Futuremakers: Brain and Mental Health

Episode 3: Childhood and adolescent anxiety

Professor Belinda Lennox

Welcome to this season of future makers, brain and mental health. I'm Professor Belinda Lennox. I'm a psychiatrist and a researcher here in Oxford, and this season you'll be joining me as we demystify the science behind the most complex object in the known universe, our brains. And look at the wide-reaching impacts of mental illness on individuals and society.

I'll be introducing you to some of Oxford's best academic minds, working to solve the greatest challenges in brain and mental health, and I'll also be speaking to guests from beyond the university to bring their perspectives, and lived experience, and get a sense of the impact of what we're doing. Join us as we discover how Oxford is shaping the future of brain and mental health research.

So welcome to another episode of the Future Makers Podcast, and it's my great pleasure this afternoon to be joined by my colleagues, Professors Cathy Creswell and Polly Waite, and we're here to talk about childhood anxiety. So, to start off with, maybe, I don't know, do you want to tell me how you got into this area of research and why it's so fascinating?

Professor Cathy Creswell

Yes, definitely. So, I I've been working on child anxiety for a really long time now. My PhD focused on that just after I trained as a clinical psychologist. In fact, Polly and I trained together as clinical psychologists many years ago, and during my clinical training I very much enjoyed working with children and young people, and that was definitely the direction I wanted to go in. But I also was very interested in psychological therapies and anxiety disorder. An area where there's been huge advances in psychological therapies for adults, but there was really quite a substantial gap in relation to the application of those treatments for children, but some really promising work at that time. So, it really brought together my sort of passion for working with children and families, but also this drive to try to improve psychological therapies. And then sort of I've carried on from there and not really moved out of that area since.

Associate Professor Polly Waite

Yeah, I think from my point of view, I'd worked once qualifying with both children and with young adults, really enjoyed all of that. But one of the things that I became really aware of, I think when I was working with children, was a lot of the research that we were doing, and a lot of the clinical treatments saw children and adolescents as if they were one big group. So, between sort of 6 to 18, as if you know they thought the same way, and they behaved the same way, and it seemed to me that actually there were particular things that were really unique to teenagers specifically and a lot of treatments, you know, weren't really addressing that. Though I became particularly interested in teenagers with anxiety. To try, and sort of, think more specifically about their needs.

Professor Belinda Lennox

Yeah, it's interesting what you say. I suppose it's that a sort of marker of paediatrics perhaps. And child psychiatry certainly is that everything is developed backwards from adults, rather than actually

starting with children. So, I suppose, you know, that's the sort of the starting question. Is it anything different about anxiety in a child or an adolescent compared to an adult?

Professor Cathy Creswell

Yeah, absolutely. I mean, my focus is predominantly with the pre-adolescence and one thing that's very clear is that we tend to see different sorts of anxiety disorders appearing at different points in development, and some anxiety sorts are much more common in younger children. Others are much more common in adolescence. So, for example, in the younger children we see a lot more separation anxiety. We also see a lot more phobias as well, whereas in adolescence we really see a big increase in social anxiety, don't we? And panic disorder and also more comorbid low mood problems start to appear at those times. So just at that very basic level we see quite marked differences in what you know how things present. And then obviously the interference of that because it also varies in its nature. I guess younger children probably have a bit less choice and agency in terms of what happens in their lives, so they might still be at school, for example, but might be struggling to get there or struggling when they're there, whereas in adolescence obviously there's a bit more agency and people, you know, young people can start to avoid places that might be harder to avoid when you're younger and you kind of just get put in places.

Professor Belinda Lennox

Yeah, yeah. No, sure. And they're common, right? I mean, you know, we all recognise the term anxiety, but even separation anxiety or phobias, I mean it's part of normal experience to some extent.

Professor Cathy Creswell

Yeah, yeah, absolutely and it’s interesting because the onset of the disorders tends to coincide with when actually you see those fears happening as something that's developmentally normal, and really what distinguishes what we'd call an anxiety disorder is when the, the severity, and the impairment is such that it's getting in the way of everyday life and stopping normal developmental experiences. So actually, many children may have problems with anxiety that kind of come and go, or they feel worried about things, but it doesn't really stop them doing anything, or cause a particular amount of distress. So that's what we're really looking at in the clinic is this now at the point where it's actually been sticking around for a while and it's really interfering in this person's life?

