

[00:00:00.000] - Melissa Corkum

Is your parenting journey turning out differently than you imagined? It's never too late to begin your family's transformation journey.

[00:00:09.160] - Lisa C. Qualls

Welcome to the Adoptionwise Podcast, formerly the Adoption Connection Podcast, where you'll rediscover the confident and connected parent you long to be. I'm Lisa C. Qualls.

[00:00:21.210] - Melissa Corkum

And this is Melissa Corkum. Don't worry, we get it, and we're here for you. Well, hello, everyone, and welcome to this month's workshop on neurodevelopmental movements. When I first contacted Sonia about this, I had the idea a lot of our families come to us and tell us that things like MNRI or reflex integration have been really helpful. And so we went on the search for an expert in such things, and Sonia actually said, That's just a small part. There's so many more things to know. And so we're super excited to have her here to talk with you guys today. Welcome, Sonia. Thank you so much for being here. I'm going to turn it over to you and let you start maybe with just perhaps a little introduction about who you are, what you do, and then you can take it away. And I'm already I'm intrigued by the slides.

[00:01:18.300] - Sonia Story

I really appreciate being here, and thank you for everyone listening and joining in. I got started with neurodevelopmental movement first through a training that I took that was basically doing movements to help with education. But what I found was that for my own children, when I started these movements, we had one daughter who had some birth trauma and a lot of hypersensitivities, and our next daughter, she had a lot of trauma from the womb life, having to do with a previous child that we lost. It was really hard for me because I didn't have these tools then to manage my own nervous system. So that pregnancy with our daughter, our next daughter, was so challenging because I was pretty anxious the entire time. I knew enough because I'd read so many birthing books, I'd known enough not to be, that it was bad to be anxious. But I didn't know really how to help myself out of that. That little soul there, she ended up being really hyperactive. I had one who was hypersensitive, one who was hyperactive, and I was homeschooling at the same time. They were constantly, even though they loved each other, they were constantly triggering each other.

[00:02:52.570] - Sonia Story

There were days when I was just in tears, not knowing what to do. I remember one day yelling at them for yelling, and I just thought, I don't know what to do. I am so off track. Then I found these movements. The first thing I found was just from a book that I had read. Then I started doing some of the things. Like one thing I can show you right now. I started doing this thing where I pulled the thumbs down, curled up like this, had the tongue on the roof of my mouth, and my legs are also crossed. It's just incredibly calming. That started working to stop them from engaging in more arguments and fights. Prior to that, I had tried so many other things. I tried different ways of getting us out of those kinds of negative spirals. One of them was nonviolent communication, which is a wonderful set of tools. But I realized it doesn't work well when you're really triggered. We forget that we have those tools, even though I trained myself in it, I trained our daughters in it. The tools went out the window and we couldn't access them when we were stressed or fighting. And so when I found these movements and they worked so fast and they worked so well, I was like, I have got to learn more. At the time, our family was living in Hawaii. I'll just move through a slide here so you can see a little bit of the background here. But at the time we were living in Hawaii, there wasn't much training. We ended up moving in 2006 to the Pacific Northwest. I was able to... By that time, our youngest daughter was six, and I was able to start training. I just fell in love with it. I was just so amazed. Because we had just moved and we were in transition, my husband wasn't working at the time, so I literally went to class after class after class. I ended up taking 50 courses in neurodevelopmental movement. Some of those were MNRI courses, a lot of them actually.

[00:05:20.780] - Sonia Story

But another whole body of work was from rhythmic movement training, which I took enough courses to become certified as an instructor with all three levels. I had also been developing my own

curriculum at the time, which was Brain and Sensory Foundations, which pulled together lots of training that I've had from different body work. I had body work training because I had previously gone through a lot of car accidents and things like that. I pulled together a lot of things. I had done play shops and I knew I had a mentor who was super emphatic, and rightly so, about the need to make it playful. I just combined the best of the best tools from all these different courses, and it turned out to be super useful. My goal was to get these tools to parents. What happened is, even though I was going to all the homeschooling lists and parent groups and things like that, there were very few parents coming in. It was mostly occupational therapists and physical therapists. In order to survive as a functioning business, I had to do the work to make sure that my course was approved for professional-level CEUs. We've had that approval in place with OTs since, I think, 2014 or 2015. As part of that whole process, I got really into doing the research. I'm currently in the master's program, and I've loved every minute of it, mostly because I very often hear stories. I've read over 1,600 case studies now, so I know this combination of tools works.

