When Science Finds a Way

Season 2, Episode 8
AVATAR Therapy: digital dialogues for mental health

Show notes

Episode description

Hearing voices is a challenging symptom of psychosis that treatments have often failed to address effectively - until now. Introducing AVATAR therapy, a remarkable approach using digital technology to help patients engage with distressing voices and regain control. Alisha meets Dr Vaughan Bell to explore the therapy's potential, talk about findings from the latest clinical trial and hear a personal story of transformation.

Mentioned in this episode:

AVATAR: a digital therapy that could help people who hear voices

Dr Vaughan Bell - Professor of Clinical Psychology and Cognitive Neuropsychiatry, University College London, and Clinical Psychologist, South London and Maudsley NHS Trust

Dr Thomas Ward - Clinical Psychologist Lecturer, Institute of Psychiatry, Psychology & Neuroscience, King's College London and Clinical Lead of the AVATAR Therapy team.

Dr Clementine Edwards - Research Clinical Psychologist, Institute of Psychiatry, Psychology & Neuroscience, King's College London and Trial Coordinator for the AVATAR 2 trial.

Ruth Mathieson - AVATAR trial participant, and PPI consultant with Psychosis Research Group, University of Glasgow

Transcript

Alisha Wainwright 00:00
Hey, Alisha here. Just letting you know, this episode mentions distress caused by symptoms of psychosis.

Vaughan Bell 00:14
People with psychosis have not always had a great experience of mental health services. And so having that long term relationship, working in partnership with people can really give people the experience of making an input and working towards the common goal of making a therapy more effective.

Alisha 00:33
Welcome to When Science Finds a Way, a podcast about the science that's

changing the world. I'm Alisha Wainwright, and on this series, I'm talking to the global experts who are making a difference, as well as the people who have inspired and contributed to their work.

Today, we're talking about a new digital intervention that can help empower people who hear distressing voices. People who hear voices that others don't can find this to be a really isolating experience. Sometimes these voices can be abusive or bullying in a way that severely impacts day-to-day life.

And when these people seek treatment, some can find that interventions have limited efficacy or side effects. It can leave these people feeling powerless in the face of their voices. But there's a new intervention that's trying to change this. It's called AVATAR therapy. The idea is to create a digital representation of a voice – or, an avatar. In guided dialogue with these avatars, facilitated by a trained therapist, people can take back control from the voices that are causing them distress. And there's some new research that provides evidence that this can work effectively for many of them. To get some insight into AVATAR therapy. I'm joined by Dr. Vaughan Bell. He's a professor at University College, London, as well as a clinical psychologist in the National Health Service, or NHS in the UK.

Together we'll be talking about how research into AVATAR therapy has been conducted, and the opportunities and challenges of using digital technology in mental health interventions. Dr. Vaughan Bell, welcome to the show.

Vaughan 02:13
Thank you very much. Many thanks for inviting me, Alisha.

Alisha 02:16
So let's jump in. How common is it to hear voices and what kind of experiences can cause it for people?

Vaughan 02:21
So it's worth saying that all of us probably hear voices to some extent – when we may have been drifting off to sleep, or when we sometimes feel that someone's called our name, and then we realise nobody has. These tend to be really kind of fleeting experiences.

Some people have those experiences a little bit more intensely. Not all of those experiences may cause people problems and cause them distress. But when people experience psychosis and have these very intrusive, very distressing, distracting voices – well, that can be a very different story, and probably maybe 1 percent of the population have this very intense experience as part of, kind of, mental illness. And of people who have psychosis, actually probably quite a large number of people do have this experience of distressing voices – maybe even up to two thirds.

Alisha 03:15
What have been the standard treatments provided to people who seek help in dealing with their distressing voices, and how effective are those treatments?