Professor Belinda Lennox

Yeah, no, sure. And in adolescence it sounds as though it's a subtly sort of different profile Poly. I mean, are these basically the sort of the evolution of disorders that, if left untreated, can sort of persist into adulthood.

Associate Professor Polly Waite

Yeah, I think that's right. And what we see generally actually, in terms of prevalence rates, is from children into adolescents, and adolescents into young adult’s rates tend to increase over time. So yeah, but it's interesting how things like in teenage years, you know, Cathy mentioned social anxiety being particularly prevalent, and that makes sense when we think about the kind of developmental things, or what's happening in teenagers lives. They become so much more focused on what their peers think and how they're coming across. And so, a lot of that makes sense in the context of sort of normative development.

Professor Belinda Lennox

Whilst I know that you've been doing a lot of work during COVID, a lot of amazing work, actually profiling the change in anxiety disorders over the period of lockdown and after. Do you just want to summarise maybe the sort of what you found?

Associate Professor Polly Waite

Yeah, I can do that. So we launched the cost based study within a month of the first national lockdown in COVID. So that was in March 2020. 3 years ago now. And we were really interested in understanding the experience of young people in terms of the pandemic and trying to kind of track what was happening overtime. So, we recruited over 8000 families. It wasn't a representative sample, so we always have that major caveat that we're not able to look at things like prevalence rates. But we were really interested to sort of understand what was happening over time. And in particular, to think about what we could do to support families during that really difficult period.

And so, families very kindly filled in monthly surveys. It was mainly parent report, and we had some really interesting findings. So, the first finding was such an important finding. We saw really high elevated rates of mental health difficulties across particular young people. So, children with special educational needs, neurodevelopmental disorders, things like autism, families where they're from single adult households, or low income, just had these high rates that persisted all the way through. And then on top of that, we saw particular patterns where there are periods of restriction, where there were school closures and national lockdowns. So, we saw that primary school age children were particularly affected by that, particularly when it came to symptoms like attentional symptoms and hyperactivity. They were definitely struggling more in those kind of periods. And we also saw that in secondary school aged children, although on the whole their symptoms were a bit more stable. Actually, we still saw those same patterns where periods of restrictions they were struggling a bit more as also were their parents, not surprisingly. So, parents of children across the age range were experiencing more symptoms of depression and stress at those times. So, it was really evident that the pandemic was affecting different people in different ways, but particular interventions like the restrictions had particularly pronounced impacts for young people.

Professor Belinda Lennox

Yeah, I suppose that completely makes sense, doesn't it? That populations at higher risk anyway of developing mental disorders were at even higher risk in lockdowns and it was the social restrictions, and the being away from schools. Do you think that is your sort of instinct is that's the causative?

Associate Professor Polly Waite

I think it makes sense, doesn't it? That you know, families were really struggling, particularly in that first lockdown, very little support, you know, suddenly shifting to being in a home environment and parents, you know, right from the get-go were just describing to us how they were really struggling to manage the needs of their child, and all the other things that they needed to do as a parent. You know, many of them really felt that they needed parenting support, and that led on to some other work that we've done with colleagues. So, I think, it reflects the fact that they were very much on their own, really struggling for support and that was having quite significant implications.

Professor Belinda Lennox

Yeah. So, what happened over time as you tracked throughout the last couple of years? Did the situation improve?

Associate Professor Polly Waite

Well, those are kind of things we're looking at now actually. So, we're really interested now to understand which children have bounced back, which children are struggling, and to understand the sort of patterns, and whether there are particular predictors of children in the longer term, perhaps still aren't doing so well and that we might really need to think about. So, I think there's still so many questions to answer in all of this.

Professor Belinda Lennox

Yeah, completely. Thank you, Polly. So, another area I suppose, more controversial, maybe just as controversial as that, there's a lot of narrative and media reports around the rise in childhood mental illness, in the rise of anxiety disorders. I don't know if you want to say anything about the sort of the evidence base behind that, or perhaps, some of your thinking through some of these large-scale surveys you've done, as to whether it is a detection issue or whether it is through an increase, perhaps?

Professor Cathy Creswell

Yes. So, I think with the work that we've done we can't really draw any conclusions about preference because as Polly said, it's a particular sample, but there is some other fantastic work that's been done that works very hard to get representative samples, and it does very in-depth diagnostic assessments with children and young people from around the country. And using consistent methods overtime that data has shown quite a substantial increase in mental health problems in children and young people over time, and certainly there were increases that were shown during the pandemic, but actually we were already on an upward trajectory. We've seen it in those sorts of national surveys.

