHD. So I use the long version to get all of those measures. There's also an observer report that can be given to a person who knows them well currently. I like that measure because it also includes a derived symptom validity measure, and we can talk about that when we talk about those issues. No other measure has that. Then I use the Behavior Rating Inventory of Executive Function Adult Version. Again, self and informant report. At times, I will use the Barkley Deficits in Executive

Functioning Scale, if I want to do a, and I hate the term, "deeper dive" into executive functioning because it uses his concept of executive functioning. But, again, it's limited because it does not have normative data for the informant. So those are all of my go-to rating scales that I use. Then I like the MMPI because I can also look at what they're reporting cognitively on that too, and see if there are any contributing emotional factors. There was a study by Roger Gervais and colleagues a number of years ago that found that the COG scale on the MMPI actually was more likely to correlate with emotional distress than with actual attention deficits. So that can be helpful. I think it's always interesting on the Conners' scales, if the inattention/memory problems, hyperactivity/restlessness, impulsivity/emotional lability scales are low, and then all of the symptom scales are off the charts because that tells you they know what the symptoms are. You know, there are a number of studies that show that with a simple internet search, you can easily duplicate an ADHD profile.

Ryan Van Patten 55:08



Robb, you mentioned that sometimes other neuropsychologists asked you for a brief ADHD screening battery. Could you briefly run through what that is? I think a lot of our listeners would be interested.

Robb Mapou 55:19



I'll run through what it is, and the reasons why I include these measures. Trail Making Test, because there was some literature and several meta analyses that showed poor performance on Trails B than on Trails A in adults with ADHD, whereas the opposite pattern to me, poorer on Trails A than Trails B, is more likely to indicate initial anxiety on the task. I like having Digit Span - forwards, backwards, and sequencing - because again, ostensibly, these tests are getting harder and the early meta analyses seem to show that adults with ADHD did worse on backwards than forward digit span. They didn't look at sequencing, and I sometimes wonder if sequencing really is harder because I have people tell me that it's easier. I like to have a continuous performance test. There are two reasons for that. One, I want to get a read on sustained attention during a boring task. But also that has a performance validity measure built into it and if I see a performance that is way worse than people I typically see with ADHD, either there's something else going on - they may be falling asleep - or they're deliberately blowing the task. I like the Tower of London as a measure of planning because I often find that it is associated with reported planning difficulties in everyday life. Then always an MMPI-2 RF, or as we're moving forward, an MMPI-3 to look at contributing psychiatric factors. Now, there was some evidence from kids' studies, again, this was worked by Russ

Barkley and colleagues early on, that the Controlled Oral Word Association test, particularly with letters, is another sensitive measure of executive functioning. I think they found that was one of the most sensitive measures, if kids were going to show a deficit on a measure of executive functioning. So I may throw that in - it's quick. But this group of measures does not take long to do and just gives me a sampling of cognitive functioning in folks who I'm seeing.



Ryan Van Patten 57:29

Great.



John Bellone 57:30

Just to follow along these lines, the continuous performance tasks, CPT, some people rely on intra-individual variability and response times, omission and commission errors, just variability across cognitive profiles and different tests as another bit of information. Can you talk through the variability?



Robb Mapou 57:52

Yeah, variability in response time seems to be one of the most effective measures of ADHD-related impairment, which is interesting. I look to that when I'm thinking about, you know, a borderline case. "Does the CPT show similarity to what we see in ADHD?" The omission errors, of course, are a measure of "can you really sustain attention to an infrequent stimulus". I use the Test of Variables of Attention. That's my preferred CPT because I've been using it for a very long time. I like the fact that you have a low frequency event during the first half and a high frequency event during the second half, so you can look at the difference there, and it has built-in performance validity measures. So that's my go-to task. It's also the longest of the continuous performance tests. There is certainly literature in adults, in the vigilance area, a lot of work done in the military, that actually shows to get a vigilance decrement in a normal individual, you need to do a CPT that's like 45 minutes long otherwise you don't see a vigilance decrement. So I think a longer task is better. I think the Gordon Diagnostic System, for example, is just way too short and the Conners' Continuous Performance Test is in between. Conners' is also a little bit different because there you're pressing the button every time and you have to inhibit. You know, there was also some research showing differences between different CPTs. But the bottom line, I should add, is that a CPT is sensitive, but it's not specific. So, if there is a problem, it shows that an attention problem is present, but it doesn't tell you what it's due to. Again, that's why you need to look at history and symptom reports when you're doing a CPT. It also can be affected by a bunch of different factors.



John Bellone 59:51

That's a good point just generally speaking, right? Because sometimes people with ADHD who meet diagnostic criteria do fine on cognitive testing, right?



Robb Mapou 1:00:01

That's correct. And that, again, has been Russ Barkley's argument that a lot of people with ADHD do fine on cognitive testing. So let me give you another clinical example. This was actually by one of our board certified colleagues at a prestigious institution - no names. I saw a woman a good number of years ago who was preparing for the bar exam. She had been evaluated and they concluded she did not have ADHD for exactly that reason - because there were no deficits on the attention measures. They didn't review her history. They didn't look at her symptoms. I interviewed her mother. I interviewed her. I learned that she had been very hyperactive from an early age. Once I looked at the history, there was all sorts of evidence of ADHD symptoms. That was a good example where the clinician concluded ADHD was not there solely on the basis of test results. So normal test results don't rule out the presence of ADHD. Abnormal test results make it more likely that ADHD is present, but again, you have to rule out other causes.



Ryan Van Patten 1:01:27

Right. So this is all very interesting. I'd like to try to summarize the areas of agreement and disagreement between you and Russ Barkley, and then solicit your feedback. So areas of agreement: you both agree that cognitive testing is not necessary, or potentially very useful in the diagnosis of ADHD. You also both agree that self-reported attention and executive functioning and other-reported attention and executive functioning is very important. It tends to correlate much more strongly with everyday adaptive functioning than do tests of executive functioning, which I think is an important point. One other caveat is that IQ testing and academic achievement testing can be helpful to assess and potentially rule out intellectual disability and learning disorders. The area of disagreement between the two of you is whether or not cognitive testing, aside from what I already mentioned, is useful for ecological purposes - for understanding the whole person, for looking at cognitive strengths and weaknesses. Where you think it is, but Russ thinks it's not. Is that right?