Vaughan 03:24
So there's two main treatments, really – one of which is medication, antipsychotic medication, and the other one is psychological therapy. So antipsychotic medication is reasonably effective. Probably about a third of people who take the medication will find that their voices mostly resolve. About another third will find that the voices, uh, you know, kind of disappear a little bit, fade into the background or have a partial effect.

And for about a third of people, unfortunately, the medication doesn't have much benefit. Now, that may seem like a really valuable treatment, and in many ways it is. One of the difficulties with antipsychotic medication is it has some quite unpleasant side effects. People frequently talk about them feeling kind of, you know, foggy and slowed down.

Some medication can really make you put on weight. Other medication can give you, kind of, movement problems. And of course, you know, people have the capacity to have some quite, uh, idiosyncratic reactions to any sort of medication. So while medication is really valuable, and for some people it works well, for a lot of people it can be quite a difficulty in itself.

So it's recommended that medication is the first thing you try and then psychological therapy may be a useful compliment to that. Actually, some people with psychosis decide not to take medication. For some people that may not be recommendable, but for some people, actually, they just may find that the medication doesn't particularly help them, and they wish to cope in other ways.

And so, for those people, it may be that psychotherapy, talking therapies, may be the treatment that they find most useful. However, for most people, it would be the combination, which are, you know, which is the thing that would be recommended. Talking therapies typically involve working with a psychologist, and the talking therapies for psychosis will involve thinking about the sorts of emotions and the effects they have on some of your symptoms.

So, those are the typical approaches that someone hearing voices in the context of psychosis may be using, or may be recommended to them, to help manage the experience of psychosis.

Alisha 05:46
Okay. Let's hear about this relatively new treatment – AVATAR therapy. Dr. Tom Ward is a clinical psychologist and lecturer, and is the clinical lead of the AVATAR therapy team that has produced the research for this intervention. He was one of the first people who were actually trained to practice AVATAR therapy in a clinical setting.

He told us how it actually works.

Tom Ward 06:11
As it stands for people who are hearing distressing voices, the voice can often be experienced as a powerful, almost omnipotent presence. A presence that pushes

them around, that tells them what to do, and the person can be left feeling powerless and weak in relationship to that voice.

So AVATAR therapy is fundamentally looking to support people to regain a sense of power and control, so they decide what they do in their life, and they feel more confident in dealing with that voice in daily life. We start with the person who's hearing a voice, by creating a digital avatar to represent the main voice that they hear.

So the person chooses how it looks and how it sounds. And the aim is to try to get an avatar that represents as closely as possible the main voice that they're struggling with. The person then engages in a series of face-to-face dialogues with the avatar, which are facilitated by a therapist, in which they learn to take back power and control from the voice.

There are three sections to each session. The first is the therapist and the person in a room face-to-face, discussing the voice, how the voice has been, how the person wants to use the dialogue to take control. What are the important things that that person needs to say within the dialogue? The person would then go into the direct face-to-face, dialogue.

The therapist is then in a separate room because they're controlling the avatar. They speak through the avatar, and the person hears the avatar speak using a voice conversion or voice transformation technology. And the therapist switches in between voicing the avatar, and coming in at various points to support the person in delivering their powerful messages.

When the avatar starts to say the things that they hear in daily life, there's a very strong sense for that person that it's as if they're talking to their voice. It's really striking to see that, when you first see someone speaking to the avatar as if it's their voice.

Often they'll be sharing things or saying things that you as the therapist didn't know before. But the person is immersed in the dialogue and they're really speaking from the heart and speaking to this avatar as a representation of their voice.

There are significant commonalities in terms of what we do in therapy, compared to other approaches for people. The main difference would be that in a cognitive behavioral therapy session, the voice is spoken about in an abstract term. But the key difference here is that AVATAR therapy is bringing a tangible representation of the voice directly into therapy. But I think before I worked with AVATAR therapy, my understanding of the lived experience of hearing voices was not as deep and rich as the understanding I've gained through working with people in the AVATAR therapy, because it connects, it's a connecting therapy.