[00:07:10.680] - Sonia Story

It works beautifully. I'm going to share with you why it works and more about the excitement of it. I know we don't have a whole lot of time. So neurodevelopmental movements include the primitive reflexes. By the way, I really love the MNRI program. I learned a ton with that. But there's more. It's a very good program, and it's wonderful that parents are looking into it and finding out about it. The things that I have added, in addition to reflex integration, are tools that are really playful, so playful ways, and also the all-important innate rhythmic movement. That's why I use the term neurodevelopmental movement because it's an umbrella term, including as much of development as I can include in there that I know of. That would be the primitive and postural reflexes, the developmental movements, which are ones pretty much everyone's familiar with, like crawling is a developmental movement, sitting up, the milestones, those kinds of things. Then there are these phenomenal, innate, rhythmic movements. These haven't been studied as much in the research literature, but there is information about them, which I will share. I love these movements because they're so impactful for our functioning, mainly because they're calming and the brain and body already recognize them and know what to do with them. That's true of all these neurodevelopmental movements. They're recognized by the brain and body because they're part of natural development. What happens so often, and sadly, in our culture is that natural development is hindered, either from excessive stress, problems with pregnancy, birthing, womb life, or infancy. There's a lot of things in our culture that hinder these movements from working naturally.

[00:09:28.890] - Sonia Story

But the great thing about it is that we can use these movements later on and they still work beautifully. An overall general view of what these movements do, they develop the brain and the nervous system and the sensory system. They're critical for developing muscle tone, muscle strength, stamina, and coordination. They mature the lower parts of the brain to give us access and connections to the upper parts of the brain, which is where we have our emotional and social skills, where we have our ability, all those executive function things to get to the front brain so we can control our impulses, communicate, solve problems, focus, those kinds of things. They're really important for our learning and for our balance and posture. Think about the ability to be upright, free of tension. I'd love to share this photo because it really gives a visual of what we're talking about here. When we see children who are not functioning well, what I learned from Dr. Blomberg, who developed the rhythmic movement training, which was actually a combination of innate rhythmic movements and reflexes, he talked about the problems that we see in children stem from poor development, and you can see it in these pictures. The babies on the top row, they've gone through their neurodevelopmental movements without hindrance. That's why you see they're able to be upright, free of tension. They're ready to explore their world. They're ready to engage. They will successfully explore their world and engage. This is the picture of a happy baby right here.

[00:11:20.330] - Sonia Story

The ones on the bottom, sadly, this is happening so much. Even in children who are functioning fairly well or even excelling, you can still see some underlying weaknesses in their core because of their bad posture. Now, some of that is definitely learned, like the tech neck thing when you're on your technology and things like that. But some of it also has to do with the core not being set from infancy.

That has huge implications for the way we function for the rest of our lives unless we correct it later. First of all, if we do this ourselves and we scrunch up like this and we sag, or we are more slumped, we're not able to take as deep of a breath. We don't have as much room for our internal organs, and there's not as much oxygen going to the brain. Not only that, we're weaker and we have less stamina. That makes a huge difference in the amount of ability that we can go and explore our environment with and then our ability to develop our sensory systems. These are common challenges when these innate infant movements or neurodevelopmental movements have not gotten to do their complete full depth and breadth and repertoire.