We also are seeing it in referrals to mental health services. So recently there's been a 40% increase in referrals to child and adolescent mental health services, so the need is very apparent there, of course always is. The question was, the need was there, but people weren't reporting, that people weren't asking for help. I think the fact that the data that we do have, which comes out of NHS digital, and has used very consistent measures, gives us some reason to think that actually it's not just about reporting. People were asked the same questions. But of course, people's willingness to talk about things may have changed, and I think our impression is probably it's a bit of a combination.

So, it does seem, when you talk to mental health services, when you talk to schools, the general feeling is that everyone who's working with children and people are seeing a lot more mental health problems. So, I think it's not just about reporting and willingness to talk. People are noticing young people are willing. But there also is an element that people I think are, you know, some of the stigma has gone somewhat and that people are more able to talk about it and more able to ask for help, which is a good thing.

Professor Belinda Lennox

Yeah. And I suppose, and following on from that, I mean do you get a sense certainly from your clinical work that it's across the board that the presentations now are just more? Of the sort of what we saw before? I'm just thinking in particularly, there seems to be data about particular increases in eating disorders, in particular amongst young girls. And you can sort of understand perhaps why the particular circumstances of the pandemic. Might have sort of precipitated that, but do you sense sort of across the board in young people that rise in anxiety disorders?

Professor Cathy Creswell

Yeah. So, I mean, you're absolutely right. So, for example, refers to faith in disorders really went up substantially following the lockdowns and the pandemic. And I guess that we don't know whether it's the particular circumstances of the restriction, or whether it's that people weren't able to get help until late on, which may be elevated the need dramatically, and so there was a particular need there in terms of anxiety disorders. I mean, certainly the most recent data suggest that we are seeing specific increases in the rate of anxiety as well. And particularly, as Polly was saying, in at the adolescent age and the older adolescents, and particularly amongst girls.

Professor Belinda Lennox

Hmm, OK, I wonder why do you think that's the case? I mean, are there sort of well, I mean that's an impossible question, isn't it? But you know, is it the impact, particularly the sort of social aspects of lockdowns on the pandemics, I don't know. Have you got ideas?

Associate Professor Polly Waite

It's really difficult to know. I mean, I think, you know, we've got lots of research that tells us about what some of the risk factors are for developing an anxiety disorder in general, which inevitably of course is a reflection of sort of biological factors and then environmental factors.

So, in terms of biological factors, we see that anxiety tends to run in family. And we know that there are particular characteristics that make some young people more at greater risk of developing an anxiety disorder. So, things like having an inhibited temperament where you know if you're put in a novel situation, you might be more likely to sort of avoid or withdraw. So, you know, we're all just built differently. We have different temperaments, and that kind of temperament has put you at a much greater risk of an anxiety disorder by about sevenfold. Things like having a parent with an anxiety disorder, that sort of increases your risk of having an anxiety to sort of twofold.

So, we know that there are some of these particular characteristics, environmental factors. So, a lot of research has been done on things like parenting, understanding not only how that might potentially, you know, the way that you might parent your child might present a risk for developing anxiety problems, but also that it goes back in the other way. So actually, an anxious child tends to invoke particular responses by parents or other adults. So, we've got quite a lot of data around all of these different things that we know are important. You know, there's also some data about things like peer relationships or other kind of environmental factors.

But I think in terms of understanding what's going on now, you know there's less of that data. But some of those environmental factors are likely to be really important in terms of what everyone's going through in terms of things like the cost-of-living crisis, you know, financial difficulties, increased pressure for young people, all the things that are related to COVID. So, yeah, I think it's probably a complex picture.

Professor Cathy Creswell

Yeah. And I think one area where there's really been very little research in relation to anxiety, just sort of specifically, is peoples school experiences and obviously where, young people, children, spend a very substantial amount of their time. At school and in studies where they've asked children, and young people, who have problems with anxiety what they worry about, actually it's school related things that tend to come out at the top, but yet we have very little research about those young people's experiences at school. And I guess that you know, in recent years we've seen

increasing pressures within school systems and so and we certainly know that children who have special educational needs are at increased risks of mental health problems generally, not specifically anxiety.