And we regularly hear people who create the avatar and in those early sessions saying things like, you know, this is the first time people have heard what I've heard. This is the first time somebody knows what I'm actually experiencing. We've had experiences of people choosing to share their dialogues with their loved ones, with

their family, because it's a way of connecting other people to that experience, which isn't shareable, in the sense that it's the person struggling with that voice and other people can't hear that. But I think it's a very powerful aspect of the therapy, and connecting aspect of the therapy.

Alisha 09:29
I love those terms – connective therapy. And it does seem very powerful. Tom mentioned how AVATAR therapy has commonalities but also differences with cognitive behavioral therapy. As a clinical psychologist, can you expand on how the AVATAR therapy approach is different to previous therapeutic interventions for hearing voices?

Vaughan 09:51
So it's, it's worth just saying how it's similar. And one of the things that traditional approaches do is think about the identity and perceived power of the voice. So for example, if you believe that God is telling you you're a failure, that's going to be far more distressing than if you feel that, for example, you just have this thing in your head, which keeps repeating that you're a failure, or even if you feel, you know, it's one of your neighbours saying it. So, understanding that the relationship between you and the voice reflects a lot of the sort of things that we have in everyday relationships has been a core bit of psychological treatments. What AVATAR therapy does is it tries and makes that a live interaction, by allowing the person who has these experiences to test out new ways of challenging the voice, to doing different things and trying out different ways and seeing what the effects are and how they feel and how they act. And in that way, it tries to make this much more of a live process, rather than one that's a little bit theoretical sometimes.

So, for example, some people have voices, which just seem to be like kind of words burbling in the background. However, lots of people who do have the most distressing voices will often experience them as particular characters, as having a particular personality, and while not everybody will have a kind of clear visual image or see that particular voice in a very visual way, all of us, probably, when we hear a voice – people don't know what we look like when they're hearing this podcast, they probably come up with an image of what you or I may look like or what we might be like. And what the AVATAR therapy allows people to do is use those perceptions, use those understandings, to create a much more concrete representation of that voice, to try and allow people to interact with it in a much more assertive and effective way.

Alisha 11:57
So Tom mentions this idea of being able to connect with others and share an experience of hearing voices. How important is this as a response to what I can imagine is an isolating experience?

Vaughan 12:10
For a lot of people, it is really valuable. And for exactly the reason you mentioned. Certainly, as a psychologist who's worked with people with hallucinated voices, it's often something that people don't like saying to other people because of all of the cultural assumptions we have about hearing voices, right?

It's associated with dangerousness, and it's associated with, you know, people who are not in control of themselves. The majority of people who hear voices, even distressing ones, just find them an unpleasant aspect of their mental health that they wish could get better. It's not particularly associated for the vast majority of people with dangerousness, or being out of control, even though it may be distressing for them.

So you can imagine, for the majority of people who have those experiences having, you know, to hide that, to avoid people's kind of prejudice and condemnation or perceptions about how they might be like, can be really difficult. So being able to share that can be very valuable. AVATAR therapy and working with psychologists is one aspect of that.

There are also things like hearing voices groups, increasingly, where voice hearers can share their experiences between themselves, and think about ways of managing that experience in kind of new and innovative ways.

JULIA GILLARD 13:36
Hello! I'm Julia Gillard, chair of Wellcome. Thanks for listening to our podcast, When Science Finds a Way. Wellcome supports researchers around the world to make discoveries and help solve urgent health challenges. We believe in the power of science to build a healthier future, and the need for inclusive collaborative action to ensure that everyone can benefit. To get involved, visit wellcome.org, that's Wellcome with two l's. Now, back to the story.

Alisha 14:10
To get a perspective from someone who hears voices, we spoke to Ruth Mathieson. Ruth was a participant in the trial as part of the control group, but after the conclusion of the trial period, received avatar therapy for about eight months.