[00:12:50.170] - Sonia Story

There can be anxiety and fight or flight states, ADHD, sensory processing disorders, poor balance, free states or withdrawal, muscle aches, learning delays, poor core strength, and sleep issues. I'm going to show a video of a little boy who was adopted at 18 months, and we're going to see him. I think he's six in the video. He made huge changes with the introduction of these rhythmic movements. One of the big changes was he had constantly had leg pain. So his legs were always hurting him, even if he just walked 5 or 10 minutes. He got amazing results in his development. Then he walked around the whole carnival for hours without complaining once of leg pain. I bring that up because it's hard for a parent maybe to understand that the child is not being lazy, they're not being defiant. They really are struggling. Hopefully, those pictures of the baby will bring that home.

[00:14:05.770] - Sonia Story

We should all be paying attention to these things more. When they took a group of children and they assessed their quality of movement and their gross motor performance in infancy and early childhood, then they followed them to when they were six and 12 years of age or somewhere in that range, they could see that the children in infancy who had poor motor skills ended up being the children later on who were anxious and depressed or who had those signs. That is really important. The main thing of why that's important is we can do something about it. We can intervene at any time. We can use neurodevelopmental movements to build these foundational skills that you can see here are so important because they really do affect us for life. Human beings are designed so beautifully, and I've really been in awe of these movements and the design of human beings because it's so perfect. It's so perfectly put together. The more you study this, the more you go, Wow.

[00:15:27.520] - Sonia Story

But the problem is there are so many hindrances, and that's what we need to take care of. But when there are hindrances, this is a picture we've touched on this already, where when this survival brain or the lower parts of the brain are stuck in their development, then the system is constantly raw and vulnerable, hypervigilant, and the question is always, Am I safe? Children learn to be manipulative, or they learn to misbehave, or they learn to do anything they can because their brain is wired just to focus on safety. If you can calm and mature and organize that lower part of the brain, then everything else holistically functioning in the brain starts to come online much better. The quote here is from a mental health therapist who is using these movements with children with trauma and neglect. She's saying that most of the things we do as mental health therapists are aimed at higher brain regions, but the primitive brain is where we need to focus, at least initially. We can transform the fight, flight, free states by using these principles of applying the neurodevelopmental movements, boosting development, and using the natural tendency of the brain to grow and change.

[00:17:08.980] - Sonia Story

I'm going to focus here mostly on the rhythmic movements because we don't have a lot of time, but also because they're the best place to start with a movement program because they're calming and soothing and because most children love them and most children will ask for more. Not every child, and if the child is really sensitive, like some children won't let you touch them at all. We have ways that we work with them to gradually bring them forward to be able to handle the touch. As you might guess, these are a key for healing trauma. If you guys are aware of the work of Bruce Perry, which I'm sure you are in this group, he talks about the importance of rhythmic stimulation to regulate the brain stem. He doesn't know about these movements yet. I've written to him and I'm working on it, but he does know about rhythm and the importance of it. But we're going a step further than just giving rhythm. We're giving rhythm that the body recognizes already because these are the movements that

are innately, they're hardwired into us. The reason they're hardwired into us is because they're so important for our development. When we get them, the brain and the body go, Oh, okay, thank you. The brain starts to grow, the body starts to calm. One rhythmic movement that is innate that everybody's familiar with is sucking. Sucking is rhythmic, and that's one of our first calming movements that we do in the womb.

[00:18:59.240] - Sonia Story

Okay. These are all challenges with atypical rhythm. If the child goes through their womb life or their birth or their early infancy with stress, almost always they're going to have an atypical rhythm or one that's not quite right or one that's a little glitchy. When that's the case, there can be speech and language disorders, developmental coordination disorders, ADHD symptoms, and dyslexia. Here is an example of the kinds of changes that we might see just applying the rhythmic movements. Now, this is an OT that sent me this story, and they haven't even gotten to the reflexes, which again, the reflexes are really important. I'm going to talk about those if there's time. This was a child at eight years old was having severe behavior issues. It was so severe that he was in a special school. When he had a major meltdown, it was violent, as you can see, throwing chairs and yelling. He would have four to five adults holding him down. This is hugely traumatic for everyone. They started doing these rhythmic movements, and he has hardly had any behavioral or emotional outbursts since he started. Within six weeks, he had already made gains in balance, coordination, sensory processing, impulse control, and frustration tolerance. This is huge. I read something like that and I think, Wow, this is amazing. Awesome. I love it. Then I go, What about all the kids who their parents don't know about this, or they need this but they don't get it. That's what gets me up at night and why I'm very thankful for programs like this to help spread the word.

