



CENTRE FOR AUTISM  
MIDDLETOWN

## Managing Anxiety in the Classroom



RESEARCH BULLETIN ISSUE NO. 3

Supporting the promotion of excellence throughout Northern Ireland and Ireland  
in the education of children and young people with autism spectrum disorders.





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## Managing Anxiety In The Classroom

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**The aim of the Research Bulletins produced by Middletown Centre for Autism is to provide accessible summaries of relevant peer-reviewed research articles and literature reviews for education staff working with children and young people with Autism Spectrum Disorders.**

The focus of the current edition is on helping children and young people manage their anxiety. This Bulletin contains summaries and implications for practice based on eight articles from peer-reviewed journals written over the period 2003-2010.

The Bulletin commences with an interview with Ruth Fidler.

Ruth Fidler is an assistant Head Teacher at Sutherland House School where she has worked for 18 years. Sutherland House School is a specialist school in Nottinghamshire for pupils across the autism spectrum, aged 3 – 19. The school has pupils from the surrounding eight local authorities. It is part of NORSACA, (Nottinghamshire Regional Society for Adults and Children with Autism) which offers a variety of family services, training, as well as adult and children's services.

The Elizabeth Newson Centre is based within the school and provides psychology input to the school as well as a diagnostic clinic which responds to internal and external referrals.

Ruth has responsibility for whole school developments, with a particular focus on interaction and social and emotional well being. She has contributed to publications in the Good Autism Practice Journal and regularly presents at training events.

Please note that the views represented in this document do not necessarily reflect the views of Middletown Centre for Autism. Reviewers have, where possible, used the original language of the article which may differ from UK and Ireland usage and the usage of a range of terminologies for ASD.

# INTERVIEW WITH RUTH FIDLER

## 1. What are the most observable signs that indicate that a child or young person may be experiencing anxiety?

Everyone shows their anxiety in individual ways so the most reliable observations that a child is anxious are going to be made by the people who know the child best. This shows the importance of working closely not only within a school staff team, but also with the families of children on the autism spectrum. There may be changes in their sleeping, toileting or eating patterns. They may be less tolerant of changes or of social situations. They may be less engaged communicatively or emotionally. They may become increasingly fixated on special interests or on following new or old routines. There may be evidence of stress related physical symptoms such as irritable bowels or a flare up of eczema. They may not cope well with situations which they usually tolerate or even enjoy. They may show behaviour which avoids co-operation, leads to shut down or ultimately becomes physically challenging including for some, self injurious behaviour.

## 2. What are the most important environmental supports that might be made to mediate anxiety provoking stimuli?

People on the autism spectrum are prone to experiencing anxiety. This is often because of difficulties they have with communication, predicting outcomes, understanding social interaction along with differences in sensory processing. Environmental supports which will help are strategies which can do two things:

1. Reduce confusion and unpredictability.
2. Increase a sense of calm.

The first of these points is often achievable by using a range of visual strategies. This may include organisational visual information such as timetables and visual ways of clarifying reminders/instructions/problem solving strategies. It also includes finding ways to illustrate conceptual information in a visual way, such as using symbols to recognise and communicate emotions.

The second of these is about raising awareness of the potential for overload. This can come from too much input in any mode. A child may be receiving too much organisational information, social interaction which is too intense, or experience sensory overload. Supporting adults can help by having a reasonably predictable and low arousal environment. This means thinking about every aspect of that environment such as general clutter, sensory input, schedules and structured teaching approaches plus building in techniques for relaxation and emotional well being. It also means thinking about how to plan for helping children once they are experiencing unmanageable levels of anxiety.

## 3. What do you feel are the most important things a teacher can do to prevent an anxiety provoking situation?

Children on the autism spectrum will of course have personal triggers for their anxiety. Some common issues may be related to interrupted routines, changes to ordinary arrangements, new experiences, particular events (dentist, doctor, Christmas school activities, parties), changes to classes or teachers. In addition to this are hormonal changes and mood swings which accompany adolescence.