Robb Mapou 1:02:41

I would say yes, that's accurate.



Ryan Van Patten 1:02:43

Okay. So I would refer our listeners to those papers, which we'll link to in our show notes, which go into more detail. Then I'd like to move on to something you've touched on several times...



Robb Mapou 1:02:56

Let me just add to that. There was a final follow up paper by Russ and one of his colleagues that essentially argued against all of my arguments in the first paper. I think that came out in the summer of 2019 in the ADHD Report. I actually began assembling a team of folks to respond to that, which included a number of researchers like Paul Marshall, who has done lots of research on the utility of cognitive tests in ADHD diagnosis, and several other people who have looked at this to respond to all of these arguments. Then, basically, COVID came along and interfered. We may pull that together again, but I think there are still things to be said about the arguments that they made, arguing against my arguments. So the debate may not be over at this point. It's just a matter of pulling that together.



Ryan Van Patten 1:03:58

Yeah, please do. I'd love to see that. I've seen Barkley's first paper, your response, his response to your response. So I've seen the three, but then I'm very interested in your response along with your colleagues, and we'll continue to follow this. So related to cognitive testing, is the issue of feigning or malingering of ADHD, which is important and frequent, at times. For example, college students have these external incentives to be diagnosed with ADHD if they want Adderall and/or accommodations. My understanding is that the brief symptom report instruments such as the CAARS or BRIEF, or Barkley scales you referenced earlier, really don't do a good job of detecting symptom invalidity in ADHD. But MMPI, PAI, and performance validity tests have utility here. So how do you go about assessing for symptom and performance invalidity in your ADHD evaluations?



Robb Mapou 1:05:00

Let's look at rating scales to start. Julie Suhr and her group have developed a Conners' Infrequency Index, where they looked at what symptoms on the Conners' Adult ADHD Rating Scales were not typically endorsed by college students who had ADHD. They came up with - I can't remember how many items, it's in the paper -but they have cut off scores of I believe 20 for women, 21 for men. Above that raises questions about whether you have a valid performance. Two other things - in the manual from the CAARS, they talk about a T-score above 80 raises questions about exaggeration of deficits. You know, I prefer to talk about exaggeration of

deficits or even misperception of what is going on. I won't always jump to malingering. I think psychiatric disorders can contribute to high scores on these measures - on the infrequency measures and on the scales themselves. I think one has to be very careful in assuming intent unless you know that for sure. So, I prefer, as many of us do these days, to simply talk about whether the results are either valid or they're not. That we're not getting a valid symptom picture, or we're not getting a valid neuropsych performance picture. So far, the freestanding symptom validity tests and especially the Word Memory Test seem to be most sensitive to performance invalidity. That's another reason that I argue for doing neuropsych testing. I should add to my battery, I would do the Word Memory Test as well. And if you do the whole word memory test, you not only get a measure of validity, you actually get a measure of learning and memory too, which you can look at. So it provides two pieces of information. So I would add that to my screening battery because I use that as well. I don't see that many people in my own practice who are truly feigning or malingering the ADHD. I'm more likely to see people who think they have ADHD, when in fact, it really is due to something else and they're more comfortable with getting an ADHD diagnosis than with something else. I sometimes find that people who really do have ADHD, deny that they have ADHD. One thing that I look for are the differences between an observer report and their report. ADHD, if indeed it is a disorder of executive functioning, can also be a disorder of awareness. As one example of that, again, in the longitudinal study from Medical College of Wisconsin, when they looked at young adults at the age of 21, if you looked at their parents' symptom report of these young adults, 66% met criteria for ADHD. If you look at their own self report, only 12% met criteria. Then you see them at age 27 and roughly half of the parents and half of the young adults both report symptoms, because they've been out in the real world, they've had more real world experience with the impact of their symptoms, and probably the frontal lobes have matured. So I think, again, that's important because you sometimes see underreporting of ADHD in people who actually do have it. Going back to my earlier example of the woman I evaluated yesterday, when I raised the possibility of ADHD with her she said, "Oh, no, I don't have ADHD. I've never been hyperactive. By the way, I was an athlete when I was younger, but I've never been hyperactive."



John Bellone 1:09:16

[laughs]



Robb Mapou 1:09:17

And then she said to me, "Well, I can't have ADHD because I can sit and read a book for hours and hours." Well, that doesn't rule it out because, A) women with

ADHD, as we said earlier, are less likely to be hyperactive, and B) anyone with ADHD can hyper focus on something that grabs their interest and for some people with ADHD reading is that interest. But when she repeatedly had trouble finding the papers that I had sent more than once, and told me that her desk is totally disorganized and she can't find anything, and she then says, "No, I can't have this even though my son's been diagnosed with this." Those are all red flags for the reasons we discussed earlier - the genetic predisposition and what you actually see in terms of difficulties in everyday life.

Ryan Van Patten 1:10:09



Robb, my clinical experience in the diagnosis of ADHD is that it can be really difficult in these fuzzy borderline cases, even more so than other mental illnesses. I have the sense that the interrater reliability of the clinical diagnosis of ADHD might be quite low, although I haven't seen good empirical research on this - this is all anecdotal. I'm wondering what your sense is and if you have tips for how we can maximize our interrater reliability in these diagnoses?

Robb Mapou 1:10:37



Well, I think corroboration is important, which I've emphasized all along. Getting rating scales from parents, from the individual, from a current respondent is essential. I will never make an ADHD diagnosis solely based on self-report and I'm critical of that in reports that review for other things. For example, for the FAA, when I do evaluations of pilots or pilot candidates who've been evaluated for ADHD, I see a lot of cases where it was just a very cavalier diagnosis made on the basis of self-reported attention issues without any review of the history. To me, the best thing is to get hold of early academic records - elementary school records with teacher comments - because that gives you a good indication of what's going on. Now, in some bright kids, you may not see very much, but I still think it's really helpful and I always try to get that.