Since then, she has taken a role as a patient and public involvement, or PPI, consultant with the psychosis research group at the University of Glasgow sharing her experience and expertise to help others. She gave us a first hand perspective of how AVATAR therapy worked for her.

Ruth Mathieson 14:44
As far as taking part in the trial goes, it was very much something different, something really quite unique. It was the use of technology to provide therapy, and the integration of technology into a therapy session, I'd never experienced that before. So that's why I really wanted to pursue getting this therapy and going for the trial.

So, the avatar creation, I'm not gonna lie, it needs a bit of TLC and a bit of love because it's quite basic. Especially if you're used to, you know, things like on, on the PlayStation or, you know, you're used to The Sims or Elder Scrolls or somewhere where you can fully customise your character. It's not as good as that. But you go through the process, you create what your avatar looks like, whether they're male, they're female, young, old, facial features, whether they wear glasses, hairstyles.

And then once you've done that, you use a scale to sort of change the voice levels and change the voice sort of depths and stuff.

So by the end of the process, you do that in one session, and that would be you having the avatar as a physical representation in front of you, and that is who you work with throughout the therapy. So with the AVATAR therapy, a typical session – for me it was slightly different, because I did this remotely.

I would just get somewhere comfortable in my house, get myself a nice cup of tea, get myself a drink, you know, get myself sorted. And then the therapist would chat with you for a while. And then when it comes to doing the avatar work, it's like a sort of shared screen type process. She went off the camera and the avatar came on.

Although it's the therapist that is saying the words that the avatar is speaking, I'm not hearing that coming directly from the therapist. I'm hearing that being filtered through the avatar, and through the avatar speech software. So, it's quite hard because in the back of your mind, you do still know that it's your therapist that's saying these things, but it doesn't feel like that.

It feels like you are confronting this avatar. The whole process is quite, it’s really interesting. Facing the physical representation was difficult, but not for the reasons I would have assumed it was going to be. I would never wish my voices on anyone. But sometimes it would be nice to just give them my voices for an hour, just so they could see what it's like, and then they might know better how to help me. For me, the AVATAR therapy was the closest thing I've been able to get to that. It was like the therapist and the avatar and me were all inside my head at the same time, and it was extremely, extremely powerful.

Now, I hear many voices. I knew going into this that I wasn't going to get rid of them all, but the one that I dealt with on the avatar program, the one I was dealing with, the one I was focusing on, is one that has plagued me for over 20 years, and I can say now that he's gone completely, which is not something I was expecting at all.

I did not think that that was possible. But because I was able to process him and understand him and see him for what he was – he was a voice. He didn't have control over me. I had control over him, and I could stand up to him. That made a huge difference. So not only did I come out of the therapy having one less voice, I also came out of the therapy knowing my own strength and knowing that I can combat them. Because if I can combat that one, who was the worst one that I've had, I'll be able to deal with the others in a very similar way.

Alisha 18:34
I love hearing her amazement that a pretty rudimentary representation of her voice was able to impact her life in such a meaningful way. As a clinician, what's your response to hearing how AVATAR therapy made such a big, positive impact in Ruth's life?

Vaughan 18:56
So it's fantastic to hear that Ruth found it so useful. I mean, it really is, for someone

who's worked with people with really distressing voices, to hear that Ruth found it made such a difference is absolutely fantastic. One thing that's worth bearing in mind is, of course, most therapies, most treatments of all types have different effects on people.

So we tend to select the therapies and treatments that on average tend to help people. Not everybody will necessarily have exactly the benefit Ruth mentioned, but the whole point of doing scientific research is to get past the problem of just using one person's experience, as positive as it may be, and test out to what extent this may benefit, as exactly as Ruth said, a lot of people.

And it seems to be that AVATAR therapy is showing good signs of doing that.