Teachers cannot remove all situations which provoke anxiety; nor should they as this does

not reflect everyday life. However, teachers can help to prevent the impact of anxiety provoking situations by doing some of the following. They can help by making the child's day and environment predictable; by giving the child opportunities for regular relaxation at times of stress; by putting in place preventative strategies which the child can understand and influence; and by minimising sensory overload.

One of the most important things a teacher can do to prevent anxiety provoking situations is to get to know their pupils on the autism spectrum well so that they can 'read' their behaviour or anxiety levels. This will also help them to connect with a child, which will enable them to prevent as well as calm anxious episodes. Another is to be aware of what contributes to any difficult situations for these pupils, including an awareness of the impact of how staff interacts with them.

#### **4. Are there areas that can be incorporated into the curriculum that can prevent the occurrence of anxiety in the long term?**

There is an increasing emphasis in the school curriculum on protecting children's mental health and emotional well being. This provides great benefits to children on the autism spectrum, and allows schools increased flexibility to meet the individual needs of their pupils. Curriculum work can be linked to Personal, Social, Health Education (PHSE), Personal Development, citizenship and careers etc. Areas of work which can be beneficial are long term preventative work which can develop self confidence, self awareness, problem solving strategies and social skills. It is also important to teach relaxation techniques and personal strategies to manage anger and anxiety. Space can be made in school timetables for additional

sessions to address emotional well being. Some schools build in regular but brief sessions with pupils at the start or end of the day; others may use assembly time. At Sutherland House School, we use a system of weekly personal tutorials to work on developing interaction and emotional well being. It is important that whatever work is done in this area is carried out collaboratively with other adults who are involved and supportively with families.

#### **5. Your service uses 'personal tutorials' to enable children and young people to understand and express their emotions; what do you feel are the key elements that make this strategy a success?**

All pupils at Sutherland House School have weekly personal tutorials. This includes pupils aged from 3 – 19, whose needs represent the range of the autism spectrum. These are approximately 50 minute sessions with a nominated member of staff which focus on developing social interaction, emotional understanding, self awareness, problem solving skills, managing anger or anxiety, understanding options and expressing preferences.

Some of the key elements that make this approach effective are; a combination of commitment to the underlying ethos of personal tutorials from senior managers as well as from classroom staff; an understanding of the core principles being about building rapport with pupils, accepting individuals, encouraging development at each pupil's pace and level; working collaboratively with families and other professionals; providing workable and sustainable systems for training, monitoring and supporting staff involved.

### **6. Once a person becomes anxious, what are the best ways to work with them to alleviate their experience of anxiety?**

Once a person becomes anxious, many of the techniques which will help them are variations on a range of anxiety reducing strategies. They will of course need adapting to suit both individual personalities as well as any aspects of how their autism affects them. Once a person becomes anxious, it is often useful to start with reducing input in general. This may mean reducing sensory stimulation as well as requests to complete tasks. As long as the people involved are safe, it can be helpful to give the individual some calm time and space and to offer them reassurance from supporting adults who know them well. It can be helpful to use personalised distraction techniques. These may be related to personal interests or may include deep breathing and yoga, or may use sensory modulation approaches such as weighted blankets or deep pressure massage. When children are younger they will need adults to implement some of these strategies for them, but as they mature it is important that they learn to recognise the signs of stress or anxiety in themselves and develop a range of relaxation strategies they can use which suit them.



# Anxiety in Children and Adolescents with Autism Spectrum Disorders

## RESEARCH AIMS

The researchers indicate that anxiety related problems are among the most common presenting problems in school age children with ASD. In order to improve understanding of anxiety in ASD and provide a rationale for future research in the area the research has three overall aims:

1. To review current research in the area of ASD.
2. To recommend future research.
3. To provide overall recommendations for professionals working with children and young people with ASD and anxiety.