[00:20:57.540] - Sonia Story

Here's another little boy who he was adopted at, I don't remember the age at which he was adopted. It's in the case study, I'm sure. But he was four at the time that this was written, and he had already been kicked out. Well, he had been refused service from an OT. Unfortunately, he was dismissed from OT because she didn't know what to do with him. His behavior was so extreme. His mother couldn't leave him alone with his other siblings because he would scratch and bite and push and he had this really terrible behavior. You can see here, he had excessive sensory processing challenges. You can see he is able to overcome the sensory issues, which those are the things when you have extreme underdevelopment of the lower brain centers and you have primitive reflexes unintegrated, and you haven't had enough of these rhythmic movements, you're not going to be able to have good sensory processing. It just won't, it just doesn't happen because these are the very movements we're designed with to develop sensory processing in the first place. That's why when you give the movements the sensory system gets the stimulation it needs to mature and the brain and body can calm down, and then you don't have to be in this hypervigilant state. Anyway, his mom was able to, after they did these movements for a while and he learned to trust and stop having the reactive attachment and would sit in his mom's lap, he could be left alone with his siblings. These are huge, important changes and stories here.

[00:23:04.810] - Sonia Story

Lifecycle of a primitive reflexes. Many of you are familiar with these super important movements. For those who aren't just very quickly, these are movements that are innate. Again, they're hardwired into us. One that we all recognize is this one where you press the baby's hand when they're first born and they will grasp. This has many different functions. But the important thing about this is this is automatic, meaning that when you give the stimulus, the baby will automatically do this as long as they're healthy. They should be expressing in infancy because you need that. You need that. You need... It's like your first exercise program, your first movement program to get you from the stage of being a helpless infant up to walking. You need to have a systematic, well integrated way of getting you up and dealing with gravity and being able to be upright walking ideally with alignment, coordination, flow and rhythm. There's a lot of brain maturity are going on with these movements because the brain is sending information to the muscles, the muscles are sending information back. These are designed to be there in the womb, and at birth and early infancy. They're there for our survival, for our protection and our development. They emerge just spontaneously as a result of a healthy development, and then they repeat over and over. You'll be able to do that until such time as

the brain and the body and the sensory system get that mature and then somehow our brain knows, I've had enough of that. If you touch me here, I can have a choice whether I do this or not. That's really important because if you have a choice, you're not obligated to do that, and you can go on to learn something more precise and more useful. But if you're stuck here, then holding a pencil or counting are going to be more difficult.

[00:25:18.120] - Sonia Story

These are well-known in the scientific literature. They've been used in infant assessment to determine whether the nervous system is healthy or dysfunctional. When they assess an infant, remember all these different movement patterns, and there are many of them, they're supposed to be there, but later on, they're supposed to be dormant. That's why you see over time, the frequency diminishes, and then they merge into these more voluntary movements that the baby has more precision and more control. Hopefully, that's helpful. We already talked about this, but these are all things. Some of them are new here on the list, but these are all in the research literature, and we've got it online if you're wanting to look that up.

[00:26:05.470] - Sonia Story

But this is important. All of these conditions: anxiety, ADHD, sensory processing disorders, learning issues, poor balance, poor posture, speech and language challenges, emotional behavior difficulties, which I'll share a slide about that, and schizophrenia all are linked to retained primitive reflexes. Just go to [moveplaythrive.com/mentalhealth](https://moveplaythrive.com/mentalhealth). It doesn't matter if the mental health is capitalized or not, but you just make it into one word, mental health. So [moveplaythrive.com/mentalhealth](https://moveplaythrive.com/mentalhealth). There's so much up there that is fantastic resources, research. You can see videos from mental health therapists. There's a whole presentation I gave that is free. I have to figure out how to link to that, actually. While we're talking about this, I'll have to write myself a note. But anyway, there's a lot there that is really worthwhile. That was actually a project that I did for my master's program. Anyway, I turned out for it.