So, you know, you might imagine that there may be many young people who do have needs that aren't quite being met in the school environment, given all the pressures that there are within that environment. So that might be another important factor as well as, you know, with the pressures that in the system, you know, managing the social side of it, you can imagine may have become something that's a bit trickier to do and, you know, that's something obviously that children and young people are having to navigate quite challenging social environments in many respects. So, all of those sorts of experiences that children are having on a day-to-day basis, I think have been very much neglected in the research, but are obviously a really important area for us to look at going forward.

Professor Belinda Lennox

And it seems so obvious now you're saying it, Cathy, as you say, that children spend a large proportion of their time in these. That I mean the opportunity for intervening in those environments as well as our school level.

Professor Cathy Creswell

Yeah. And there's been some recent research that's come out that's really highlighted the potential role of academic pressure as well, which I think is something that again in relation to anxiety specifically, has not received a lot of attention. But again, it's the sort of thing that young people talk about a lot as being an important factor.

Associate Professor Polly Waite

And that would fit with the prevalence rates that we see where they really jump up in the sort of 17- to 19-year-olds. You know that really critical period where, you know, many of them have got A-levels looming, you know, mock exams where that, you know, dictates the potential university places you know, 40% of them applying for universities. So, there's a huge amount of pressure I think at that point in life in terms of social stuff, you kind of developing intimate relationships all of that, leaving home, I think there's so many things going on at that point in life.

And it's really hard for young people, particularly when there are other aspects like in terms of the biology, you know, your developing brain is still got years of developing, particular things like, you know, all those skills, organisation, problem solving, motivation, all of those bits of the brain still got another sort of few years of developing. And yet you're being in this environment that's got lots and lots of challenges where actually those skills are really important.

Professor Belinda Lennox

Yeah, you're triggering me slightly, Polly, thinking well, it is an absolute terrible time. Well, I found it as an adolescent growing up the academic pressures, the social pressures, sort of developing as a human being and, you know, who am I? What's the point? You know, all of these things sort of coalesce around a really vulnerable developing brain. Yeah, it's a wonder that anybody gets through it without significant mental health problems. Quite honestly, it's a particularly female issue, though, isn't it as well?

Associate Professor Polly Waite

Yeah, particularly emotional disorders? We do see higher rates in young women. But also, I think have particular difficulties in providing treatments to young men who may not present for treatment, so, you know, in a lot of our recent treatment studies, we've got two adolescent treatment studies recently. And when you look at the data, the proportion of young men in those studies is lower than it should be on the base of the prevalence data. So, it's sort of twofold, that yes, it is young women that tend to have these difficulties, but actually, the young men that do have those difficulties are not necessarily making it into services and making it into treatment.

Professor Belinda Lennox

That's really interesting. So still, even with the sort of increased acceptance of mental health problems, perhaps there's a discrepancy there. It's not particularly in young men. Maybe there's still an issue with the sort of acceptability of having emotional difficulties.

Associate Professor Polly Waite

Yeah, I think so.

Professor Belinda Lennox

OK. Hello, I hope you're enjoying this episode of Future Makers, Brain and Mental Hhealth. If you'd like to learn more about our work here in Oxford, head to ox.ac.uk/brain, or let us know what you think on social media using the hashtag Oxford brain.

So, I suppose that leads on to the treatment developments because you know, although it's a very common problem and can be, you know, very disabling actually to whole families, there are really good evidence based treatments now both that for the children and for the families. I don't know. Do you want to start by discussing what the treatments that you've developed, Cathy?

Professor Cathy Creswell

Yes, well, we've very much been influenced by work that's happened here in Oxford over decades in the development of very highly affect interventions for anxiety disorders in adults. So, there's been a lot of work in the development of cognitive therapy, which is very much about understanding how people's belief and thought processes might lead them to interact with the world, and how it can sometimes prevent opportunities for new learning. And so, through intervention, or helping people to notice those sort of thinking patterns and find ways to go and make new discoveries about the world.

And so, we've been very influenced by that work. And I guess our starting point was, I think, when we both came into this, there had been quite a lot of work looking at cognitive behaviour therapy, sort of a broader range of treatments that take a similar sort of approach had been used with children and young people. And there have now been quite a lot of studies evaluating that, and we generally find by the end of treatment, about half of the children are free of their anxiety disorder, and some will then continue to get better over the following period.