## RESEARCH METHOD

The research was focused on examining the experience of, prevalence of, and intervention for anxiety in ASD in children and young people between the ages of 8-18. Their search identified 40 articles that had been published up until August 2008.

## RESEARCH FINDINGS

Large scale studies to determine the number of people with ASD and anxiety have not been conducted, however, from the articles reviewed the authors indicate that between 11% and 84% of school age children with ASD experience anxiety. The authors indicate that further research on the prevalence of ASD is crucial.

The studies reviewed indicated that ability may be a mediating factor in the child's experience of anxiety. Several of the articles reviewed indicated that while children and young people with learning difficulties can and do experience anxiety it was more common in

children described as highly functioning or having Asperger's Syndrome. Anxiety and the experience of specific fears are seen to be a factor in what the authors term 'acting out behaviour'. The presence of anxiety and fears should be seen to be a major factor in children's behaviour.

All of the studies reviewed highlighted that children with ASD will experience higher levels of anxiety than their typically developing peers. The more prevalent types of anxiety included social anxiety, specific phobias and generalised anxiety problems. The method used to measure anxiety should also be considered, as several studies indicate that the levels of anxiety recorded by parents and teachers are higher than those reported by the children and young people themselves. The authors recommend that results should include information from the child, teacher and parent where possible.

The authors note that there is emerging evidence of relationships between sensory sensitivities, social difficulties and anxiety; this would certainly be congruent with practice based evidence.

Cognitive Behaviour Therapy (CBT) is the most popular intervention used in the articles reviewed and the results of this are largely positive. Traditional CBT techniques should be augmented for children and young people e.g. use of visuals, parental involvement and lots of structure. The authors indicate that the use of CBT in ASD is an area of development with several studies on-going to establish its effectiveness. Largely the use of CBT if augmented correctly is effective with studies

reporting a reduction in the experience of anxiety and children and young people demonstrating medium to long term benefits from the use of CBT style interventions.

### The researchers recommend future researchers could focus on:

- A consistent framework for the measurement of anxiety in children and young people with ASD.
- Incidence of anxiety in children and young people with ASD from community based samples.
- Relationships between social difficulties, sensory difficulties and anxiety.
- The impact of anxiety on the lives of parents and carers.
- Anxiety and its relationship with ASD generally. Is anxiety a part of ASD or an avoidable common co-morbidity?

### IMPLICATIONS FOR PRACTICE

(by the reviewer)

- A large proportion of children and young people with ASD will present with anxiety.
- This anxiety may present as problematic behaviour and professionals and parents should be aware that certain types of behaviour can be caused by anxiety.
- CBT based approaches are useful for helping children and young people to cope with their anxiety but these should be augmented and should be delivered by a professional who has experience in working with children and young people with ASD.
- More research needs to be conducted in this area.

### Full Reference

White, S., Oswald, D., Ollendick, T., Scahill, L. (2009). Anxiety in children and adolescents with Autism Spectrum Disorders. *Clinical Psychology Review*, 29(3), p. 216-229.

## Reactions to Ostracism in Adolescents with Autism Spectrum Conditions

### RESEARCH AIM

To compare the experiences of those with Autism Spectrum Conditions (ASC) and Typically Developing (TD) peers in terms of self-esteem, belonging, control and meaningful existence, through self reporting on anxiety and mood changes, when experiencing short term ostracism.

### RESEARCH METHOD

Twenty-nine teenagers, 13 with ASC and 16 TD took part in the “Cyberball” game. This is an internet ball game involving three people. The players believe that they are involved in a free flowing game, when in fact, the actions have been pre-programmed. After an initial period where the players each throw the ball to each other, the other two players stop, including the initial participant, thus attempting to induce feelings of rejection and ultimately ostracism.

Measurement of affective needs and consequences of ostracism, anxiety and mood modification, was achieved based on Williams’ (1997, 2001) Needs Threat account, which demonstrated that adults tend to seek group inclusion and acceptance by conforming to perceived norms rather than appreciating individuality.