[00:27:19.310] - Sonia Story

Here is a study that they look specifically at some of these retained primitive reflexes. Now, remember, once the child has gone through the toddler stage, these primitive reflexes should be well dormant. They should have developed into other more precise voluntary movements. Otherwise, it really causes hindrances, and it can cause emotional and behavioral challenges. I shouldn't say cause, but it's correlated to emotional and behavioral difficulties. Dr. Blomberg taught that that's a direct result of an immature brain and one that's under functioning. Here is one particular primitive reflex that for our discussion of fight or flight, it's really important, and for sensory processing. I can tell you why. The moro reflex is really important to our survival when we're infants. What it has to do with is if there's a sudden sensory input, the baby will startle and shake and then come back into a clinging mode back to the center. But when they startle and shake, their arms go out, their legs fly out, and it's often accompanied by the baby crying and by skin tone changes. What happens in the body is that adrenaline and cortisol are secreted at the time that the baby is startled. It's really important to survival because it's there for a good purpose. It alerts the caregiver. It gives our nervous system that practice of having a fight or flight response. We need that for emergency situations. But the problem is if you don't get proper care in infancy or if you don't get proper movement in infancy, then this can be left in your system.

[00:29:30.390] - Sonia Story

And this was me. This was me. I didn't realize I had this until I started learning about these movements, and it just made so much sense. This was why I didn't understand why I had this underlying anxiety. Well, I didn't even understand that I had anxiety. I was always just compensating. I was one of those kids who I got good grades in school. I didn't cause any problems. I just made myself invisible. But that stayed with me until my 40s when I started learning this 17 years ago. I didn't realize how bad it was until I got out of it doing these movements. I was like, Oh, all of a sudden, there was just this well of spontaneous joy and I could function better. I could do things like things I had never been able to do, like braid my hair in the back without a mirror, all this funny stuff. Then my visual acuity changed and my vision improved. There were just so many things that felt so good and I was way less reactive to sensory stimulus. I was way more calm and less controlling, which my family

really appreciated.

[00:31:00.420] - Sonia Story

Anyway, the earlier you can get a hold of these tools, the better. I am very aware that it's a very stressful time to be a parent. Parents need these movements just as much. They're highly nurturing. But anyway, back to the point here. The actual physiological response for this reflex is a fight-or-flight response. It's the same exact response where you have increased heart rate, increased breathing, and sweating secretion of adrenaline and cortisol. Again, it's good when you're a baby to have that when you get a sudden sensory stimulus that startles you, because it alerts your caregiver. As long as the caregiver is there, you get held, you get rocked, you get comforted, then your body learns that it's safe. But if your mother has an unintegrated moro like I did, I wasn't able to teach my children even though I was totally there for them physically, my nervous system was in such a state where they would get hurt or something because of the trauma of our first child having a traumatic birth and she was in intensive care as an infant. We were both really compromised in our nervous system. If she got hurt, I would be right there. I'd pick her up, I'd comfort her, I'd nurse her, I'd do all that stuff. But inside, my nervous system is going woo. She can sense that. Even if I say it's okay, they can sense the underlying reality of where your nervous system is. It wasn't until we all started doing this as a family that we had huge and tremendous changes with our girls. That's what I recommend. It can be super joyful for families to do this together.

[00:33:06.490] - Sonia Story

Here's another case study with a child who had reactive attachment disorder, had multiple outbursts per day, directed toward siblings, difficulty with transitions and schedule changes, and then he was able to do it. Reduced outbursts, less aggressive. He could work through his day without the meltdowns. There's many stories like this. Another one where you can see with this one, this child complained of headaches. I'm almost positive this little girl was 11. After doing the movement, she had fewer headaches, much less neck pain when she was working at a table. Her startle reaction, which we just talked about, was much less and her emotional regulation was better. She even got better in terms of bedwetting, which she had had a problem with during the day and night, actually, and then much more able to do things that were challenging and difficult for her.