And I guess there are two main challenges that we've been trying to face, one is about, well, ok, so that you know, you've got a good number of children and young people who will get better from those treatments, but hardly anyone is accessing it. So, we need to really increase access. And then the second is that you've obviously also got a good chunk of children, young people, who are not getting the best outcomes that they could from those treatments. So, we also need to understand who's not benefiting, and what do they need.

So, these are really the two questions that we're trying to address in much of the research that we're doing. So maybe if I start with the access bit, and then could pick up on the how we make treatments better.

With the access part, we've been particularly, a lot of our work has been focusing on the pre-adolescent age and the reason for that has been that well first as I said, we have treatments that work reasonably well, but we found really low access rates among pre-adolescent children. So, one of our colleagues, Tessa Ridden, did a study where she went around the country identifying children in the community who met diagnostic criteria for an anxiety disorder, but actually finding them through their schools, not through services, and essentially this was a few years ago. But at that time, she found that of those children who had an anxiety disorder, so a level of anxiety that's significant interfering in their daily life, 2% of them had had cognitive behaviour therapy, which is the one treatment that has a significant evidence base behind it. So that obviously is horrifying.

Professor Belinda Lennox

Well, just to pause there a second. I mean, that is horrifying. Yeah. Is that that's 2% received the treatment. Yeah. How many asked for the treatment?

Professor Cathy Creswell

Isn't it?

Professor Belinda Lennox

Do you know?

Professor Cathy Creswell

Ah, that well. So that's a good question. No more than 2% had got to services. I'm trying to think of the exact numbers now about 2/3 of families had tried to get some support somewhere, for many of them, they got some sort of support from within their school.

Professor Belinda Lennox

OK.

Professor Cathy Creswell

So that at that time that may have been, you know, sort of pastoral support work, and then a much smaller number had got to specialist services, and then a tiny number had got the one evidence based treatment. So, this is a few years ago and there's been some really fantastic service development since then. So, things are absolutely improving and moving in the right direction.

But we were very, you know, motivated by this to think well, how can we make these treatments more accessible? And the thing was that because, as you were saying before, the way that cognitive behaviour therapy had very much developed for children, young people, was we've got these adult versions that work quite well, let's make them child friendly. So, they move from working with one individual adult to working with one individual child, which means you have to take a lot of time over

it because you need to build the relationship. You need to make it fun, and you can't pack too much into a session, so you end up with quite lengthy treatments. Then people thought, well, actually the parents obviously around when the therapist, why not work with the parent as well to, you know, amplify the effects, and essentially what people tended to find then was adding on the parents as well, you know, you get good results, but it doesn't necessarily get better results. But then what we found if we only work with the parents we could get those same results again, but much, much more quickly because we're working directly with the parents and they can implement strategies in their child's day-to-day life. And actually, what we heard from parents was in many cases that they didn't necessarily want a potential barrier, to take their child to a clinic where they might feel a bit odd, and feel they might feel like a quite unusual experience and they might have to miss other things that that were important to them. So actually, parents told us that the early support they would really like to be empowered to help their child, to put things into practise in their child's life, and not disrupt their child's routine. And of course, by doing it, we could take an approach where we share lots of material with parents and then just help them work out how to apply it with their child based on the expertise they already have about their child.

So, we were able to get our treatments from what had been about 16 hours down to about 5 hours of therapist support without compromising treatment outcomes. And more recently, we've moved to a digital version of that treatment where the amount of therapy involvement is about two hours. And again, we've found we don't compromise treatment outcomes at all by doing it. So, it's really just about trying to find ways to deliver treatment more efficient, but without compromising on those clinical outcomes, and hopefully along the way, overcoming other barriers that parents might face. So, we found with the digital version parents can access the content whenever they like, and they'll be doing it in midnight after having done all the other jobs and things that need to be done. And then they just have quite a short phone call with a therapist who helps them think about how to play with their child or overcome problems that they've had with it. So, parents tell us that it does actually make it much more accessible in many ways, not just because of the amount of time.

So that's an example of the work we're doing to try to increase access and the how that's gone, but also there's a lot of work going on just trying to understand how we improve outcomes as well. So do you want to pick up there?