Alisha 19:49
I just really specifically want to point out how she was able to describe how she fully understood, on a logical level, that the avatar was an intermediary between her and her therapist and she was like, “logically, I knew that it was my therapist talking”, but it didn't matter because the avatar was so powerful on its own that when she was able to speak to it, like, on a level playing field, and have it feed out the things that she's accustomed to hearing inside her head, it's just really interesting, and I think her ending conclusion, which is that she has the control, and it sort of reminded her that she is in control of her own mind, it's just really beautiful. And I understand not everyone always has a extremely positive experience, but it sounds like, if she's just a representation of even a small cohort of people who are benefiting from this therapy, then it's very powerful.

Vaughan 20:46
Yeah, and we can take a kind of, you know, less striking example.

Imagine if someone has really intense voices, they're not quite sure whether they're real or not. And after AVATAR therapy, they're just less scared of them, and they have less of an impact on their life. Maybe they don't come to the same point of realisation and feeling of control as Ruth. But we know on average, at least as far as the trials that have been done, which have been very impressive, that on average, the AVATAR therapy will have a benefit.

And if some people come to this real kind of understanding and realisation, and some people just are less scared and disabled, that mix is a really positive one.

Alisha 21:34
What are some of the challenges for a therapist in opening up a dialogue between one of your patients and a voice they're hearing?

Vaughan 21:43
Sure. I think there's a few, and one of them is something that happens even before anyone gets involved in AVATAR therapy.

So I sometimes do talks to various places around the world, and I just talk about psychological treatment of psychosis, because it's not very common in lots of parts of the world. And I talk about how we do things in the UK, and in other places. And normally when I talk about some of the new, under development, cutting-edge treatments, and I mention AVATAR therapy, that's the point where people go, “hang on a minute, that sounds a bit, that sounds a bit radical. I'm a bit concerned that I may cause lots of distress”, or “I'm a bit concerned that actually people may leave the experience thinking their voices are more real than they did before”. So, you know, I think this is an entirely reasonable concern. And as clinicians, we should always have concerns about the potential negative effects of any treatment.

And actually, this is a problem common to a lot of therapies, in that quite a few psychological treatments work on getting patients to experience some distress and getting them to manage it in new ways.

And so, actually, the idea that as therapists or psychologists, we might be working with people to make them feel a little bit distressed, but in the service of helping to manage that a little bit better, is something we don't always feel naturally comfortable with. But it's something that a lot of therapies put a lot of attention on, to allow that to be done safely and helpfully for the people we're working with.

Alisha 23:15
Well, let's hear now about how AVATAR therapy is being trialed. Dr. Clem Edwards is a clinical psychologist and the trial coordinator for AVATAR 2, the second study done with this intervention. She told us about the history of the research into avatar therapy and explained how AVATAR 2 was conducted. She also talked about the importance of getting input from people with lived experience of hearing voices.

Clem 23:43

AVATAR 1 was the first fully powered trial of Avatar Therapy. AVATAR 1 happened in South London and Maudsley NHS Trust and that found really convincing evidence of the effectiveness of AVATAR therapy – it reduced distress that people felt around their voices, as well as a range of other outcomes.

What we wanted to do in AVATAR 2 was include other sites, other locations away from King's College London, and as geographically diverse within the UK as we could manage, and that brought in our colleagues in Manchester, in Glasgow, and across the river in London as well, in North London, at UCL. We trained lots of therapists.

I think we set out to train 20, and we ended up training 38, from a range of disciplines, from psychology to psychiatry, to nursing, to other therapists, to kind of demonstrate that avatar therapy could be implemented by people that weren't that core team. And so the trial was designed to test the original kind of six or seven sessions of AVATAR therapy, which we called AVATAR Brief, compared to an extended version – 12 sessions, so twice as many, which we called AVATAR Extended, and to see how both of those perform compared to treatment as usual. So we recruited anyone who had a diagnosis of psychosis, so this was across that kind

of schizophrenia spectrum disorders, but also people might experience psychosis alongside or as part of mental health diagnoses such as depression or bipolar disorder.

