XR Therapeutics

Immersive Technology Therapist Training Manual

BASED ON:

MASKEY, MCCONACHIE, RODGERS, GRAHAME, INGHAM, MAXWELL, AND PARR

Introduction

This manual covers a specific aspect of therapeutic intervention for people experiencing high anxiety, that is, how to arrange 'graded exposure' in a way which is manageable and predictable.

Carefully graded challenges within individually tailored situations can be created with immersive technology, and the participant is allowed to control when they are ready to move on to the next step. For people with Autism Spectrum Disorder (ASD), who may experience difficulties with the imaginal aspects of graded exposure, this immersive technology offers appropriate exposure for specific fears/phobias (i.e. those which can be presented visually).

Thus the manual does not cover broader aspects of psychological intervention for mental health conditions. The broader case formulation of a person's difficulties may have many elements. This specific intervention is designed to focus only on overcoming a specific fear.

The immersive technology processes have been designed for young people aged 8 to 14 years with ASD and for adults on the autism spectrum, who are verbally able enough to participate, and who do not have high levels of generalised anxiety. The materials have also been adapted for those with autism and/or learning disabilities (see Appendix 3).

Contents

1. Initial Training & Preparation

1.1. Direct training with Clinical Psychologist Trainer

Expected background of the Therapist who will work directly with the person with autism and the relatives/supporter:

Experience in working with individuals who have ASD and/or learning disabilities. It is desirable that they have worked in a therapy or education context with verbal children of school age and/or adults with ASD with appropriate language skills and/or children or adults with learning disabilities. There would be many transferrable skills from working with children and/or adults with ADHD.

The therapist may not at first know much about anxiety or psychological therapy approaches. The therapy approach laid out in the manual is programmatic, and the therapist will be supervised in delivery. Background reading will fill in much about the nature of anxiety in children and adults, and how various behaviours may reveal underlying anxiety (see suggested reading in 1.2).

Training in the use of XR as therapy can be carried out face to face with a member of XRT's training team or by online CPD UK certified training. This should take approximately 1.5 to 2 hours. In advance, the Therapist should read the Manual, and the Maskey papers cited below.

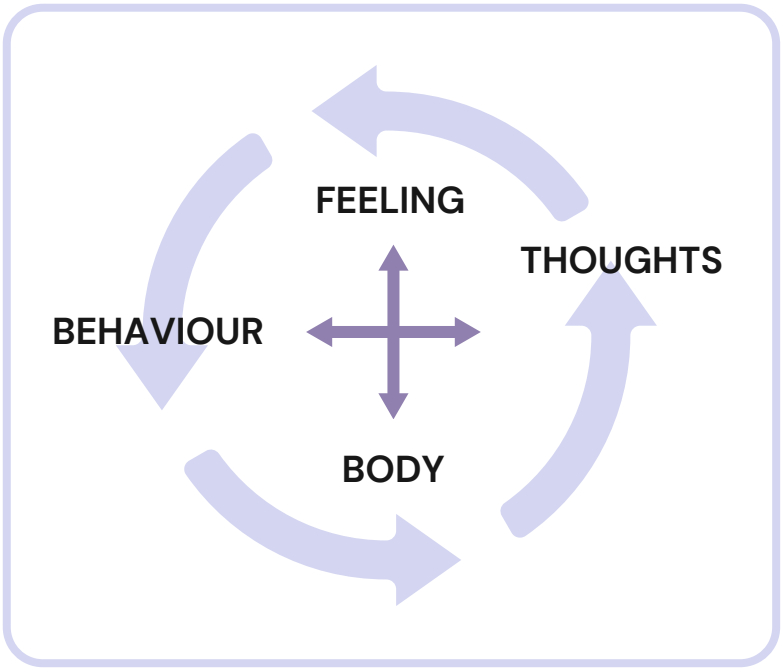
Depending on the level of experience of the Therapist, therapy elements to cover in the training session should include the process of:

How to establish whether the person with autism and/or learning disabilities can recognise their own anxiety and other emotions.

Introducing the concept of the '**Hot Cross Bun**' – that behaviour, physical response, thoughts, and emotions are all linked and all affect each other.

Some participants will be able to engage in this more than others.

Some will just need to know e.g. that 'relaxation helps your body'.



- Creating a generic situation to help explore how the person experiences and describes their emotions, using the hot cross bun. Beginning with some other emotion than anxiety (e.g. happy / unhappy/sad).

- Normalising anxiety – e.g. 'everyone gets worried some of the time – it can be helpful – but if it is too bad it can stop us doing things', etc.

- Individualising - Finding out which words the client uses to describe their anxiety (do they use 'worried' / 'scared'?).

- Using scales to help a shared understanding of what the person is like when they are a little / moderately / very anxious. (What am I like when I am number 3 on the anxiety scale?). Modelling with different emotions using generic situations (e.g. "when I am going on holiday I am "3" excited, but the day I got a new puppy I was "5" excited). Adapt the situation described to the age of the participant. The scale can be presented with a velcro strip beside it and a face representing the participant, so they can show the level without saying a number. We would usually use a 6 point scale; however, for some participants this is cognitively challenging. In that case, it may be more effective to use a simpler scale such as traffic lights (red, orange, green) or even just two alternatives (thumbs up, thumbs down). See appendix for examples of adapted scales.

- Exploring the situations which make the person anxious (How do you know you would be less anxious in a medium anxiety situation than a high anxiety one? E.g. would you want to run away, feel sick etc. What would be the difference between these two situations).

- Discussing the hot cross bun of anxiety – if you can change one or two elements then anxiety may be reduced. Use the visual model of the hot cross bun to aide understanding.

- Exploring what thoughts go through the person's mind when in an anxious situation – developing rationalising thoughts/mantras ('I can do this'). It is important not to describe these anxious thoughts as 'bad' thoughts as this can be taken literally, and they can infer that they have bad thinking. There are additional materials in the Appendices to support with this.

- Introducing physical relaxation techniques and the importance of practising them between sessions. (See suggested script, Appendix 1). Whether delivering the session to adults or children with autism, their supporter(s) should be present if possible to get a better understanding of anxiety and to practice the relaxation exercises with the client.

1.2 Individual supplementary reading/preparation

Background reading - Principles of CBT:
"An Introduction to Cognitive Behaviour Therapy: Skills and Applications" by D Westbrook, H Kennerley & J Kirk, 2011, Sage Publications.
"Think Good, Feel Good: A Cognitive Behaviour Therapy Workbook for Children" by P Stallard, 2002, Wiley.

On CBT / Anxiety in Children:
"Helping children cope with anxiety" by J Eckersley, 2006, Sheldon Press.
"Anxiety in neurodevelopmental disorders: Phenomenology, assessment, and intervention" by V Grahame & J Rodgers, In Van Herwegen, J & Riby, DM (eds) Neurodevelopmental Disorders: Research Challenges and Solutions, 2014, Psychology Press, Abingdon, Oxford.

Considering Adaptations of CBT for Children with ASD:
"Exploring Feelings: cognitive behaviour therapy to manage anxiety" by T Attwood, 2004, Future Horizons.

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RESEARCH PUBLICATIONS

Maskey, M, Lowry, J, Rodgers, J, McConachie, H & Parr, J (2014) Reducing specific phobia/fear in young people with autism spectrum disorders (ASD) through a virtual reality environment intervention. PLoS ONE9 (7): e100374. doi:10.1371/journal.pone.0100374

Maskey, Morag, Jacqui Rodgers, Victoria Grahame, Magdalena Glod, Emma Honey, Julia Kinnear, Marie Labus et al. "A Randomised Controlled Feasibility Trial of Immersive Virtual Reality Treatment with Cognitive Behaviour Therapy for Specific Phobias in Young People with Autism Spectrum Disorder." Journal of autism and developmental disorders (2019): 1-16.