[00:34:15.270] - Sonia Story

I think I don't have too many more slides. Well, I have some research slides here, but these are showing how the challenges with the primitive reflexes... Look at this goes way back to 1982. These studies have been around for a very long time and there are new ones coming out. But just to give you an idea, these are linked with mental health challenges. They're linked with anxiety in children and adults. Here's what I think is so cool, is there are studies showing that if you take a child with anxiety and you give them movements to help them with their balance, which is exactly what the rhythmic movements and the primitive reflexes are designed to do. That's our natural human, innate way of learning posture, balance, and core strength. But they didn't use those exact movements in this study but they did use movements to help children with balance. What they found is that it lowered their anxiety and increased their self-esteem. It's just so worth doing this. Here's a kid who had poor balance, that's super anxious, wouldn't leave his mom's side, wouldn't go to sleep alone. They noticed huge changes not only was to be able to get freedom from the anxiety, but he got better in his, I think he was in some martial arts, but I don't know the one, so I don't want to say it wrong, but he got much better in his martial arts, and he could... Yeah, he developed better balance. I think I'll just let everyone know that you can learn more at the Brain and Sensory Foundations course. I welcome everyone who wants to learn this. It's such a good way to bring a gift of in-depth, calm and nurturing to your whole family and set children on a foundation that's going to serve them the rest of their lives. So more information at [moveplaythrive.com](http://moveplaythrive.com). And I do have that video that I can share if you would like. Should I share a video?

[00:36:46.090] - Melissa Corkum

Why don't we do this? Because the video won't translate very well to the podcast. Why don't I have you go ahead and just tell people where they can find out more, reiterate your website one more time for the sake of the podcast, and then we'll go to the video and the Q&A.

[00:37:01.370] - Sonia Story

Okay, great. So you can learn more at [moveplaythrive.com](http://moveplaythrive.com) and just go to the courses section and the course is called Brain and Sensory Foundation. There are two levels. They're both great. Most people just start with the first one. We have many case studies that are published, and you can read the stories, and they'll give you hope and inspiration. So thanks again.

[00:37:30.320] - Melissa Corkum

Great. I know you said that they're approved for continuing education, but would they also be appropriate for caretakers, parents, folks who don't have a background in say, OT or other?

[00:37:41.410] - Sonia Story

Yes, absolutely. I developed this course first for parents. It's very doable. It takes time to learn. But right away, so there are eight sessions in the first level and nine in the second. Right from the first session, you can start applying things. I just know you'll get results if you apply consistently. That's been my experience over and over again. Usually, you see results within a month. 99% of the people see results in a month going in the right direction. That doesn't mean you're done. You want to spend some time and do it because you're replicating development here. You're not just... It's not like this quick... It's not a pill. It's not a magic bullet. It's helping development, natural development do the job it was supposed to do.

[00:38:44.490] - Melissa Corkum

Thank you, so much. I'm so fascinated, and I can already see we offer the safe and sound protocol here at Adoptionwise, and so I can already see how adding some neurodevelopment movement in families who are also helping the nervous system with sound, I can just see all the places that that connect. So I'm super excited. Thanks for all of those things and building all of those resources for families.

[00:39:10.870] - Sonia Story

Yeah. Well, thank you again. And thanks for everyone listening.

[00:39:15.350] - Melissa Corkum

Before you go, we'd love to connect with you on social media. Our Instagram handle is [@adoptionwise](https://www.instagram.com/adoptionwise), or better yet, join our free Facebook community at [adoptionwise.org/facebook](https://www.facebook.com/adoptionwise.org).

[00:39:30.270] - Lisa C. Qualls

Thanks so much for listening. We love having you. Remember, you're a good parent doing good work.

[00:39:38.940] - Melissa Corkum

Music for the podcast is composed by Oleksandr Oleksandrov.