So they attended a baseline assessment, then one at 16 weeks, which would be after all therapy was completed, and then one at 28 weeks as a follow up. Across the three time points, we collected outcomes across voices, so how distressing the voices were, how frequently the person heard the voices, and we also assessed how they thought about their voices, so how powerful they experienced them as, how controlling, and we also really prioritise some outcomes that have been really identified as important by people with lived experience.

So, well-being and also kind of personal recovery measures. So how much the person feels they are recovering and kind of an agent in their life, as part of the therapy. And we also assessed symptoms of trauma and difficulties with trauma because that's very prevalent in psychosis and very prevalent in voice hearing.

Yeah, lived experience was at the centre of AVATAR 2. We had a group of, I think, over 30 people with lived experience of voice hearing or caring for someone who hears voices that formed our kind of lived experience panel, and that was across all four sites. The research assistants that worked on the trial were a key part of the success of this work, because the model we had was that they were kind of assigned two or three of the lived experience experts to kind of work with and support through the process of being involved in the trial.

So yeah, I think they made a huge difference to the delivery of the trial. They gave us loads of ideas about how to talk about the therapy, how to talk about voice hearing. That made it more accessible to those people, and they helped us think about the results, and they've helped us prioritise the results and think about which ones really matter to people with lived experience, and that's reflected in the paper.

Alisha 26:54
How does this kind of input improve the quality of research?

Vaughan 26:58
So I'm going to go a little bit against the grain here, and say I don't think it *necessarily* does, but when it's done well, and it's done as a partnership rather than just asking people's opinions, I think it works really well. And I think this is what the people who've run the avatar trial have done very well.

As we just heard from both Ruth and Clem there, it wasn't just about kind of going, “here's what we're doing, what do you think? What could we do different?” it's like kind of asking someone, or my car mechanic asking me, what he should do different about his job.

But, if you're working with someone over a long term and you get to be part of that, you see it develop, and you develop something that's particularly important in psychosis, when you're working with people affected by psychosis, is developing trust. And developing trust that you're doing something that's going to ultimately be

aimed at being beneficial, and that you're taking their point of view and their input seriously. And so having that long term relationship, working in partnership with people can really give people the experience of making an input and seeing it make a difference, and having those debates, actually, when some of those differences come up, in good faith, and working towards the common goal of making a therapy more effective.

Alisha 28:17
There's a common thread here of empowering people who hear voices and centering their agency. What are the benefits of this kind of approach to mental health?

Vaughan 28:29
Mental health services have a long and checkered history, and it has a long history of developing things for the good of other people without checking with them that that good is actually something they want doing to them, and whether actually in reality it's doing good, and not just trying to convince them to do something different.

So that aspect is really key. And I think, actually, it's key throughout medicine, throughout clinical treatment, but because of the history of mental health and because mental health frequently affects your emotions, your feeling of trustworthiness in other people, your feeling of being motivated or valued, it's particularly important to take that part seriously and to think about the position and lived experience and incorporate that into the work you're doing to make sure it's developed in a way that's going to be comfortable, acceptable, and useful for the people you're working for and with.

Alisha 29:31
Well, we spoke to Tom about the findings from the AVATAR 2 trial, and their future plans for expanding the research.

Tom 29:42
In terms of the results of the AVATAR 2 trial, we found that both versions, AVATAR Brief and AVATAR Extended, delivered rapid and significant reductions in voice distress. That was the primary outcome in the trial. AVATAR Extended delivered a significant and sustained reduction in voice frequency. So this means that people were reporting that their voices were happening less often.

This is really important because, if you've got a persistent bullying voice, the idea of it, of reducing it, is a huge priority for people that hear voices. So we also saw improvements across other broader domains, that include empowerment, wellbeing and recovery. And while these were observed in both AVATAR Brief and AVATAR Extended versions, the improvements tended to be stronger and more sustained within the AVATAR Extended version.