Maskey, M., Rodgers, J., Ingham, B., Freeston, M., Evans, G., Labus, M., & Parr, J. R. (2019). Using virtual reality environments to augment cognitive behavioral therapy for fears and phobias in autistic adults. Autism in Adulthood, 1(2), 134-145.

2. Preparation for Psychoeducation Session

Plan this session based on any information already obtained from the family / supporter including:

- Age and verbal fluency of the client;
- Level of anxiety/impact on functioning;
- Situations that make the person anxious;
- If possible, an idea of what situation/s the client is particularly anxious about should be explored at this stage, and therefore what their 'target situation' might be;
- Effect on individual/family life;
- What, if anything, the participant does already to deal with their anxiety/coping strategies and any other therapy they have tried for anxiety;
- How the client describes anxiety in their own words (e.g. worried, scared)
- Some basic information about how anxiety is experienced (e.g. physical – heart-beating etc., worrying thoughts), if they are able to express this. Often clients can find it difficult to recognise the physical sensations of anxiety.

Schedule of visits

01	**Clinical Visit** The therapist is to teach the CBT techniques from the training to the person and parent (s)/supporter and agree target situation to work on. Time taken approximately 45 minutes.
02	**Clinic Visit** Occurs about 2 weeks after the above session and will be 2x 20-25 minute sessions using immersive technology with a 20-minute break in between sessions.
03	**Clinic Visit** Within one week of the above visit and same procedures. Ends with the next steps given to parents / supporters and person with ASD.
04	**Follow-up** Research team will carry out follow-up visits to children to monitor progress.

3. Psychoeducation Session

The therapist should meet the client and their family/supporter(s), a few weeks before they attend the immersive sessions for a psycho-education session. The session should take no longer than an hour. At this visit, the following things should be explored with the client, with parent/carer/supporter observing.

Basic CBT Concepts

- Explain that feelings, thoughts, behaviour and body are interactive and affect each other and draw out “hot cross bun” as a visual support.

- Concrete examples of what happens in different situations. E.g. thoughts, feelings, behaviour and body reactions on Christmas Eve (if appropriate).

- Ask client about their hot cross bun in different situations (e.g. if they get a present, or win a game). Try and include a situation around their special interests, if appropriate. Repeat this (thoughts, body reactions, feelings, behaviour) with a situation which makes them anxious.

- Referring back to the diagram, explain to the client that if we can change some of the elements, e.g. thoughts and body, we can help the anxious feeling reduce (because they are all interlinked).

- An introduction to anxiety, normalise it and an explanation of when anxiety can become a problem. E.g. “Everybody gets anxious sometimes and it can be helpful, it can keep us safe. But sometimes it gets too much, it stops us doing things, and we have to learn to control it”.

Introduce Scales of Levels of Emotions

- Begin with a 6-point scale (with removable words). The therapist should model this with “excited”, using different examples. They should then get the client to practise using intensity scales with ”happy”. This scale will be used to communicate within the immersive sessions.

- If the client is not able to use the 6-point scale / has difficulty understanding it, try introducing a traffic light system, e.g. angry feeling – green (not at all angry / calm), amber (getting angry, feeling uncomfortable), red (very angry).

- If the client has difficulty understanding or using both of the above scales, introduce the concept of thumbs up/thumbs down to communicate anxiety level (or another of the simplified scales in the Appendix that seems appropriate). The examples used could be related to the hot cross bun examples used previously.

- Finally, the scales should be practised using the client’s own word(s) for anxiety.

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Introduce Relaxation Techniques

- Remind that, due to the "hot cross bun", if we can relax the body, it will help the anxious feeling.
- Request all that are present to join in.
- Go through controlled breathing and progressive muscle relaxation (see Appendix 1).
- Ask the client how they feel after (if it is helpful).
- Ask the client and parent/carer to practise these techniques before the immersive sessions.
- Discuss the use of positive statements or mantras (give examples, e.g. "I can do this").
- You may be able to find out what they think (e.g. "It'll stop soon") and then explain what an alternative might be, using yourself as an example. Ask them to have a think about coming up with their own before the immersive sessions, if appropriate.

Give lots of positive praise as appropriate, and remind them that they will be doing similar things (relaxation, scales etc.) in the immersive sessions.

Also, discuss that there won't be any 'nasty' surprises and that we don't want them to be 'high (6/red) anxious' at any time.

Ask if they have any questions or anything that they would like explained again.

4. After the Psycho Education Session

Write a summary note about the visit, as soon as possible after it has taken place. Use the information obtained at the visit to consider the person's individual scene and how the level of 'challenge' might be graded.

Example

The therapist had established that a child was particularly afraid of dogs when out and about and the dog was lively.

File note by therapist:
"Please do let me know if you think of anything I've missed! It occurred to me over the weekend that I didn't discuss with B whether or not barking/dog sounds affect his anxiety - apologies for this oversight."

Visit with B

B was verbally fluent and talkative, engaging well with the discussion about the hot cross bun of behaviour, thoughts, body, and emotions. He was also able to confidently use the scales to grade his feeling strengths. He was able to identify thoughts and agreed to think about some coping statements with his mum before coming to the immersive sessions. He engaged really well with the relaxation exercises and agreed to practice these before the next session.

His specific anxiety is around dogs. He described that when he sees a dog he feels 'scared', his heart races and he wants it to go away (or get it away, e.g. "kill it"). He became distracted at times with humour around using pepper spray on the dog but was able to be guided away from this. He was able to use the scales to indicate that the main factors affecting his anxiety are:

- Size of the dog (Chihuahua would be OK, Labrador-sized dog would not);
- If the dog is on a lead;

Visit with B cont.

- How far away the dog is (e.g. on a lead at the end of the street would be tolerable, however, would be more anxious as it moved closer);
- How old (energetic) the dog is – if the dog is old and slow, this is more tolerable than one that is younger / jumpy, etc.

File note by Therapist:
If possible, it would be great to be able to manipulate all of the above features, i.e. be able to have a large/small dog, on or off the lead, which we could move closer to (or it move closer to us).

I appreciate the last point may be more difficult, but if it would be possible to be able to change the movement level of the dog, that would be a bonus.

We discussed these scenarios as if we were seeing a dog in the street. Do you think this would be possible? If not, I'm sure another setting such as a park/ square would be fine.

Finalise Individualised Materials

Prepare an individualised social story to send (if appropriate), to prepare the participant for the immersive visit (see Appendix 2 for example).

5. Immersive Sessions

Before each new scene, learn and practise the controls. We would suggest arriving approximately 30 minutes before the first session to allow time for this, if the scene is new to you.

5.1. Before starting your session

- Talk through with the client and their supporters in the waiting area about what is going to happen.
- Remind client that he/she can say stop/leave at any point; agree on how they will let you know they wish to do this.
- Ask for the current level on the 6-point anxiety scale for the agreed goal.
- Remind about relaxation skills – take a few deep breaths together.
- Remind about positive coping statements – ask which ones the participant is going to use (suggest, e.g., "I'm going to be OK, I can do this", if they do not have one prepared). Reintroduce the 'anxiety' scale for communication. Ask where the client is on their own 'anxiety' scale.

5.2. In the immersive sessions

General points:

In general, adjust your style to the client. If they tend to distract themselves by talking, remind them to look at the scene. If they get hung up on numbers, such as counting a breath in and then out, then just say 'slow' breaths. If they start fiddling about with the Velcro strip on the scale, then just ask them to say the number on the 'anxiety' scale or point.

If the client refuses to do physical relaxation exercises or finds them distracting, then try a 'stress' ball and encourage a focus on the relaxation after pressing (rather than tensing and continuously pressing it).