### RESEARCH FINDINGS

All participants reported similar difficulties with self-esteem, belonging, control and anxiety after the ostracism exercise in comparison to when they felt included. Meaningful existence appeared to have a greater impact on those with ASC; the authors claimed that this may be due to limited social experiences of those with ASC in comparison to the TD group, who may have acquired a more developed support structure.

Differences were noted between the two groups in relation to mood; while the TD group reported a negative effect on their overall mood, those with ASC did not.

### IMPLICATIONS FOR PRACTICE (by the authors)

Those with ASC experience the same Need Threat as TD peers, challenging the assumption that people with ASC have a reduced need for social contact. The authors claimed that anxiety in both groups could be increased with inclusion and diminished with exclusion or ostracism.

The notable difference between the two groups was the lack of effect on the mood of those with ASC. This could be for a variety of reasons.

Those with ASC may:

- Undergo a difference in the qualitative experience of ostracism.
- Lack insight into how previous feelings impact on current feelings.
- Not make connections between state of mind and physical expressions.
- Not interpret accurately their emotional states.

The authors advise that using self reporting with individuals with ASC can be a useful tool but highlight the need to encourage the development of social groups, as students with ASC can feel ostracised but may not have the skills of social interaction to look for support with an alternative group of peers.

Students with ASC may need to be taught explicitly the appropriate interaction skills required when ostracised by one group yet may also need to be made aware of understanding

## Reactions to Ostracism in Adolescents with Autism Spectrum Conditions CONTINUED

and dealing with ostracism, particularly in the teenage years when all adolescents are trying to find their role and identity as they approach adulthood.

Further and more diverse research into this area should be undertaken. It could include making comparisons between boys and girls, or sub-groups within ASC; using physical indicators to measure affect and effect, and ultimately researching the differing effects between short and long term ostracism.

### **Full Reference**

Sebastian, C., Blakemore, S-J., Charman, T. (2009). Reactions to ostracism in adolescents with Autism Spectrum conditions. *Journal of Autism and Developmental Disorders*, 39, p. 1122-1130.

# Behavioral Forms of Stress Management for Individuals with Asperger's Syndrome

## RESEARCH AIMS

This is a discussion paper on behavioral forms of stress management for children and young people with Asperger's Syndrome (AS). It highlights the importance of understanding the cycle of tantrums, rage and meltdown.

## RESEARCH METHOD

Review of current interventions for helping children and young people manage stress.

## FINDINGS

Children and young people with AS experiencing stress may react by displaying extremely challenging behavior. These behaviors do not occur in isolation or randomly and is an attempt to communicate. Rage or anger is often experienced as a number of stages leading to an incident or episode, these are:

1. The rumbling stage
2. The rage stage
3. The recovery stage

***Rumbling Stage:*** This is the initial stage and behavior may appear minor such as clearing their throat, foot tapping etc. and become more overt

such as verbally or physically affecting someone else. At this point intervention is required and the strategies below can assist the child regain control with minimal support:

- Removing the child from the situation in a non-punishing way.
- Using proximity to the child to address the behavior e.g. stand beside the child.
- Using a pre-agreed 'signal' to communicate to the child that his/her distress is understood.
- Support from routine, e.g., direct the child to a visual schedule.
- "just walk and don't talk", e.g., taking a quiet walk with the child.
- Redirecting, e.g., helping the child focus on something that isn't upsetting.
- Home base, e.g., the use of a quiet space in the school.
- Acknowledging student difficulties, e.g., just saying 'I understand this is difficult'.

While it is important to understand interventions that can calm a crisis, adults need to know which behaviors are likely to escalate a crisis. Table 1 sets these out.