Associate Professor Polly Waite

Yes, definitely. So obviously my stuff is all much more focused on adolescence and a colleague of ours, Eleanor Lee, and work with David Clarke, have also been focused on teenagers with anxiety disorders. And in terms of what does the evidence suggest prior to all of this, we did a meta-analysis quite recently looking at sort of outcomes for teenagers, and actually often their outcomes aren't great and treatment is really lengthy.

So, this meta-analysis that Holly Baker, a PhD student of ours, did recently showed that the average length of treatment was about 17 hours. So, you know, again, if you've got services that are really stretched, 17 hours of therapy is a lot of therapy. So, we've been really focused again, like Cathy, thinking about how we deliver treatment that's actually more effective and really efficient.

So, if I start with some of the work that Ellen has been doing because she's done some brilliant work specifically on social anxiety, which we know is really highly prevalent. So, they've developed a

cognitive therapy specific treatment for social anxiety based on David Clark and Adrian Wells' original treatment for adults, and they've developed an Internet version. So, like Cathy, really optimising kind of digital interventions to be able to get a lot of that material over to young people. And their treatment just six hours of therapist time. So again, really got the time right down and they found 77% of their teenagers with social anxiety were free of their social anxiety post treatment. And over 90% at six month follow up. So that's very exciting because that's far from where the remission rates are with the broader literature.

And the work that I've been doing has been more focused on panic disorder, which has been a really neglected area when it comes to adolescent anxiety disorder. I think partly because it doesn't tend to present in younger children. So, you know, often clinicians don't even recognise it and often our teenagers with panic attacks are quite socially anxious as well. So, they worry about having a panic attack, they worry that there's something wrong with them when they get those physical sensations, they tend to catastrophically misinterpret them and think they're about to faint, or something awful is going to happen. But also, they often worry about what other People think. So, we've adapted a really successful adult treatment and the brief version of that treatment, it's just five hours of therapy time, +2 booster sessions each for now, so up to seven hours. And we've just done a feasibility study comparing that new treatment to a general CBT approach, which is really great, because to be able to look at the gold standard treatment and then a newer treatment.

And so, this was just a feasibility study, it was just a small-scale study to understand things like, can we recruit young people, is the treatment acceptable, what do they think of it? But we've also been looking at their outcomes as well, and what's really encouraging is both treatments actually the cognitive therapy, and the general CBT, are really highly effective. But what we're also seeing is this newer approach, this cognitive therapy, seems to have the edge on our standard treatment in terms of the number of young people that reliably improved at the end of that treatment was actually 100% of the young people in the trial, and that compared to 56% of those that had general CBT. And we've just done a one year follow up and it looks like, on the whole, those gains have been maintained. So it's really exciting that we can develop treatments, maybe make them a bit more disorder specific. We can optimise, you know, workbooks in the case of the panic treatment, or digital interventions, to really be very efficient. But actually rather than that bringing the effectiveness down, we're actually getting more effectiveness as well.

Professor Belinda Lennox

Wow, OK. So, I mean, both of those are so exciting, aren't they? Because the potential to be able to reach more than the 2% of the population and in your case, Cathy, can be reached by anybody at any time, in widely available format, you know, is certainly the way forward. Do you get any push back? Any challenge? I'm just thinking it might be quite a challenge to some psychologist, I don't know. Is it, you know, the fact that you can reduce down a very lengthy treatment that requires a highly trained professional meeting one-on-one with somebody over many weeks, into something that actually parents, for instance, can deliver themselves after a couple of hours of training. Is that challenging to the profession?

Professor Cathy Creswell

Yeah, it's interesting. I mean, we haven't faced very much push back, partly because I think that there are digital intervention has very much coincided with the development of a new workforce in child and child mental health services. So, we do now have a new workforce of psychological therapists who are trained specifically to deliver fairly brief treatment. So essentially, they're there waiting for the treatments to come along for them to deliver, and they've been really fantastic in many cases.

Picking it up and running. And I think the reality is that in those services, you know, are so stretched, and so there is such a need to be able to really make the most of the resources that people have been just really pleased to have potentially efficient options, and we just finished a trial called Copycat where we were evaluating our online intervention in routine services all around England and Northern Ireland. And actually, that can be a really tricky setting to recruit in because services are so busy and everyone in working there is so busy. You know we had 70 different clinical teams from around the country on board and I think it was that potential to be able to do more with the available resources. That was very appealing.