So it's for that reason that AVATAR Extended will be used as a guide for our next steps for AVATAR therapy. So what this means is that AVATAR therapy has been identified as a promising digital intervention. We need to go beyond the clinical research trials that we've done to date, and we need to move into real world settings.

So we need to answer questions as to whether we can deliver the impact that we've seen in trials when people receive AVATAR therapy in frontline NHS services. So that's a significant next step for us.

What we would like to have is that within five years, AVATAR therapy is something that's much more widely available that people can access within frontline NHS services. That's the mission. However, to date, AVATAR therapy has really only been delivered in higher income contexts.

And there's a need to test whether AVATAR therapy could be an effective and helpful tool in lower and middle income contexts.

So we're going to test AVATAR therapy in an adapted form in India and Ethiopia alongside partners who we're going to work with in terms of the ethical and cultural adaptation of AVATAR therapy. As part of the same award, we're also going to be developing AI powered tools, which we hope will allow the therapy to be delivered by a more widely available workforce.

What we hope to develop is conversational AI, which allows us to deliver that active avatar voicing.

And that simplifies the role of the therapist ,and what they then need to do is support the empowerment of the person while the avatar dialogue is facilitated using AI powered tools. So that's very much what we're going to look to develop proof of concept and test the feasibility of within this new work.

Alisha 32:10
Tom talked about expanding this research internationally. Is it common to see mental health treatments having different kinds of effectiveness across different cultures?

Vaughan 32:21
Yeah, it is common, but often for reasons you might not expect. Over many years of working as a clinical psychologist and working in different countries, one of the things that has a really big effect about the success of any particular treatment is the healthcare system in which it is deployed.

And that changes massively across the world. So you know, the amount of, you know, times you can go and see your clinician, what's available, the geography, how you get to see the clinician, makes all different aspects of therapies of any particular sort, but particularly psychological therapies, really different.

So we often think about the idea that there's something particular about people's understanding or culture, which may have an impact, which is almost certainly the case. But it's also the case that lots of really practical things to do with health care, and what's available, and how you access it can also mean any particular treatment can sink or swim in that environment.

Alisha 33:38
For research into mental health interventions, how important is it to have diverse representation in your sample geographically, demographically, et cetera?

Vaughan 33:40
It depends a little bit on who the treatment is for. So if it is for a particular group, then those are the particular people you want to test the treatment out on. In this case, psychosis can affect anyone, and we do know it is more likely to happen to people from marginalised backgrounds, from ethnic minorities, for people who have immigrated to the country, and often because those are exactly the groups who experience marginalisation, have a history of trauma, have experienced more poverty. So in this case, it's absolutely essential to have a really diverse group of people for whom you're developing the treatment with and evaluating the treatment when they're taking part in it because the people we're thinking of are a huge cross section of society, and so we want to make sure it's suitable and appropriate for everybody.

Alisha 34:44
You know, when he was reflecting about how challenging it might be as a therapist to be able to offer dialogue through the avatar and then speak for themselves.

I know they're getting better and better every day, but I do think like, this is just my own personal reflection – kind of watching the avatar function, it's so like, not human, but assigned like, a face, but there's a human voice coming through the other side. And I just wonder if you take away the actual human voice on the other side and it just becomes a total digital representation, if you do lose a little bit of the ability to connect with it. Because that is something that Ruth kind of reflected on, this idea of like understanding that it was her therapist talking. I wonder if that would impact people knowing that they're interacting with a wholly digital entity.

Vaughan 35:38
So this is a big issue in what's become called digital mental health.

You know, the idea that we can use tech, you know, digital technology, to extend the reach of the therapies we have or, you know, deliver them in a different way, hopefully in a way that scales.

And there are lots of kind of online, app-based CBT. One of the difficulties these treatments have is that people tend to drop out pretty quickly. And that human element is really important to a lot of people, because frequently people don't just want to rethink their thoughts, think about their behaviors, they often want a mix of kind of practical ways of addressing things, and someone there to give them that confidence and support, as well as sometimes just talking about some difficult stuff and having a listening ear. And so one of the interesting things is, to what extent can digital technology be integrated into some of the therapies?