I think as far as the fuzziness, Martha Denckla talked about the fact that if you see a kid who has impairment, but they're only meeting criteria at four or five symptoms, as opposed to six inattentive or six hyperactive-impulsive symptoms that you need for a diagnosis, it's probably worth treating them empirically to see if it makes a difference. So I would say the same thing with adults. Now the criteria for adults, for anybody above age 17 in the DSM, is five inattentive or five hyperactive-impulsive symptoms. I also use the proposed adult symptoms that Barkley, Murphy, and Fischer developed empirically, that were designed for adults and, I should add, are less likely to be feigned because most of them are not familiar to people. Several of

them will be, like distractibility and sustaining attention, but a lot of them, like difficulty doing tasks in the specified order or being unable to disengage from tasks when you should do so, are going to be less familiar. It's always interesting to see when people report a high level of DSM symptoms and very few of those adult symptoms - and again, they were research-based and they had hoped that they would go into the DSM-5 for adults with ADHD but ultimately, they did not. So six symptoms meet criteria provided that you have a childhood history that you can establish. If I see five symptoms, I may still say, "You know, it may be worth treatment." But the key is: are they impaired in everyday life? I have to add, I've seen a number of adults with ADHD who say, "I just want to know if I have it. I'm not interested in medication, I don't like taking medication." We can talk a little bit about treatment in a bit, but, you know, often the diagnosis is of interest, but not because they're pursuing medication.

John Bellone 1:14:01



So this is a good transition. Let's talk more about intervention for adults with ADHD. There are multiple options. There's pharmacotherapy, there's CBT, there's coaching that you mentioned earlier, neurofeedback, physical exercise, different accommodations. Maybe we could start with medications - there are stimulant and non-stimulant options, both of which have some evidence supporting the efficacy. So what do you think about medications in this population?

Robb Mapou 1:14:31



Stimulants are really the first medication of choice. They're the most effective in both kids and adults with ADHD. So there are methylphenidate-based drugs, like Ritalin and Concerta, and Focalin is, sort of, a close cousin to that. The amphetamine-based drugs, such as dexedrine, or Adderall, which are mixed amphetamine salts, and Vyvanse, which is a little bit closer to amphetamine than it is to methylphenidate. But the efficacy in adults when I was looking at this literature, I think is about 10 to 20%. Medications are less effective in adults than in kids. You are also more likely to have co-occurring medical disorders that may contraindicate stimulant medication, such as cardiac disorders, high blood pressure, and so on. So you have to be more careful of those than with kids. The non-stimulant medications - the three that are probably most common are Intuniv or guanfacine, which I believe was originally researched on adults, Strattera or atomoxetine, again I think the research was predominantly on adults on that one, and then bupropion. I always mix up how to pronounce that. Is it /BuproPRION/ or /BuPROprion/?



John Bellone 1:16:01

[laughs] Wellbutrin. Wellbutrin is easier.

Robb Mapou 1:16:04

Wellbutrin! Yeah. Which, you know, is a stimulating antidepressant. But what's clear is that these meds are definitely less effective than the stimulants, and I've not been impressed with what I've seen. I may suggest speaking with a psychiatrist about those, if, for example as in a patient I'm working with now, he's had several trials of stimulant medication and they cause side effects whereas he had actually taken Wellbutrin for smoking cessation and did not have side effects. So I suggested that he talk with the psychiatrist, or I'll talk with the psychiatrist, about perhaps trying that again, because he absolutely had problems on testing - his CPT performance was abysmal and it was valid. So I'm not exactly sure what's going on with that.



John Bellone 1:17:00

Where's your threshold for referring to psychiatry? Is it a pretty low threshold that you recommend?



Robb Mapou 1:17:06

Yeah, if the symptoms are there and there is impairment in everyday life where they're really struggling? Absolutely, I refer. But, you know, at times, I'll get the referral from the psychiatrist who says, "I've been working with this person for a really long time. Yeah, I treated them for ADHD, they're not responding. I want to send them to you to figure out what may be going on here." And again, often I find a lot of co-occurrence of high anxiety, mood disorders, - I should say, depression, specifically - and sleep problems. Because I think I find a lot of adults just think they can get by on little sleep and we know that's just not true. But then they're sort of resistant to changing sleep patterns.



John Bellone 1:17:54

Yeah, it wasn't good that my daughter woke me up at 1am last night. I couldn't get back to sleep.



Robb Mapou 1:18:00

How old is she?



John Bellone 1:18:00

She's eight months old.





Robb Mapou 1:18:03

Oh, yeah. Well, that goes with the territory.



John Bellone 1:18:06

That's why I'm just never making sense these days. [laughs]



Ryan Van Patten 1:18:09

At least now you have an excuse for it. [laughs]



John Bellone 1:18:11

That's true. Yeah.



Robb Mapou 1:18:12

But you didn't say to your wife, "Honey, can you get up and take care of her?"



John Bellone 1:18:17

We took turns. [laughs]

Ryan Van Patten 1:18:19

Big interview tomorrow. [laughs]



Tell us about the potential for misuse of ADHD medications in adults. I'm thinking about college students who use Adderall to boost their academic performance. You know, this is not prescribed by a physician or taken under medical guidance, it's sold on the side, for example. How do you deal with this clinically?