If the client says "This is just immersive technology, it does not seem real", agree that it is not real but its value is in being able to practice. We have found that clients will go along with it, and practice. Remember a client saying 'it's not real' may be one way of coping and that some anxiety is actually being felt.

Session 1

Begin by showing one of the relaxation scenes to help them become used to the technology, and understand that it is possible to move through the scene.

Introduce the relaxing scene/music, and go through the breathing and progressive muscle relaxation exercises. Give praise, "well done". Use the 'anxiety' scale so the participant says how scared they feel for that scene – if "high", do some more breathing/relaxation. Ask client what statement they will use.

Beginning at the lowest challenge level, navigate through the scene whilst;

- Frequently checking how high their anxiety level is;
- Reminding about taking deep breaths and focusing on being relaxed;
- Frequently asking them about their thoughts / to repeat their positive coping statements; Constantly being aware of the person's body language / outward signs of anxiety (especially tense shoulders).

Repeat the scene until the clientt is consistently reporting a low level of anxiety, and using breathing techniques and coping statements effectively. With adults, there may be an opportunity to explore their thoughts on the situation as it unfolds in the immersive sessions. This may give deeper insight into the thought processes and the specific triggers for the fear they are experiencing.

The client may say they are willing to go on to the next step but stay aware of their possible physical signs of anxiety. Gradually increase the difficulty of the scene, with the client's agreement, making sure that their anxiety level remains low, and repeating each stage until the client has 'mastered' their anxiety control at that level.

- Make sure not to rush/progress through challenge levels too quickly;
- Try and ensure the client is engaged with the scene at every stage.

At the end of the session, briefly sum up what the client has done, emphasising that he/she has brought down their anxiety. Encourage them to verbalise the strategies they have used to control their anxiety.

Break after approximately 20 minutes.

Session 2

After the client has had a break, repeat as in session 1– although the introduction and initial relaxation scenes will be quicker at this stage.

Begin the scene at a challenge level they have already 'mastered' before the break, ensuring their anxiety level is low / under their control before moving on to more challenging scenes.

End session after approximately 20-30 mins.

Sum up again. Use lots of positive praise, discuss/remind the client of how far they have come in controlling their own anxiety (e.g. "You have done brilliantly! When we first started you were 5 scared of being on an empty bus, and by the end, you were able to be on a bus with 6 people and use your breathing and positive thoughts to keep yourself nice and calm – only at 2 scared! Well done!")

Note down where you left off session 2, so you know where to start session 3 at the subsequent visit.

Session 3 & 4

Repeat all steps from sessions 1 & 2, moving more quickly through the introduction / relaxation stages. Begin session 3 a few stages before the final stage of session 2, ensuring that the client's anxiety remains low, before moving on to more challenging levels.

Depending on the client's scene/suitability for the individual, it may be appropriate to reduce the level of support provided/ frequency of reminders to use relaxation techniques, use positive thoughts etc.

It may occasionally be appropriate to allow the client to control their own scene using the controls if it is an in person session – ensure that the client remains engaged with the scene and relaxation exercises if so. (Be careful that the scenario is not navigated like a video game).

5.3. At the end of all the Immersive Sessions

Consider and discuss with the client and family/supporter the steps to adopt, aiming for 'real' exposure.

Agree and outline a plan that the client and their caregiver/supporter feels comfortable with. This is particularly important with adult participants in the sense that they need to agree a path to exposure that both the adult and their caregiver are comfortable with. Write down the plan and proposed steps of increasing difficulty; this can be written into a visual format such as a ladder with steps going upwards (photocopy so each have a copy).

The suggested timing and outline of these sessions is a format that has been found to be effective. However, the number of sessions and timings of these may have to be changed to fit the working of your service. This is fine – the key thing is to proceed at a pace that is comfortable to the client and where you can observe anxiety reduction taking place.

6. Measurement of Change

Standardized scales (such as the Spence Children's Anxiety Scale) may not include the exact item(s) of most concern to a participant or their caregivers and may fail to reflect real change important to the individual family. We have developed a pre and post treatment questionnaire which measures real life change and can be used alongside standard measures you already use in your service.

The questionnaire process followed was developed by the Research Units in Pediatric Psychopharmacology, (Arnold et al., 2003, Parent-defined target symptoms respond to risperidone in RUPP autism study: customer approach to clinical trials). The questionnaire asks questions such as 'how often?', 'how distressed?' and 'How does the fear interfere with daily activities? in a standard format to the parent/supporter and client, to enable a vignette to be written about the fear and its severity/impact before treatment.

Pairs of vignettes (for example, from baseline and at the last session of treatment) are later compared as definite improvement; minor improvement, no change, somewhat worse or definitely worse.

These questionnaires can be found on the **Boundless** platform.

Additional Materials

Appendix 1: Scripts for Relaxation Training

- Muscle Relaxation
- Breathing

Appendix 2: Letter format for session visits

- My Immersive Therapy (for Children/Young People)

Appendix 3: Adapted Materials

- Advice to Therapists
- My Immersive Therapy Sessions
- Anxiety/Worried/Scared preferred words
- Where I Feel Anxious Body Diagram
- Sort Through Body Feelings
- How My Body Feels When I am Anxious
- Discussing Specific Situations
- Discussing Specific Situations: Examples
- Thoughts Diagram
- Feelings, Thoughts, Actions Sheet
- Severity Scale
- Three-Point Anxiety Scale
- Alternatives to a Numerical Scale
- Traffic Light Scale
- Muscle Relaxation (modified)
- Hot Drink Relaxation

This is Me booklet

Appendix 1

Scripts for Relaxation Training

We will start at the bottom of our bodies and work up learning how to relax each part of our body at a time. To learn what it feels like to have relaxed muscles, first of all we have to know what it feels like to have tense muscles. So I want you to screw up your toes as tight as you can, that's right really screw them up into little balls, feel how tight your toes and feet feel and hold them really really tight (hold for about 10 secs) and now let them go – see how relaxed and floppy they feel now.

Next I want you to pull your toes back up towards your knees as tight as you can. Feel it pulling down the bottom of your legs. Pull them back so they feel really tight and hold it, okay, and now relax your feet again. Do your legs feel a bit heavy? That's what it feels like to have relaxed legs and feet.

Now we need to know about the top half of our legs. Press your knees together as tight as you can and push your bottom down hard on the chair or floor. Really feel those muscles in your legs pushing and hold them really tight (hold for 10 secs). Ok and relax and give your legs a little shake. Now you have totally relaxed legs.

Next we will do our tummies. Take a deep breath in and pull your tummy in as tight as you can. Try to make it disappear. Pull it in really, really hard. That's right hold it tight (10 seconds) and then relax, feel how comfortable it feels when your body relaxes.

Next your arms, make arms like a muscle man and really show me those muscles. Pull them in really tight until your muscles start to bulge, good, now hold it there (for 10 seconds) and relax. Shake your arms out and let them relax completely.

Now clench your fists as tight as you can. Squeeze those fingers in really hard and feel how tight your arms and hands feel. Hold it (for 10 seconds) and now let your hands go floppy and relaxed.

Now I want you to try and touch your ears with your shoulders. Pull them up as tight as you can and see if you can feel the tightness in your neck and across the top of your back. Hold it tight like that (for 10 seconds) and now relax. Let your shoulders slump as the muscles let out all that tension and go floppy.

Muscle Relaxation cont.

Now we're onto our head. First of all wrinkle up your nose as tight as you can and hold it (for 10 seconds), now let it go and let your face go all droopy and soft. Now push your tongue against the roof of your mouth so that your mouth feels all tense and frozen, push it and hold it (for 10 seconds) and then relax and feel how nice it is.

Clamp your lips together, push them down and try to smile so that you can feel the tightness in your cheeks, hold it there (for 10 seconds) and then let all the tension escape.