It's an unanswered question actually. Could they replace therapies completely? Replace therapists completely? Maybe in some cases, yes. In other cases, no. In

other cases, we may need a kind of blended approach. And exactly as you mentioned earlier, sometimes it comes down to preference.

But the question of where should the human element be in these therapies is a really open one at the moment.

Alisha 37:04
Do you think the ideas of avatar therapy could be utilised in treatment for other mental health problems?

Vaughan 37:11
So, yes. And I know that, um, one of the things that that group is starting to test out is AVATAR therapy for eating disorders. Because sometimes people with anorexia, or bulimia, sometimes describe their problems as if they're being kind of bullied by a particular voice, not necessarily one they might hear or perceive in the same way, but it feels like, you know, there is some sort of thing which feels like it's bullying them, and being able to stand up to that and respond in a different way may be useful.

It's worth saying that, you know, actually, this idea of making the situation a bit more real has become quite a central idea to some of these new generation of digital mental health interventions. So, for example, you know, creating virtual reality environments of things people have phobias about or might have post traumatic stress about. People who are scared of heights, you could go into virtual reality environments where you're quite high up, or if you've had a really traumatic experience, maybe in a car or even a war zone, recreating that in the virtual environment to allow people to have a really controlled kind of experience of it, and renegotiate, you might call, some of those feelings and thoughts and perceptions about that, to try and work on some of that anxiety and fear.

So the idea that you can take this specific idea personifying something that you feel is bullying you is something that is being deployed to other therapies. And this broader idea that you can try and make things a little bit more manifest in a digital environment that allows you to have a more controlled approach to testing out some of those fears and developing new ways of coping with that and doing things differently, I think, has become quite a core area of lots of this experience and research into digital mental health.

Alisha 39:19
Dr Vaughan Bell, thank you so much for joining us today to talk about AVATAR therapy, it has been a real pleasure.

Vaughan 39:25
Thank you very much, Alisha. It's been a pleasure.

Alisha 39:34

Since we recorded this episode on AVATAR therapy, our interviewee Ruth Mathieson has sadly passed away. Our deepest condolences go to her family and loved ones.

Wellcome and the team behind the podcast would like to acknowledge Ruth's valuable contributions to this episode, and share this statement from her wife.

“Ruth’s commitment to ensuring the AVATAR Therapy would help others in the way it helped her was enormous. She even overcame her fear of being on TV as it was such an important healing process for her. Sadly, she will never get to see the success that she hoped AVATAR Therapy would achieve. But we would like to honour her memory by encouraging everyone to continue to show kindness in a world that needs it.”

Thanks for listening to When Science Finds a Way. I also want to say a huge thanks to all our contributors.

Learning about AVATAR Therapy, it just sounds really powerful. But I think one of the main takeaways I got from Vaughan was that AVATAR therapy can have a range of impacts on people. For someone like Ruth, the benefits were massive, but even if it’s a small positive impact for someone, it’s still worth having in the toolkit of interventions to help people who hear distressing voices.

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If you visit their website, wellcome.org/podcast, - that's wellcome with two L's - you'll find a whole host of information about mental health, as well as full transcripts of our episodes. It's also where you'll find the episodes about mental health from season one of the podcast. Or, just scroll back through the series on your podcast app and you'll find it there too.

If you've been enjoying When Science Finds a Way, be sure to rate and review us in your podcast app. You can also tell us what you think on social media - just tag at Wellcome Trust - with two L's - to join the conversation.

That brings us to the end of this series of When Science Finds a Way. But stay tuned, because we’re already working on the next series. And we’ll be bringing you more stories of hope from the front lines of our biggest health challenges.

When Science Finds a Way is a Chalk and Blade production for Wellcome.