Robb Mapou 1:18:41

Well, first of all, I think there's absolutely a lot of that going on. I think some of the FAA candidates I evaluate will acknowledge to me that they pursued a diagnosis for performance enhancement in college. And, of course, now they want to fly or be an air traffic controller, and they had no idea that these were disqualifying, even though they never had ADHD. I can't recall what the diversion figures are, but they're fairly high and, from what I understand, stimulant use in college from college students that I've spoken with, you know, it's pretty common. It's used either to get better grades or to stay up all night to study. Now granted, I went to college in the 70s and there was this thing called speed that people used. So stimulant use was happening back then, but I think it was much harder to get stimulant medications,



primarily Dexedrine, back then because ADHD wasn't widely diagnosed. Now, you know, it's so widely diagnosed that these meds are easy to obtain. Again, this is one of my arguments for a really thorough, comprehensive assessment in terms of looking at what is the real problem here. Now, I suppose you could do that with just a history. But if you do an assessment, and there's really no history and the person has very few problems on testing, and then you do an MMPI and you find there's depression, anxiety, or sleep issues, I think it's much easier to make the case to the person that they don't need stimulant medication. It becomes tougher when the parent is insisting that the kid needs medication. I will admit that sometimes I just have to defer and say, "You know, this is not what I would recommend, but you're seeing a psychiatrist. I will tell the psychiatrist what I think, but ultimately, he or she is the one who's prescribing medication and it's up to them to make that choice." Sometimes I can't win. I try to avoid cases by screening those who may just be looking for medication, or accommodations for that matter, and that's all they want to get at the evaluation. So it helps that I'm able to do my own intakes, which actually, I was not able to do in the practice I was with before my current practice. But I would say those are really the rare cases. I think with a good feedback session, people are willing to hear what you have to say. They're coming to you as an expert.



John Bellone 1:21:37

Yeah. Can you tell us a little bit about CBT, cognitive behavioral therapy, for ADHD? What does the treatment look like? What's the evidence of its efficacy?



Robb Mapou 1:21:49

There's good evidence for efficacy. There have been a number of studies. I would say the first treatment program, and I think this was in 2005, came out of the Harvard group by Steve Safren, who I think is now in Florida. Their group published a number of studies on group-based CBT - that's a combination of psychoeducation and cognitive behavioral strategies for managing attention and executive functioning issues. It was a modular format that was - oh, what's the word for that - manualized, that's the word I was looking for. I hate when these word-finding problems happen. [laughs]



Ryan Van Patten 1:22:32

[laughs]



Robb Mapou 1:22:32

Just wait, they'll happen to you, too. [laughs]



John Bellone 1:22:34

Oh, they already happen. [laughs]

Robb Mapou 1:22:37

But "Mastering Your Adult ADHD" was in the Harvard series "Treatments That Work", and so this was really the first one that came out. Now, since then, this was followed by the book by Russ Ramsay and Tony Rostain at U Penn, where they have a very good ADHD center, "Cognitive Behavioral Therapy for Adult ADHD". Now, I think this was more an individual approach as opposed to a group approach, so both are there. But, again, this was another manualized approach. A third set of studies came out of NYU, by Mary Solanto and her group, unfortunately has exactly the same title as the Ramsay and Rostain book "Cognitive-Behavioral Therapy for Adult ADHD", but they have different titles after the colon. So the Ramsay and Rostain book is "An Integrative Psychosocial and Medical Approach", whereas the Solanto book is "Targeting Executive Dysfunction". Mary Solanto's approach was a group-based approach as well. Now, Ari Tuckman, wrote a book called "Integrative Treatment for Adult ADHD", kind of in the same period as the Ramsay and Rostain and the Safren books. While he calls it "integrative treatment", when you actually look at what he's talking about in the book, it's very much a CBT-based approach. Finally, Russ Ramsay actually reviewed the literature on non-medication treatments for ADHD, and again, what he found in his review, was that CBT was by far the most effective. There was some evidence for coaching supports. Not a whole lot of evidence for neurofeedback or complementary and alternative treatments. We have some evidence that mindfulness-based meditation can lead to better focus in alpha rhythms - I believe it's alpha - in the brain associated with focus, but again, there have not been a lot of good, hard core studies of its effectiveness with ADHD. Typically, with adults with ADHD, I recommend medication, some form of executive function coaching by someone who's really good at doing that - the quality of training and the clinicians does vary, so I have people I know and who I trust with that.



John Bellone 1:25:15

Any pearls for the audience, if they're looking for a coach for their patients? Selecting somebody?



Robb Mapou 1:25:22

You know, we have someone in our practice who's very good and has written books about the topic and developed programs for kids on this. I think one needs to be careful of folks who just hung up a shingle and said, "Oh, I'm going to be a coach



now". There is a group out of Massachusetts that I've had contact with called Beyond BookSmart. They specialize in coaching, and they actually have what sounds like a pretty thorough vetting process for anybody who does coaching with them to be sure that they know what they're doing. State by state, there's no licensing requirements for a coach. For both CBT and coaching, I think these are great areas in niche practice for neuropsychologists who would like to do treatment. I think it's badly needed. Medication only does so much. It does not give strategies that people need. It may help them focus, it may help them resist distraction, it may keep them more focused on things that are not reinforcing. But in terms of time management strategies, planning organization, how to write a paper if you're in college, because that's always that can frequently be a problem, for that we need these more behavioral interventions.

Ryan Van Patten 1:26:49

So along the lines of interventions, I'd like to talk about academic and occupational accommodations for adults with ADHD. And before you answer, I just want to highlight the interaction hypothesis for extended time as an accommodation, which I read about recently. It suggests that a disability group, such as people with ADHD, will perform below their peers at standard time, and then be comparable with their peers when given extended time. So the purpose of this extended time accommodation is meant to bring people up from an area of deficit where they're performing worse than controls up to normal. But one study, again, this is one study, this is Miller et al. (2013) found that the ADHD group performed similarly to controls at standard time and then better with extended time. They suggested that maybe these accommodations aren't appropriate if they're giving, you know, a boost. So you can answer this broadly. And then, if you don't mind, address the interaction hypothesis question.



Robb Mapou 1:27:54

Let me begin by recommending Lovett and Lewandowski's book "Accommodations for Post-Secondary Education Students", I'm not sure that's the correct title. It's published by the American Psychological Association. Actually, let me pull the book from my shelf so I can give you the right title.