Lastly just screw up your whole face as tight as you can so that you can feel the muscles pulling all round your head, really screw it up, that's right, and hold it there (for 10 seconds) and now let it all go and see how much calmer your head feels.

Appendix 1

Scripts for Relaxation Training:

Breathing Relaxation Exercise

Sit comfortably and close your eyes.

Concentrate on taking a deep, slow breath in and as you do, feel the air flowing in through your nose.

Now, let the air out slowly as you concentrate on breathing out through your mouth. Take another deep breath in, again feeling the air coming in through your nose and then slowly let it out through your mouth.

In...Out...In...Out... While you are concentrating on your breathing you are starting to feel more and more relaxed.

Now I want you to imagine there is a candle in front of you, and when you breath in... and out...in.... and out.... Your breathing makes the flame flicker.

Imagine the flame flickering as you slowly breathe in... and then again as you breathe out. Your breathing is now feeling very, very relaxed, and all your worries are draining away with every breath out.

In... and out... in... and out...in... and out.

Now imagine that you blow the candle out and when you are ready, open your eyes.

Appendix 2

Letter format for session visits

My Immersive Session Visits

(for Children/Young people)

On Saturday 26th and Sunday 27th at 11.00 am, I will go for my immersive therapy sessions.

My mum or dad will come with me. When I am there, I will see (insert names), that I met before.

[INSERT PHOTOS OF ALL STAFF THE PERSON WILL MEET]

Staff Name

Staff Name

There will be some different rooms, the first one is where I can have a drink and a rest, where mum or dad will wait.

Then I will go into a different room with Jess, which has the TV where I will watch the immersive scenes. Me and Jess will do some of the relaxing exercises that we practiced at home. We will also talk about some of the things we talked about at home, like my thoughts and how my body feels.

In the TV room, there will be a scene which has been made just for me.

Together, me and Jess will be able to control some of what happens in my scene, like how many pigeons there are. We will also keep talking about what is happening and how I am feeling.

I can come out of the room or ask for the pictures to be stopped whenever I want. Jess will make sure she knows what I will say or do if I want this to happen.

Sometimes, I will take breaks and come out of the room, to make sure I am feeling comfortable.

After I have practiced my scene in the room a few times, I will go back into the first room and see Mum.

Appendix 3

Advice to Therapists

Some people with a diagnosed learning disability or condition that impacts on cognitive functioning may need very little adaptation when providing this treatment approach whereas others may need adaptations. There is no single approach applicable to everyone however these general principles should always be considered. If a client has a prior communication or cognitive assessment then the recommendations should be reviewed prior to the first appointment.

Amongst other things, cognitive impairments can impact on comprehension, spoken language, vocabulary, memory, impulsivity, attention, processing and perceptual reasoning. Some people may have difficulties in all of these areas whereas others may have specific impairments in one area and strengths in other areas. Sometimes a person will be stronger at non-verbal tasks versus verbal tasks or it might be the other way round.

The issue of consent to receive the treatment needs to be explored in more detail with people who may not fully understand the potential risks and benefits. It is also important to determine a client's motivation to undergo the treatment as sometimes it may be somebody else who feels the treatment is important as opposed to the client themselves.

If the issue of consent seems unclear then discuss the treatment process using a visual aid with the client (see resource pack), outline the potential benefits and side effects of the treatment and attempt to get the person to explain this back to you and indicate their decision clearly about wanting to continue. They should also be able to understand their right to withdraw or not undergo the treatment. If the client is unable to do this then you could only proceed with the treatment if deemed to be clearly in their best interests. A best interest decision should take into account the clients views, involve family members or carers and appropriate professionals. Consent should be revisited again prior to the exposure stage of treatment.

Research indicates that approximately 95% of people with learning disabilities find it difficult to access standard written information (All-Party Parliamentary Group for Education, 2011). Offer the easy-read resources provided and consider reading to or with the client to facilitate their understanding.

Advice to Therapists cont.

In your information-gathering session, find out whether the client has any visual or hearing impairments for which reasonable adjustments should be made. Ask the client to wear their glasses or hearing aids if these are required.

Hearing and visual impairment are more common in people with learning disabilities compared to the general population (Emerson & Baines, 2010). Consider whether resources should be enlarged or printed on differently-coloured paper, whether the volume should be turned up on the Immersive scenes, and whether or not a British Sign Language or Makaton interpreter is required.

Tailor your communication with the client, ensuring you make appropriate adjustments to optimise the client's understanding and ability to participate. Research indicates that approximately 90% of people with a learning disability have difficulty communicating and around half have difficulty with both understanding and expression (RCSLT, 2010). Consider adapting your language by using simpler, more commonly heard words and shorter sentences. Avoid using complex language or jargon and make any examples as 'concrete' and relevant to the client as possible. Allow silences to occur in the conversation in order to give the client ample uninterrupted time to process what has been said.

For some clients, 'open-ended' or abstract questions for example – "What do you think about the picture?" may be tricky. Similarly, 'yes or no' questions need to be used carefully and check that the client isn't just responding the way they think you want them to. Keep questions as simple as possible and try to make them 'either/or' for example "Do you like coffee or tea?" "Does this make you feel calm or scared?"
Using increased and exaggerated gestures can help to make communication clearer. When addressing your client make sure you make eye contact and occasionally say their name to get their attention. Provide instructions in short sentences, one at a time, and check that they have understood by getting them to explain things back to you before moving on. Sometimes people with a learning disability may indicate that they have understood something when this is not the case. This could be because they want to comply (particularly in a situation where there is a clear power imbalance) other times it may be a learned appropriate social response.

It is important to regularly and sensitively ask your client about what you have been discussing or explaining, particularly if this is a critical part of the treatment. If clients cannot give some indication that they have understood the basics of something from the session it's likely that they may not have understood, despite what they say or what their body language tells you.

Advice to Therapists cont.

You will need to try to go back over the topic in a more simple or visual manner. You could consider role-play or involve the person's support in this. Encourage the carer or family member to go through some of the materials in between the sessions.

It is worth considering that people with relatively higher perceptual reasoning (nonverbal) abilities may prefer to learn by 'doing' or learn through visual aids rather than just hearing instructions. The use of clear and interesting visual aids is therefore encouraged if this seems helpful. A toolkit of visual resources is included in this pack.

Some clients may find apps helpful. You may consider using the XRT app which has an audio recording (male or female voice choice) to demonstrate how to regulate breathing and relaxation scenes.

If you do not understand what your client has said it is important, to be honest and clarify this. Use a compassionate phrase such as "Sometimes it is hard for me to understand; could you say that again please?" If you still cannot understand, ask the client if it is okay to ask the carer or family member they have brought to support them. Ensure you ask about the client's communication preferences. They may find it easier or preferable to write things down or use a communication aid, as opposed to speech. In this case, ensure the client brings whatever resources they use to communicate to all their sessions.

A general rule of delivering any therapy with somebody who finds it harder to process and retrieve information is that you need to take more time adopt a slower pace to the session and allow more time for the person to answer any questions or reflect on experiences without interruption. It will also be helpful to repeat key concepts several times and encourage 'over learning'.

Some people may have difficulties with working memory i.e., the storage and retrieval of information (particularly information that is new to them). It would be helpful at the end to go over the key concepts of the session content ending with 1-3 simple messages that could be written down or illustrated in a "session diary" that you could revisit at the start of the next session.

Research also demonstrates that people with learning disabilities may be more susceptible to suggestibility and it is important to be aware of this particularly when asking them to rate their feelings during and after the exposure tasks. It is worth reaffirming the importance of being as honest as possible and being aware of how your tone of voice and body language may potentially influence your client's responses.

Advice to Therapists cont.