So occasionally we have comments like that about are people going to be replaced. But I think as soon as people have experience of it, they realise, no that's not the case. And it's interesting because people in our team who are really expert in delivering this treatment. So, they actually really enjoyed delivering it because they feel they really get to use their clinical skills because parents can access so much of the information online, and so their job is very much about personalising it and understanding what this family needs. So that brings out all their clinical skills rather than having to, you know, repeat the same information that they might share with everybody. They can be very much focused on the individual family and listening to their needs and thinking about the particular challenges they might face. So hopefully people will find once they have a go at these sorts of interventions that hopefully it can add and not take away from their experience as a clinician.

Associate Professor Polly Waite

Yeah. And I think the other thing I would add is that what is very much at the heart of what we do is working with young people with lived experience, with their parents, with their careers, with clinicians, with all the key people that are involved right from the get-go in our research. So, for example, Cathy's Aussie programme was designed involving all these people. So actually, what we really try and ensure is we've got a highly acceptable treatment before we're even get it out there. That's going to work for clinicians because they've been part of that group who's thought about what all the challenges are. And I think going forward, one of the things that's really important for us to think about is all of these implementation issues, because it's all very well designing a nice treatment, and then getting these outcomes, but actually it's another thing getting them into services. So, we're really keen to think about what we know about implementation science and different ways of how do we maximise this this research and these new treatments, to make sure that actually we can address all the particular barriers that there might be. To make sure we can actually get them into services.

Professor Belinda Lennox

Completely, but I suppose what you're talking about really is sort of developing precision psychological therapies, aren't they? Because although they may be brief, and although they may be

able to be delivered with somebody without a PhD, that doesn't mean that they're not absolutely scientifically, rigorously tested and better than the standard of care that was being provided before. I mean that's what's so stunning. I guess you can deliver a treatment that improves 100% of people with panic disorder as opposed to something that took hours and hours of somebody's time before. That's just amazing.

Associate Professor Polly Waite

Yeah, it's really exciting. And I think there's so much more for us to learn, because you know there are particular treatment components, and we have a really good understanding now of which are the really important bits that we need to maximise within treatment. But there's still lots of opportunity to think about how should we do that? So, for example, in anxiety treatments, a lot of the focus for us is about doing actually the behavioural works we talked about, cognitive therapy, but essentially, it's about people doing different things in order to challenge their beliefs and learn new ways of making sense of the problem. So, you know, often we'll call it exposure. So essentially people do behavioural experiments, they'll go and do something, perhaps that they might have ordinarily avoided, and in order to learn that actually some of the things that they worried about might not happen. So, we do lots of work around that, but we know there's a lot to be learned about how we can optimise that, how we can do it in the very best way. So, I think what's exciting going forward is we can still continue to improve how we deliver these treatments and look at some of these particular factors.

Professor Belinda Lennox

Yeah. So, do you want to do a bit of a future look? What's really coming down the track?

Professor Cathy Creswell

Yeah. Well, I think as much as we can to get things onto these digital platforms, we're really keen to do that. I think one, obviously for the access reason, but two because also it does mean that we then can learn so much more, so much more quickly.

So, in the past we would do, trials and you'd be limited to a certain number of people in terms of the feasibility of delivering face to face psychological therapies. But now with these digital interventions lots of the outcome measures we're collecting are built into the programme. So, every time they go on to a new module they can complete measures so we can see very clearly who's improving, who's not improving, when they're improving, when things might stagnate. And because of the reach that you can get from digital interventions you can learn so much from that. So, we're already able to see what the outcomes are looking like when we just let services use this outside of a trial.

Reassuringly, they're looking really good, so that's really fantastic. As the numbers build up, we'll be able to say who are the people that are not getting better, can we identify them early on, can we identify them from the early trajectory of their symptoms, or how much they log, and the characteristics of those people. And then we can think so what do those people need? How can we make the treatment work better for them in terms of making it more engaging or addressing key processes that might be getting in the way for them? So, I think just the scale at which we'll be able to work with, because of having those digital roots, and having the data caught within them, means that we should be really advance things in terms of improving outcomes much more rapidly than we ever have before. So, I think that's really exciting.

Associate Professor Polly Waite

Yeah. And I think the other thing that we're really keen to do is to expand the reach because a lot of the treatments that we've developed have been focused on neurotypical children and young people.