Ryan Van Patten 1:28:16

[laughs]





Robb Mapou 1:28:16

My shelves are organized by topic, but it was down on the lower shelf because I had that one pulled out.



John Bellone 1:28:21

[laughs]



Robb Mapou 1:28:22

"Testing Accommodations for Students With Disabilities: Research Based Practice" by Ben Lovett and Larry Lewandowski, published by the American Psychological Association.



John Bellone 1:28:31

We'll link to this and all the other ones you mentioned, too, for our listeners.

Robb Mapou 1:28:35

For anyone who is thinking about or is doing assessments for accommodations, this book is a must read. It explains the differences between the Individuals with Disabilities Education Act, and its subsequent revisions, which govern special education services in the public schools, and the Americans with Disabilities Act, which covers accommodations on standardized tests and in post-secondary education. It's really important to understand the difference between those two. And it's important to understand the definition of "disability" under the Americans with Disabilities Act. Not everybody with ADHD may meet criteria for disability under the ADA, and this is where a couple of things come into play. First of all, the accuracy of diagnosis. In some of the studies that have been done, it's not clear that the ADHD diagnosis was actually accurate.



All right, we know one thing about ADHD from the work that was done by Bruce Pennington a while back. Kids with ADHD have slower processing speed than kids without ADHD, and we're referring specifically to processing speed on an intelligence test. Now kids with dyslexia also have slow processing speed, and it's thought that this is the behavioral indicator of the genetic overlap between those two disorders. That is what really led to the idea that extended time is needed for college students or kids with ADHD. But Lovett and Lewandowski have done some work showing that processing speed doesn't really relate to the need for extended time on an academic measure. Rather, it's measures of academic fluency - speed on measures of reading, writing, and math - that are far more predictive of the need for extended time on a multiple choice test. So it's more important to look at speed

on those measures if you're trying to make that determination. So that's number one.

Number two, if you think about ADHD as something that makes it hard to sustain attention to something that you're not engaged with, extended time actually seems counterintuitive. Do you want to put a kid with ADHD who can't sit still and make them spend 50% more time on a test? I've actually heard this from some people with ADHD - they don't want to extend the time. They don't want to deal with that, that's not what they need. Also, I have to add that for most of the high school and college kids I see with ADHD, test taking is not the issue. The problem is getting their work done, it's getting down to studying. If they study, they do okay on tests, there isn't a speed issue there. This is why, you know, I see these laundry lists of accommodations that are given - regardless of the nature of the disability, everybody gets the same accommodation. So I look carefully now as to whether extended time is needed or not. I think the study by Miller et al, which is from either Lovett's or Lewandowski's group, really is telling of the potential for unfair advantage for people with ADHD on these tests. To me, it really is an issue of fairness. Of, you know, someone who needs extended time, and you can demonstrate that and demonstrate why, should get it. But I've actually become a lot more conservative in my recommendations for accommodations. I'm more likely to recommend intervention to improve the particular skill, whether that be exam preparation or for someone who really does have a reading issue intervention to improve reading speed and comprehension.



Ryan Van Patten 1:32:45

If you can remediate and improve that skill, I think that makes more sense than providing accommodations or compensatory interventions.



Robb Mapou 1:32:53

I agree. The difficulty is, I think, as a society, unfortunately, we've really moved much more toward just accommodating. In the years that I've been working on this, which is probably a little over 25 years that I've been doing these evaluations, I've become much more skeptical. When I first started, I was more likely to diagnose ADHD in an adult. I even had this discussion with Kevin Murphy a long time ago. He was one of Russ Barkley's collaborators on the UMass study, and he agreed that, you know, in the mid 90s, a lot of us were much more likely to diagnose ADHD in adults. But now with, you know, 25 years of experience, we're looking a little bit more skeptically and really trying to rule out other causes, as well as these other factors such as a desire for medication or accommodations. So I make far fewer of

these diagnoses, but I still make them when I think the history supports it and I have sufficient information. I actually diagnosed ADHD in a psychologist - she worked for a government agency, and all she really wanted was to be able to close her door when she was doing written work and access to dictation software because she had a very difficult time organizing and getting her thoughts down on paper, and she was constantly running behind. I interviewed her, I interviewed her husband, and I interviewed her mother, and everything that I heard was very consistent. I reviewed her academic records. She was not suspended but put on probation at one school that she attended, and she attended prestigious colleges, but she went on probation, and had to appeal that, because of doing poorly in school. She took more time in graduate school, she failed her comps. But accommodations in graduate school simply of being given a little bit of extended time and testing in a non-distracting environment helped her. So there were enough data to diagnose this woman in her 40s with ADHD. But, in other cases, I find other causes.

John Bellone 1:35:19



Robb, earlier you had mentioned how important and useful the feedback session can be for these patients. Do you have any pearls of wisdom about either delivering news about whether or not someone has met criteria for ADHD or just in general for the feedback sessions?

Robb Mapou 1:35:36



So, you know, the joke is, "I have good news and bad news. The good news is you don't have ADHD. The bad news is you don't have ADHD." [laughs]

Ryan Van Patten 1:35:48



[laughs]

Robb Mapou 1:35:49



You know, my reputation is really as a straight shooter and I simply tell people directly what I think. I'm working on a legal case right now where autism and ADHD were two of the diagnostic possibilities, and after hours of interviews and rating scales with, you know, parents, partners, therapists, I can't make either of those diagnoses definitively. But I have behavioral indications of impulsivity, risk taking, sensation seeking, and difficulty with flexibility, planning, and learning from errors on my testing. So, in this case, my conclusions are that all of these factors were at play in the crime that was committed, even though I can't make a definitive diagnosis. I don't get a lot of pushback. Again, I tried to screen with my intakes, so

that people who I see are willing to hear what I have to say. If they are totally focused on getting an ADHD diagnosis, and that's it, then I'm not the right person for them to see and I hit them off at the pass. I'm at a stage in my career in which I'm pickier about the folks I will see. So it's a rare situation where the person doesn't hear that. I remember a middle-aged adult who I saw a year or two ago, who did have a hard time with my thing. I said, "I don't think this is ADHD. I think it's anxiety and depression." Because he just was totally convinced that that's what it was, I think he had a hard time hearing just about any type of feedback.