Although the treatment manual encourages the involvement of supporter/ parent/ carer this can be even more important when working with adults with learning disabilities or other significant cognitive difficulties. A carer would be particularly important for devising the exposure scenes and encouraging the client to stay in the more anxiety-provoking exposure tasks up until the point where their anxiety begins to reduce.

Also, it is important that a carer knows the client well and is aware of their power in that relationship. It would be helpful to go through this guidance with a carer, particularly at the end of treatment when they have a role in prompting the client to undergo real-world exposure tasks.

Consider adding an additional preparation session, potentially visiting the Immersive studio and viewing some relaxation scenes, in order to provide extra time to help the client build up a trusting relationship, process information, and learn to appropriate skills needed. This could take place in the immersive studio room where the client can revisit parts of the immersive pre-session that may need learning again.

Key neuro-affirming concepts explained in simple language for people new to ASD:

- **SPINS** = special interests that can help a person feel calm, safe and more like themselves (motivation, connection, comfort, strengths-based engagement)
- **Social communication** = differences in how someone communicates and connects with others, rather than something being wrong (different interaction styles, reciprocity-such as emotional exchange differences, varied communication preferences)
- **Flexibility** = what can look like difficulty with change may actually be a need for routine, preparation and knowing what to expect (routine, preparation, reduced uncertainty, safety)
- **Sensory** = some people experience sounds, lights, touch, movement or other sensations more or less strongly, which can lead to overwhelm (hyper/hypo-sensitivity, sensory load, environmental mismatch, shutdown/meltdown triggers)

Key neuro-affirming concepts explained in simple language for people new to ASD cont.:

- **Emotional regulation** = how an autistic person manages feelings, which is often strongly affected by what is happening around them (co-regulation, stress response, context-dependent coping, support needs)
- **Masking** = hiding or covering up autistic traits to fit in, often at the cost of stress and tiredness (camouflaging, social survival, exhaustion, loss of authenticity)
- **Stimming** = repeated movements or sounds that help a person calm down, focus or manage feelings and sensations (soothing, focus, sensory regulation, emotional expression)
- **Executive functioning** = the mental skills used for planning, starting, remembering and organising tasks, which can work differently in autistic people (planning, initiation, sequencing, working memory, task switching)

References

RCSLT. (2010) Adults with Learning Disabilities: Position Paper. Royal College of Speech and language Therapists.

All-Party Parliamentary Group for Education. (2011) Report of the Inquiry into Overcoming the Barriers to Literacy.

Emerson E and Baines S (2010) Health inequalities and people with learning disabilities in the UK: 2010. Improving Health and Lives: Learning

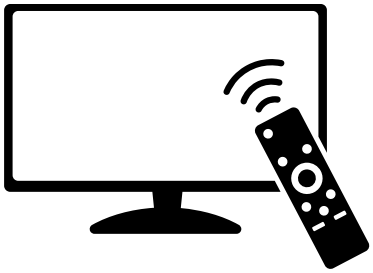
Additional References:

Communicating with people with a learning disability | Mencap cbt-id-manual.pdf (ucl.ac.uk)

Hassiotis, Angela & Serfaty, Marc & King, Michael & Strydom, Andre & Parkes, Charles & Martin, Sue & Azam, Kiran. (2012). Manual and materials for individual CBT for adults with mild intellectual disability and mood disorders.

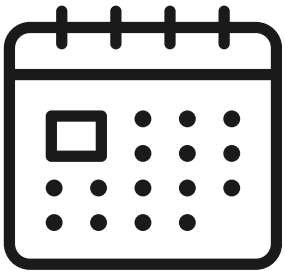
Appendix 3

My Immersive Therapy Sessions



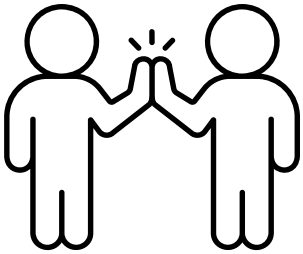
The clinic is a room where I will see pictures and hear sounds.

It has a comfy sofa and a big screen.



I will go to the room on _____ (day).

In the morning / afternoon



I can take someone with me, like:

- my mum
- my dad
- my support worker.

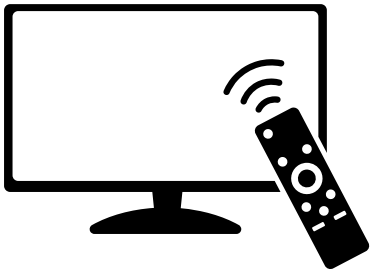
I'll meet with _____.

_____ came to see me at my house.

We will do some relaxing exercises.

We will talk about when I feel anxious.

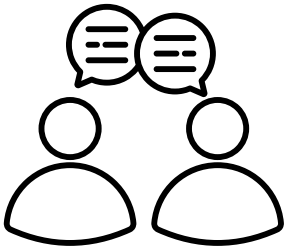
We will talk about how my body feels when I feel anxious.



When I am ready, I will go into the clinic room.

There will be a scene on the screen. I can help control what is on the screen.

I will use the screen to practise being in places that usually make me feel anxious.



_____ will talk to me and check how I feel.

I can leave if I want to or ask for a break.

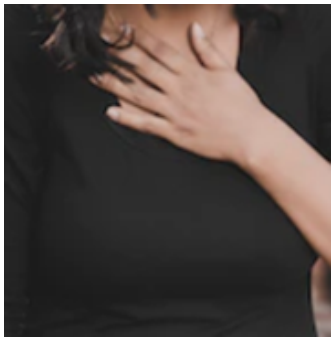
Appendix 3

Anxiety/Worried/Scared

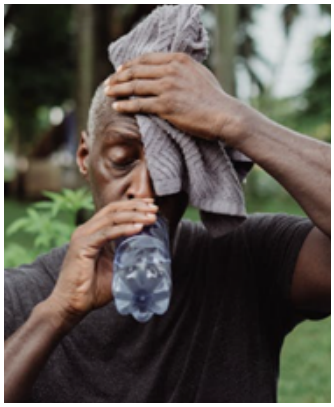
(Choose word preferred by client)

Anxiety is a feeling.

You might call it feeling scared or worried.



When we are anxious our bodies can feel tense and different.



Your heart might feel too fast.
You might feel sweaty.
You might breathe quickly.

It is normal to feel anxious sometimes.

Different things make different people feel anxious.

Some people feel anxious around dogs.

Some people feel anxious on the bus.

Some people feel anxious going shopping.

Sometimes a place or an activity can make somebody feel very, very anxious. You might call this a '**phobia**'.

I can feel anxious when:

.....

.....

.....

When someone feels very, very anxious it can stop them doing things or going places.

I can feel anxious when:

.....

.....

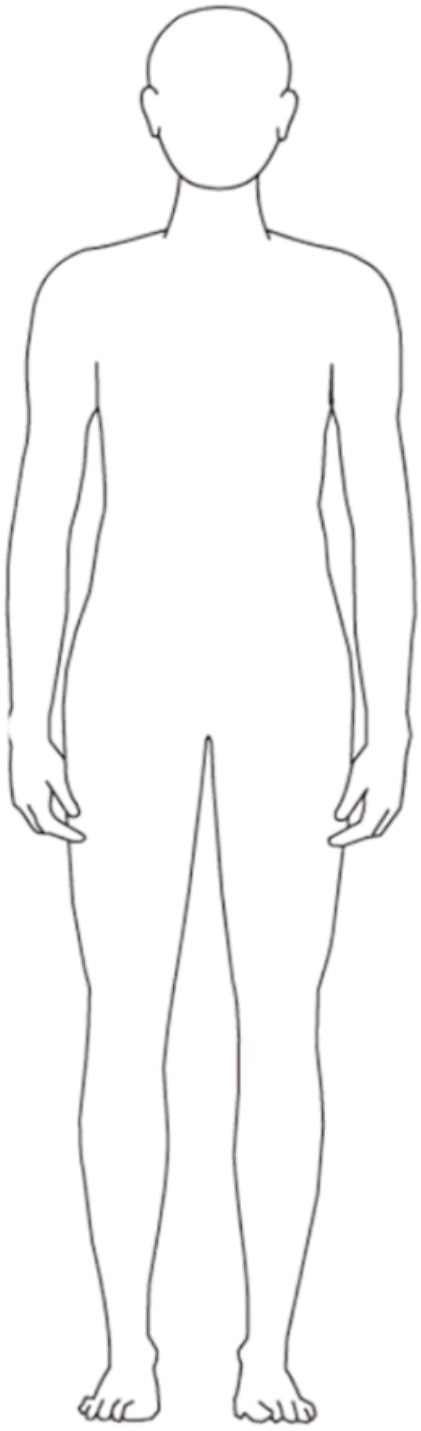
.....