We know that rates of anxiety, in particular, are really high in autistic young people, so we're really keen to now extend what we know in order to ensure that treatments are available for everyone and obviously, you know, some of that is about getting treatments out there. But it's also about tailoring to a particular population, so that's a particular area of focus for us going forward, is how do we adapt treatments to make them highly acceptable for people who really, really need that help.

Professor Belinda Lennox

I was going to ask exactly that because, you know, anxiety often doesn't occur in isolation. So, do these treatments work just as well if somebody has another mental illness, or indeed a physical illness, comorbid with their anxiety disorder?

Associate Professor Polly Waite

Yeah, that's a really good question, and actually Cathy's point about bigger data sets is going to be so helpful because part of the challenge we have is often that our trials are relatively small. And therefore, you might have a little bit of an indication of that, but you don't have enough data. So, you know, we know that in adolescent anxiety, often you do get some comorbidity with mood disorders, but often in our trials, you know, it might just be a handful of young people, so actually much bigger data sets will give us much more information about some of those factors that we can really explore them in a better way.

Professor Cathy Creswell

Yeah. And we're collecting data currently in our routine use of our online programme about neurodiversity, because that's one of the main questions we want to look at there. But what we anticipate is that we are going to need to make adaptations. And so, we've been doing some really fantastic work with colleagues at the University of Manchester who bring that expertise, where we've been working very closely with autistic young people, parents of autistic young people, autistic parents, about their experiences and their experiences of standard CBT treatment and it's been an absolutely fascinating journey. I've learned a huge amount from it and really, you know, it's really made us realise how you know these treatments have been developed and delivered very much from a particular lens and that maybe, you know, just not in a way that's going to work for everybody. And rather than us trying to fit everybody into our single mould for how we deliver treatments, we actually need to be much more flexible and have a much better understanding of people's individual needs. And I think that you know, you hope, that a good clinician does that. But I think again with the sorts of treatments we're developing, we want to make sure that's really built in from the start. So that people don't feel like they're being squished a square peg when it doesn't quite fit for them.

So that's been such a fascinating project and we're really hoping now that we'll get the funding to go forwards to fully adapt our Aussie programme so that we have an Aussie for autism version that we're going to be then delivering with a lot of input from families and clinicians as well.

Professor Belinda Lennox

Wonderful. I love your acronyms as well. You have great acronyms in all of your work. Lots of cats going on. So if anyone's listening, they may be a young person who might be currently experiencing anxiety, or perhaps a parent of a child with an anxiety problem. What would you advise them to do?

Professor Cathy Creswell

I think for parents a place I would go to look to start with is actually a series that's edited by Polly and another one of our colleagues, Peter Cooper, which is from little brown publishers, and all the books called Helping Your Child with… So, the first book from that series was one that I wrote with another colleague, Lucy. Well, it's called Helping Your Child with Fears and Worries. And that's the book that we have used as the basis for our original parent lead treatments. So that we've got good evidence that that's, you know, helpful for a good number of people. And there's now a really lovely set of other books there for parents, and I think am I right in thinking there's going to be some books for young people coming soon too?

Associate Professor Polly Waite

Yes, there are. So, in fact, I mentioned Eleanor Lee and David Clark earlier, and they, with colleagues, have been writing a book focused on sort of social anxiety and confidence. So that book hopefully will be out in six months or so, and there's another one focused on eating problems. So, we're really trying to build up resources that young people can use.

Professor Cathy Creswell

And one other place that is worth a look is that over recent years I've lead a UK research network focused on youth mental health called Emerging Minds, and as part of that we lead a project, which actually started during the pandemic, and it was very much about working with young people to identify their mental health priorities, and then working with young people to create evidence based resources. And so, through that we've made a number of resources available in a number of different formats. So, there's all sorts of infographics, there's films, there's all sorts about a range of topics, but one of those topics is dealing with fears and worries about social situations, which is written in a very sort of young person friendly way. So if people have a look at the Emerging Minds website, if they just google Emerging Minds UK, they'll be able to find that and find those resources for young people there. And actually during the pandemic, we made a lot of webinars for families about just the all the different challenges that families are facing and people seem to be still using this now. So, I think many of those things are still very live and haven't gone away whilst things have moved on somewhat with the pandemic. So that's another place to go to. Have a look for those resources.

Professor Belinda Lennox

Polly, Cathy, thank you very much.

Associate Professor Polly Waite

My pleasure. Thank you.

Professor Belinda Lennox

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