John Bellone 1:37:33

Any pearls for listeners about how to give feedback, other than shooting people straight and being very honest?



Robb Mapou 1:37:40

Well, I will talk about symptoms. I talk about what their history showed me, what the parents said, either supporting or not supporting an ADHD diagnosis, I'll talk about that first. And I will talk about these different symptom questionnaires and what I'm seeing on those, especially about the adult symptoms, and I'll say, "Isn't it interesting that when I use symptoms appropriate for adults, neither you nor your partner reported many symptoms, but as soon as I go to the DSM symptoms, you're reporting a lot, your partner isn't?" That tells me something. And, "You know, we didn't see anything in your childhood that would indicate ADHD." Then I'll talk about the neuropsychological tests and how those results will play in. I tend to be a numbers in detail person, so I often do bring scores into play when I am talking with people, though I do try to explain what those scores mean and how they are relevant. But I will go through that. And then I may still say, "Even though I can't make an ADHD diagnosis, I think you do need help with time management, staying on top of your work, organizing your paperwork. So here's what I'm recommending for that, even though I'm not recommending medication."



John Bellone 1:39:02

So focusing on the recommendations, even if it's not an ADHD diagnosis?



Robb Mapou 1:39:05

Right.

John Bellone 1:39:07



Okay. Well, this has been - we've really gone through quite a lot of information. Thanks for laying everything out for us and giving us your take on things and your long career of working with these populations. So let's do a couple of bonus questions before we let you go here. The first one is if you could improve one thing about the field of neuropsychology, what would that be?

Robb Mapou 1:39:28



It's nice to have the experience of all of the - how many years is it now? Three years of NavNeuro episodes?

Ryan Van Patten 1:39:37



Two and a half.

John Bellone 1:39:37



Yeah, just just over two.

Robb Mapou 1:39:39



I've been listening to all of the bonus questions and responses.

Ryan Van Patten 1:39:43



[laughs]

Robb Mapou 1:39:43



You know, I don't want to end up repeating something. I'll say, actually, in this area, ecological validity. I think that's really important and here's why. I do get concerned. We didn't talk about the FAA evaluations, but it's sometimes a mystery to me, when I have a teenager who's been diagnosed with ADHD, I believe the diagnosis is correct, they're still showing problems on some of the cognitive testing, including measures like CogScreen-Aeromedical Edition, which has been validated with aviators, and yet, I get a report from a certified flight instructor that, in the cockpit of the plane, they're doing fine. They're able to juggle the demands of flying with listening to the radio. They handle simulated emergencies very well without panicking. That makes me wonder how much validity our tests have when they show impairment in predicting everyday functioning, say in a plane. And that's where I sometimes get pushback from the FAA candidate saying, "What do these tests have to do with flying a plane?" But they're required by the FAA, this is what we have to do. I think ecological validity has been a problem ever since I started

doing this work. I think back to traumatic brain injury rehabilitation, where a lot of the best things that we did were interventions in the community with real life tasks. And I think people like Maureen Schmitter-Edgecombe out at Washington State University are doing some great work with looking at ecological validity in neuropsych testing by having people do everyday tasks in an analogue apartment. I think Yana Suchy has been doing good work on this. But I think this is the biggest problem - to be able to show to people that our tests do have meaning in terms of everyday life.



John Bellone 1:39:54

Yeah, yeah.



Ryan Van Patten 1:40:33

Yeah, that's a big area of interest for me that I think is critical, very important for neuropsychology. So I like that answer.



John Bellone 1:42:06

We've been focused a lot on, you know, physiological validity and lesion localization and diagnosis. Ecological validity, I agree, is incredibly important and as a field, we should move that way.



Robb Mapou 1:42:20

Bob Bilder talked about this and talked about the different levels of assessment, which I thought was really good. I should add that UCSD, of course, has been doing a lot of work on ecological validity. I was involved with their HIV studies way back in the early 90s. So the center in the town where you guys are located - and I think you're doing your postdoc at UCSD, right Ryan?



Ryan Van Patten 1:42:51

I did my postdoc there, yeah. I'm in Massachusetts now. But yeah, I've worked with UCSD people in the past.



Robb Mapou 1:42:57

Oh, I did not know that you were in Massachusetts.



John Bellone 1:43:00

Because Ryan didn't want me to announce that he's now at Harvard. So... [laughs]



Robb Mapou 1:43:04

Are you?



John Bellone 1:43:04

Yep.



Robb Mapou 1:43:05

Wow. That's cool. Who are you working with at Harvard?



Ryan Van Patten 1:43:08

Grant Iverson. Traumatic brain injury and aging work. Yeah.



Robb Mapou 1:43:12

Cool.



Ryan Van Patten 1:43:12

Yeah.



Robb Mapou 1:43:13

Cool. Yeah, that should be fun. Yeah. Very different climate.



Ryan Van Patten 1:43:18

Weather. [laughs]

Robb Mapou 1:43:18

Yeah, but among those centers that were doing good work on ecological validity, UCSD has certainly been one of them. You know, we're still working on this. Bob Spadoni, rest in peace, was one of the first neuropsychologists to raise this issue back probably in the 80s. So we're still grappling with this. And maybe the use of cell phones to collect cognitive data and behavioral data in the field is going to help with that. I know you had a whole episode about that. But doing things really in real life, we need to know more about that.



Ryan Van Patten 1:43:27

Yeah. Robb, I'm very impressed by your knowledge of NavNeuro episodes. Like, you know all of them. I'm honored that you've been listening, honestly.