Understanding your thoughts and body feelings when you are anxious can help to manage your anxiety.

Appendix 3

Where I feel Anxious body diagram

Colour in where you feel anxious on the body map.

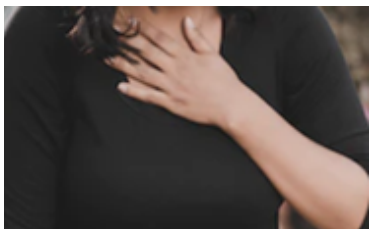
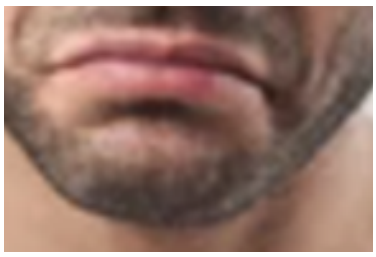
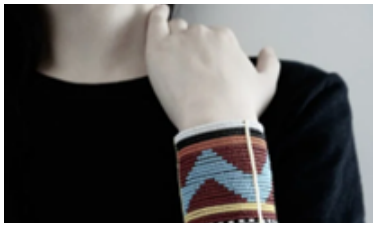


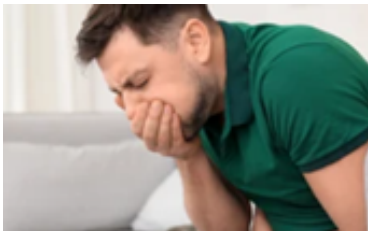
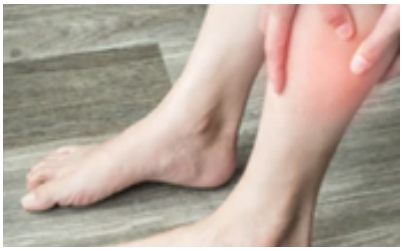
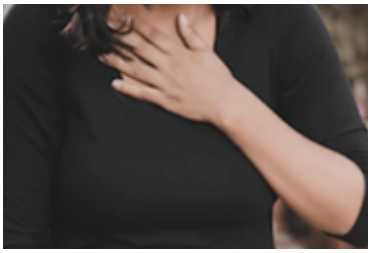
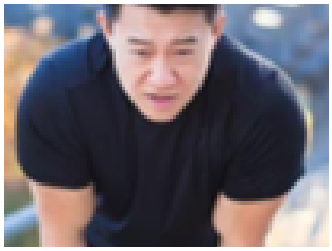
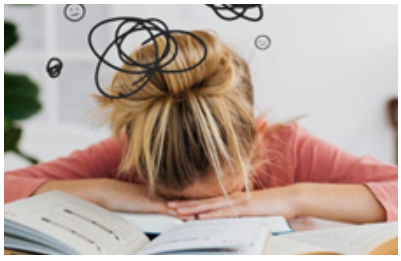
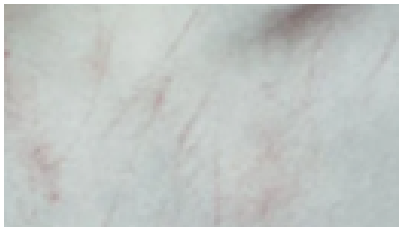
Can you describe how those bits of your body feel?

Appendix 3

Sort through these body feelings

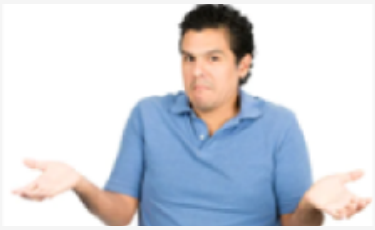
Work out if any of them describe you when you are anxious:

My heart feels fast 	I cry 	I scream 
I shout 	My mouth feels tight 	I can't talk 
My throat feels tight 	My head feels sore 	I think bad thoughts 
I want to hide 	My shoulders feel tight 	My body feels weak 

My stomach feels funny 	I feel sick 	I need the toilet 
My legs go wobbly 	My chest hurts 	I breath fast 
My hands shake 	I clench my fists 	I can’t see properly 
I feel dizzy 	I snap at people 	I feel grumpy 
I hurt myself 	I run away 	I throw things 

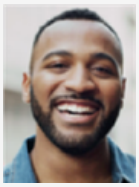
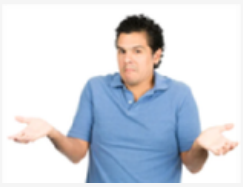
Appendix 3

How my body feels when I am Anxious

This sounds like me	I am not sure	That doesn't sound like me
		

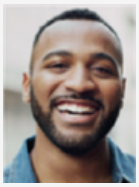
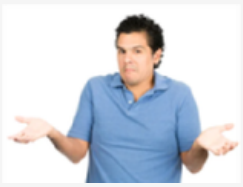
Appendix 3

Discussing Specific Situations

I feel okay about ...	I am not sure about ...	I do not feel okay about ...
		

Appendix 3

Discussing Specific Situations: Examples

I feel okay about ...	I am not sure about ...	I do not feel okay about ...
		
• Someone walking their dog on the other side of the park. • My friend's dog. • Some small dogs.	• If the dog starts to come towards me.	• Dogs sniffing or licking me. • Dogs barking. • Unfamiliar dogs. • Big dogs.

Appendix 3

Thoughts Diagram

My Thoughts When:

.....

.....

.....

.....

.....

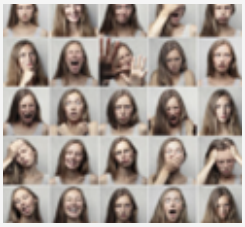
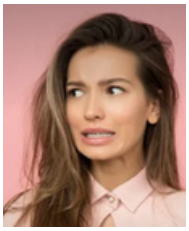
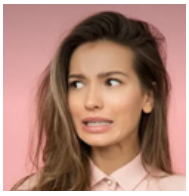
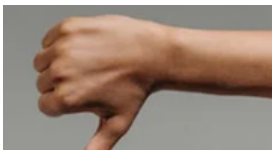
.....