Robb Mapou 1:44:09

Well, part of it is that I commute about five hours a week to and from Maryland. I drive in and it takes about two and a half hours, so I occupy my time listening to podcasts and yours has been one of the main podcasts that I've listened to along with Invisibilia and Hidden Brain. So a lot of brain and behavior-based podcasts occupy my time during that commute.



Ryan Van Patten 1:44:37

That's great. Well, as you know, we have two bonus questions. So before we let you go we'll hit you with the second one. What is one bit of advice you wish someone told you when you were in training or maybe someone did tell you that really made a difference? In this question, we're looking for an actionable step that trainees can take to improve their performance in training.



Robb Mapou 1:44:57

I think some people have said this before. Never predict what you're going to end up doing. Be open to possibilities. Now I have to go back to high school to talk about that, because I wanted to be a radio announcer and so I actually worked at a local non-commercial radio station when I was in high school. That was my dream. But I also was a math and science kid. And, actually for my bar mitzvah, a friend of mine gave me something like "A Boy's Guide to Engineering and Electrical Engineering" because I was interested in electronics. I combined these two talents when I was in elementary or middle school by building a REMKO radio transmitter, so that I could do electronics and be on the radio and broadcast throughout the house. So, actually, those were the two things I looked at, but my parents thought that pursuing a career as a radio announcer was not a great idea. So I studied electrical engineering when I was in college. But then, through a series of events, I got interested in psychology, I began working at the crisis line called the Help Center at the University of Maryland and found that I really liked working with people there. I also liked studying engineering; however, I had a couple of summer experiences with the army and their summer internship program and I wasn't that crazy about the work in the field. So I ended up consulting a friend who was planning to be a psychologist and talked to a couple of professors. I took an extra semester to take only psychology classes, and I applied to grad school.

Now, my intent at that time was to become a psychotherapist. Part of the reason behind that was that I had come out as gay at a time that it was not stylish or popular, and I began thinking that jobs with security clearances when, at that time, being gay was a kiss of death for a security clearance, maybe that wasn't such a

good idea. Anyway, I was more people oriented and I always had a mix of interests. So my plan was to be a psychotherapist in the gay community. It not the LGBTQ community as it is now, it was just gay. My first psychotherapy experiences - well, let's just say I wasn't a natural psychotherapist.

David Freitas, who was one of the Emory professors who was a self-taught neuropsychologist and one of the first board certified folks, grabbed me as his research assistant in my second year, and I started doing computer development for him. He kept saying, "You should go into neuropsychology." "No, no, no, I want to be a psychotherapist." Well, it took about three years and meeting Edith Kaplan to decide, you know, maybe this is a pretty cool field. And so I ultimately ended up in neuropsychology. I helped him start the first neuropsych lab at Emory back in the early to mid 80s. Before I was interested, I had an opportunity to attend INS. I did the whole mailing list for the Atlanta INS meeting, I think in 1980, but I had no interest in going and I didn't go. But David finally convinced me, and after meeting Edith, I decided, "Oh, that's who I want to study with." So I ended up getting into the Boston VA on my second try, not on my first try, and while I was there, I started thinking about "Wow, behavioral neurology is really cool. Maybe I should go to medical school." But I didn't want to spend another five years studying.

I moved from there into traumatic brain injury rehab work with severe traumatic brain injury, severe strokes, and figured I would have a career doing work with people with neurological disorders. But then another opportunity came along in the early 90s, and after being in a clinical track for a couple of years, I was able to move research track and did research on HIV and AIDS and collaborated with the folks at UCSD. So that's how I know the folks there. But then, like lots of government funding, this was the military and they decided they were interested in something else. During that same time period, I joined a practice specialized in learning disabilities and ADHD, and they had me come in because they were seeing more adults. That's when I started looking at the literature on this. Essentially what happened over time, after I left the research field and I did a little bit more work in TBI rehab, my work in the developmental area just grew and so I did my work on adults with LD and ADHD. But now it's morphed again and, I don't know, in the last 8 to 10 years, I've been seeing more people on the autism spectrum, so I moved in that area. So the moral to this very long story, which was probably much longer than you anticipated, is never close the door on anything. I know a number of people have said that in response to this bonus question. But for me, it's really true in the morphing of my career into different areas of interest. Maybe I just get bored easily, I don't know. It could be ADHD.



Ryan Van Patten 1:50:25

[laughs]



Robb Mapou 1:50:27

But yeah, always be open to new possibilities. Also listen to your mentors - if they think you might be good at something, try it sooner rather than later. Because I waited a few years and it took me maybe an extra year or two to get through grad school probably because of that.



John Bellone 1:50:48

So Robb, we had we had a few other questions about being openly gay. Do you still want to talk about that? Would you be open to it?



Robb Mapou 1:50:55

If you have time, I'm happy to.



Ryan Van Patten 1:50:57

These are bonus bonus questions today. [laughs]



John Bellone 1:51:00

[laughs]



Ryan Van Patten 1:51:03

So I'll launch it off. Robb, if you don't mind briefly describe the social climate when you were in grad school, and earlier if you want.



Robb Mapou 1:51:12

As you probably noticed today, I'm not one to give an opinion on something. And so that was the case for coming out for me, which I did when I was 19 turning 20 at the University of Maryland. Once I was out, I was out. Now this was the mid 70s and things were a whole lot different then, but hey, I didn't care. Fortunately, my experience has been very positive. I was in the General Honors Program at the University of Maryland and, for my honors project, I ended up teaching the second gay studies class at the University of Maryland. This was in 1977, there were no gay studies programs anywhere in the country. A philosophy professor who was my advisor had come up with the first gay studies class, which was "The Philosophy of Sexual Morality". He had a heterosexual version of a class and then a gay version of the class. So I put together this class there. I was accepted to Emory in April of

1978, and I was open with them from the start. Now, it was interesting that what people said was, "Oh, this doesn't make any difference to us. There's no difference." And I, you know, I sort of pushed the envelope there by doing case conferences and really covering the topic and what the implications were. Actually one of my first research papers was based upon a study in a community psychology class that two fellow graduate students and I did, doing a needs assessment of the gay community, which turned out basically to be limited to gay white males and we published that in the American Journal of Community Psychology. My papers before that were actually computer methodology papers, because I was a programmer, now called a coder. But that was my first substantive psychology study paper. And the result was interesting. I ended up starting to get community psychology papers to review from that journal about gay issues, including one from a newly minted professor, who eventually became very well known in the field. But I would say, the academic environment varied there. I think there was a kind of explicit acceptance, but I think there were implicit attitudes there, which one of my fellow graduate students thought might have affected my progress through the program and might have impeded me at points and affected people's opinions of me in ways that perhaps I didn't realize until after the fact. But, the bottom line is, I was openly gay there. I did my internship in 1984 and 1985. By that time, my now husband and I had already been together for 6 years and Edith Kaplan was very welcoming. We actually have fond stories of going over to her house and mowing her lawn.



Ryan Van Patten 1:51:27

[laughs]



John Bellone 1:51:34

While she gives you supervision. [laughs]



Robb Mapou 1:52:13

Yeah, and the lawn was often like two or three feet high.



Ryan Van Patten 1:54:17

[laughs]



Robb Mapou 1:54:22

I can tell a lot of Edith Kaplan stories. So, you know, I was open there. I was open on every job that I've always had, and it's never impeded my career. I have been

open in my run for office - the last two being for APA council, where I had to step down because of my mother's health issues, and also on the NAN board. So it has been a sea change in terms of the focus on diversity that we now see. Everything is different. There are gay studies programs, LGBTQ studies programs, all over the country. There is a diversity issue within AACN that includes sexual orientation and gender identity. We're just seeing a big change. There were times when I was the only one I knew who was openly gay. But over time, I met some people. Initially, most of them were not that open. But later, people came out and a number of them have served in our governance organizations and are now very open about it. So it's nice to see that change. Now that I'm at this point winding down my career. I actually am slowing down some out of choice, because there are other things that I would like to do. I'm not going to be the person still doing neuropsychology when I'm 80.



John Bellone 1:56:19

You'd be playing the ukulele. [laughs]



Robb Mapou 1:56:20

Yeah.



Ryan Van Patten 1:56:24

And one follow up question, Robb. Do you have any pearls of wisdom to share for LGBTQ trainees or professionals who might be listening or any others who might feel marginalized?



Robb Mapou 1:56:35

I think you should seek out a mentor with whom you could work with. You know, David, it's funny that he was a very good mentor and he really convinced me to go into neuropsychology - but, when he did supervision, we always had to do at the very beginning of our supervision semester an autobiography, and he did his like everybody else. And he had a very troubling and negative experience with a roommate who ended up being gay and kind of came back as this very effeminate and very different from the way he had been when David had initially knew him. And I think that shaped his view of what gay people were like, and I'm not sure he entirely got away from that. But, in this day and age, I think it's much easier to find a mentor who will get you and understand you. I think it's much easier not to feel marginalized. You know, I think people need to be encouraged to be open. You know, this is something that you can hide. I mean, I can pass - a person of color cannot pass, and that makes things very different. But my experience, and actually

that of my husband, had been very positive about being out for some, wow, what year is this? Almost 50 years. So I wouldn't change anything about that.

Ryan Van Patten 1:58:10



Wow. Well, thank you, Robb, for sharing. I'm sure for many of our listeners, it's helpful to hear that - to hear about your experiences. Thank you for that. And thank you for all of your time today. We meandered through so much about ADHD, a lot of complex information. I think there's a lot of good stuff in this episode that people will appreciate. So thank you for taking the time.

Robb Mapou 1:58:35



Oh, I'm happy to do it. I hope it wasn't too much. John may have his editing cut out for him. [laughs]

Ryan Van Patten 1:58:43



[laughs]

John Bellone 1:58:43



[laughs] I always have to do it for Ryan. So no problems.

Ryan Van Patten 1:58:46



Right, yeah. He takes out half of what I say to try to make himself sound better, you know. [laughs]

Robb Mapou 1:58:52



If people are interested in my music, I have a YouTube channel. That's the best place to go. It's actually [Robb the Uke Guy](#).

John Bellone 1:59:07



We'll link to that for people.

Robb Mapou 1:59:09



Why not? You might as well. I think the audio will be better there than it would be if I tried to play some now.

Ryan Van Patten 1:59:14



[laughs]



John Bellone 1:59:17

Yeah, thanks again, Robb. Really appreciate it.



Robb Mapou 1:59:19

I'm really appreciative and honored by you asking me to do this, particularly because I'm not a researcher and I'm not in an academic setting. I haven't been for a long time. My goal is to pull together research and apply it to assessment and really that's what I tried to do. I also appreciated, John, the shout out a few weeks ago when you were talking about your board certification. I was really glad that I could help you through that. As I told you, I thought you did a superb job and I had no doubts about your passing the exam, because you nailed a very difficult case.



John Bellone 1:59:58

Oh, thank you. And honestly, I really appreciate your help. I'll say it again. It was very, very helpful to go through the entire mock exam with you. It helped me prepare quite a bit. So thank you again.



Robb Mapou 2:00:11

Ryan, when you're ready.



John Bellone 2:00:14

Soon. Soon, hopefully.



Ryan Van Patten 2:00:15

Yeah, I'll do that. Thanks so much, Robb.



Robb Mapou 2:00:20

All right. See you.



Transition Music 2:00:21



Ryan Van Patten 2:00:25

Well, that does it for our conversation with Robb. As a reminder, John and I recently released our book called "Becoming A Neuropsychologist". We hope that it turns out to be a great resource for students and anyone who's interested in knowing more about our field. You can find it by searching, "Becoming A Neuropsychologist"

on Amazon or Barnes and Noble. And if you like it, please leave us a positive rating on Amazon. As always, thanks so much for listening, and join us next time as we continue to navigate the brain and behavior.



Exit Music 2:00:55



John Bellone 2:01:19

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Ryan Van Patten 2:01:31

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