This makes me feel:

This is what I do:

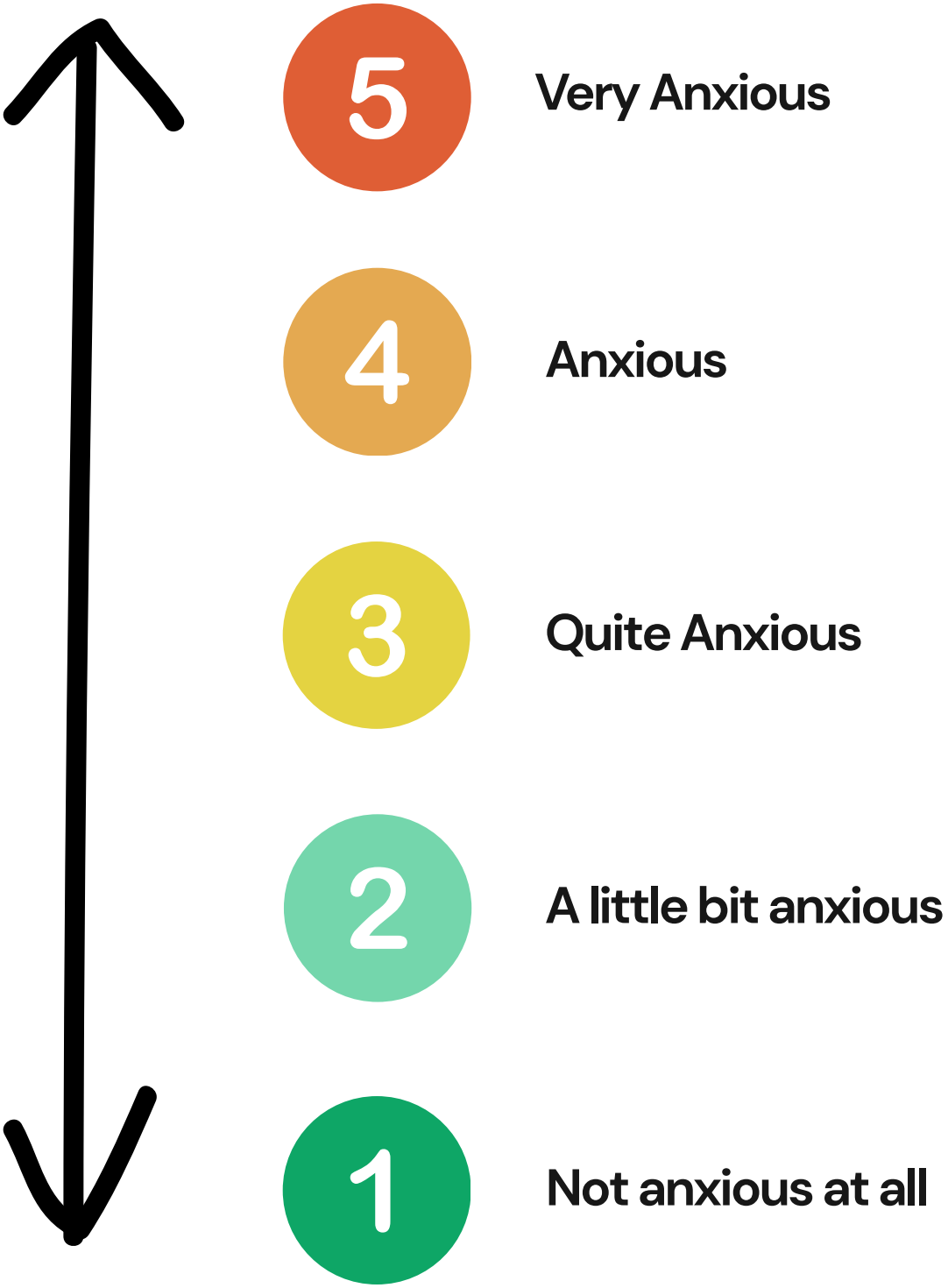
Appendix 3

Feelings, Thoughts, Actions Sheet

Feelings	Thoughts	Things people do
		
Calm	This is scary.	Go to the shop
		
Scared	This is going to go wrong.	Fly on a plane
		
Happy	I wonder what will happen.	Stay at home
		
Excited	I can't wait to have pizza tonight!	Play football
		

Appendix 3

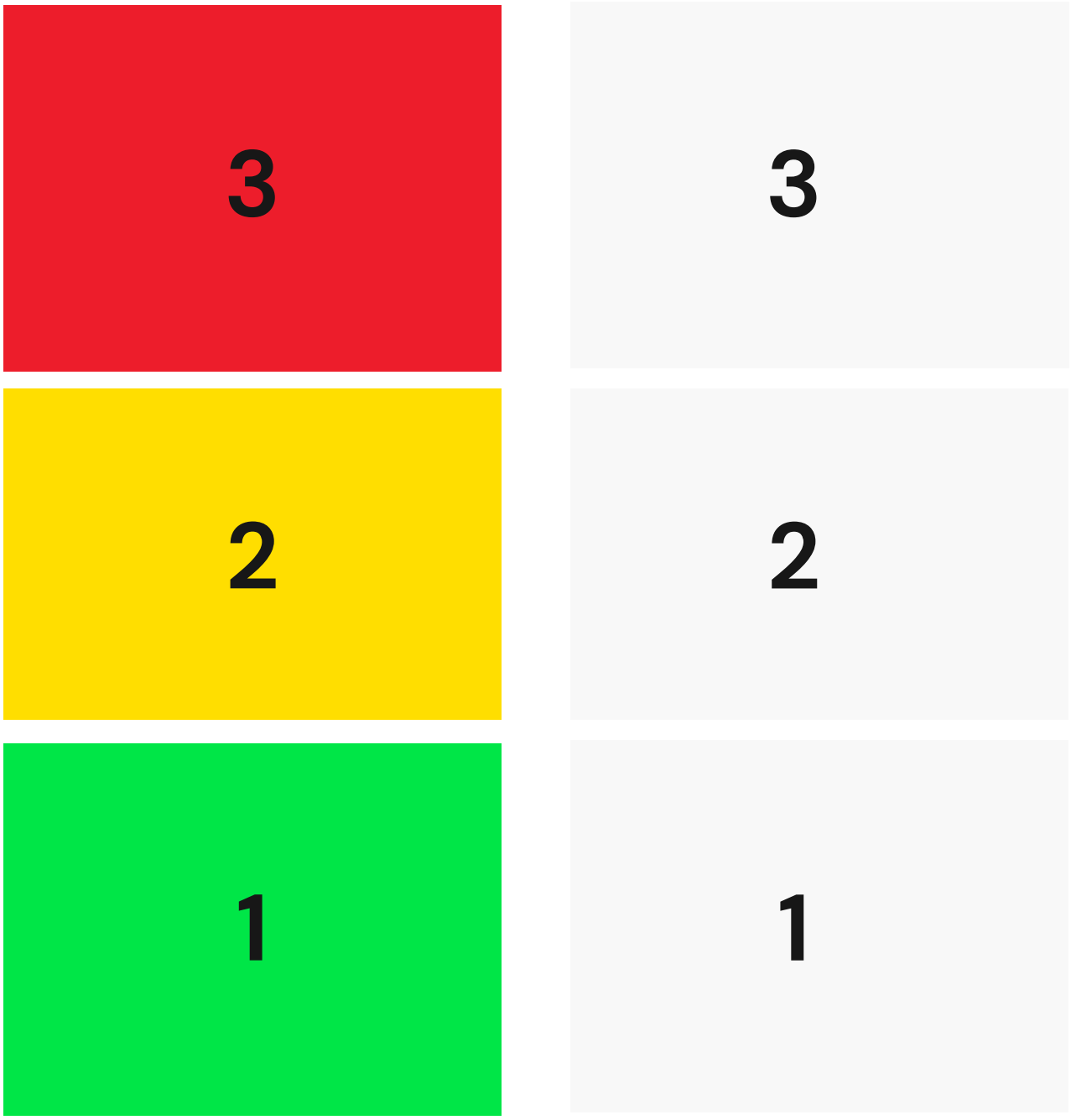
Severity Scale



Appendix 3

Three-Point Anxiety Scale

Some people with learning disabilities may prefer to use a threepoint scale. Colour may be helpful for some people or just numbers so both options are given:

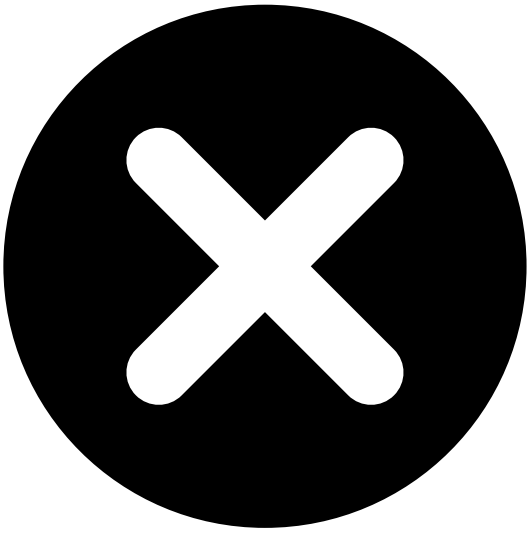


Appendix 3

Alternatives to a Numerical Scale

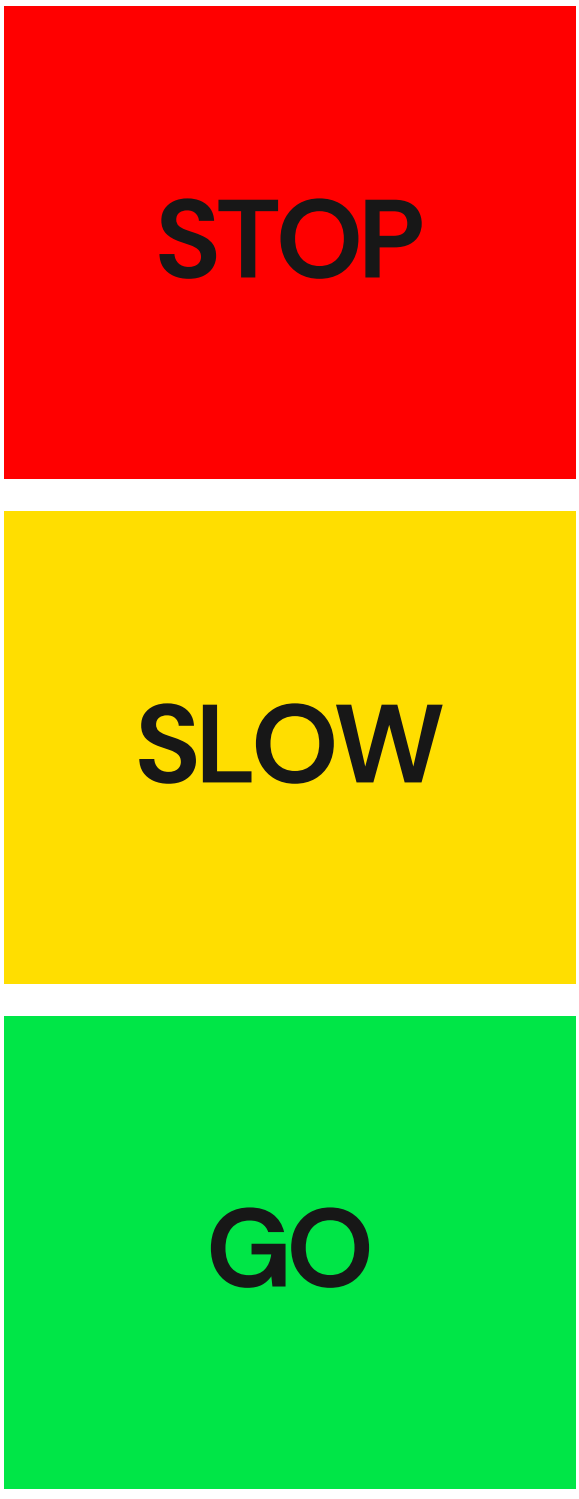
Some people may find a numerical scale difficult to work with and alternatives may be a tick / cross or smiling face / sad face emojis, and red/green cards.

Below are examples and it is important in the first session to establish which way of communication anxiety levels the participant prefers.



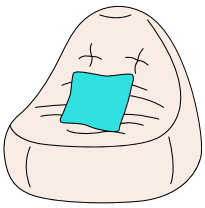
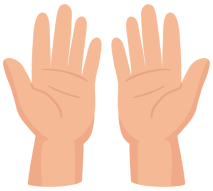
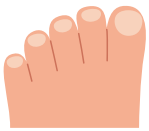
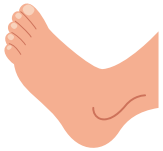
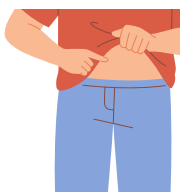
Appendix 3

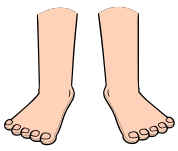
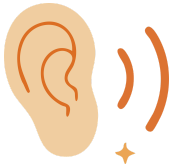
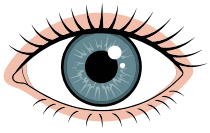
Traffic Light Scale



Appendix 3

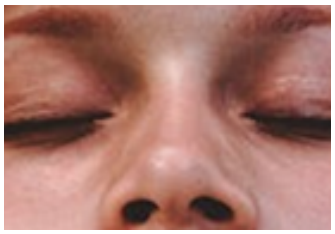
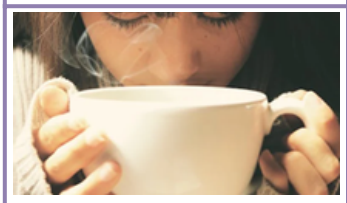
Muscle Relaxation (Modified)

	Sit in a comfy spot. Notice how your body feels in that spot.
	Close your eyes or soften your eyes so everything looks blurry. Breathe in through your nose and out through your mouth. Do this a few times.
	Squeeze your hands into fists.
	Now let go and let your muscles relax. Notice your hands get heavy. Your hands are warm, heavy and relaxed.
	Tighten your legs and curl your toes.
	Now let go. Notice your feet get heavy. Your feet are warm, heavy and relaxed.
	Pull your tummy in tight.

	Now let go. Notice your tummy feeling heavy. Your tummy is warm, heavy and relaxed.
	Pull your shoulders up to your ears.
	Now let go. Notice your shoulders feel heavy. They are warm, heavy and relaxed.
	Let your whole body feel warm, heavy and relaxed.
	Notice your feet on the floor.
	Notice the sounds in the room.
	Slowly open up your eyes.

Appendix 3

Hot Drink Relaxation

	Imagine you are holding your favourite hot drink. It might be coffee, tea or hot chocolate.
	Close your eyes.
	Imagine smelling the drink. Breathe in through your nose.
	Blow out through your mouth. Imagine you are blowing on your hot drink to cool it.
	Breathe in.
	Breathe out. Keep breathing in and out slowly.
	Open up your eyes.

This is Me

This booklet is all about you, we will use this to help people understand you better. It means we can make sure you are receiving the best care possible.

It can be filled in by yourself, with a doctor, a family member, a friend or a support worker.

About Me

Your name:

Where I live:

Who supports me:

This could be a family member, a friend, a key worker, or a carer.

Communication:

Do I communicate verbally, with sign language, pictures, pointing, or in another way?
When I communicate do I need some more time to think and respond?

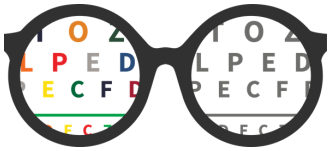
My Health

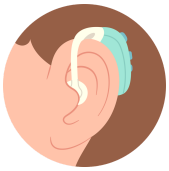
My Medication:

Do I take medication? Does anyone help me take it? Is it a liquid or tablets?

My Hearing & Eyesight:

Can I hear and see okay?
Do I need any hearing or visual aids?





My Mobility:

Am I fully mobile or do I need help from someone? Can I use the stairs?

Immersive Technology Therapist Training Manual

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