**TABLE 1: Behaviors that escalate a crisis**

Raising voice	Drawing unfounded conclusions
Assuming a top-down management stance	Backing the student into a corner
Focusing on who is right	Pleading or bribing
Having the last word	Talking about unrelated events
Throwing a tantrum	Over-generalizing student behaviour
Preaching	Making unsubstantiated accusations
Using sarcasm	Holding a grudge
Attacking the child's character	Parroting the student
Acting superior	Making comparisons to others
Using unnecessary force	Not listening
Drawing unrelated persons into the conflict	Making insulting or humiliating remarks

# Behavioral Forms of Stress Management for Individuals with Asperger's Syndrome CONTINUED

**Rage Stage:** This follows the rumbling stage if the behavior is not diffused. The behavior displayed here may be externalized (e.g. screaming, biting, kicking, etc.) or internalized (withdrawal). These behaviors are often beyond the conscious control of the child or young person. The most effective way to help with this behavior is to get the child or young person to a place where they can regain self-control. To assist this, adults should have plans for:

- Obtaining assistance from other staff members.
- Removing other students from the area.

In order to prevent the rage cycle from occurring or when selecting an intervention to be used it is important to understand the function the target behavior plays. A functional assessment helps identify the function of a given behavior and it is a first step in developing effective interventions. Understanding the reason behind a behavior improves the effectiveness of the intervention.

**Recovery Stage:** Following an episode some children may become contrite, sullen, withdrawn or deny that the behavior occurred as they cannot fully remember it. In some cases they are physically exhausted and need to sleep. Interventions should be implemented at a time when the child or young person can accept them and in a manner they understand, otherwise the intervention may resume the cycle in a more accelerated manner, leading more quickly to the rage stage. During the recovery stage it is important that adults work with the child or young person to help them get back into the routine again. This can be achieved by directing them to an easily accomplished, motivating task such as a special interest activity.

## IMPLICATIONS FOR PRACTICE

(by the authors)

The best intervention is prevention. Prevention occurs best as a multifaceted approach consisting of instruction in:

- Strategies that increase social understanding and problem solving.
- Techniques that facilitate self-understanding.
- Methods of self-calming.

### Strategies that Increase Social Understanding and Problem Solving:

Enhancement of social understanding includes providing direct assistance and while instructional strategies are beneficial, it is almost impossible to teach all the social skills that are required. As a result, skills are often taught in an interpretive manner after the child has engaged in a problematic encounter. This requires an adult to serve as a social management interpreter. Interpretative strategies can help turn seemingly random actions into meaningful interactions for individuals with AS. These include:

- Cartooning
- Social Autopsies
- The Situation, Options, Consequences, Choices, Strategies, Simulation (SOCCSS) strategy
- Stop, Observe, Deliberate, and Act (SODA)
- Sensory awareness
- Self-awareness

**Cartooning:** Visual symbols such as cartooning have been found to enhance the processing abilities of persons with AS, to enhance their understanding of the environment, and to reduce negative behaviors. Cartoon figures play an integral role in several intervention techniques such as pragmatism, mind-reading and comic strip conversations.

**Social Autopsies:** The social autopsy is a method for analyzing a social skills problem, specifically following a social error. The child or young person works with an adult to:

- Identify the error.
- Determine who was harmed by the error.
- Decide how to correct the error.
- Develop a plan to prevent the error from occurring again.

***The Situation, Options, Consequences, Choices, Strategies, Simulation (SOCCSS)***

**strategy:** This adult-directed strategy helps children and young people with AS understand cause and effect and realise that they can influence the outcome of many situations by the decisions they make. The strategy can be used one-on-one with a child or can occur as a group activity, depending on the situation and students' needs.

**Stop, Observe, Deliberate, and Act (SODA):** Similar to Social Autopsies and SOCCSS, SODA is a visual strategy that has broad application. SODA helps children and young people consider and explore social cues and discuss possible responses to them. SODA allows children and young people to approach novel situations without impulsivity and to use social skills in a context that is appropriate.

**Sensory Awareness:** There are several programs which appear to be effective in meeting the sensory needs of children and young people with AS. Some of these are:

- How Does Your Engine Run?: The Alert Program for Self-Regulation
- The Tool Chest for Teachers, Parents, and Students
- Building Bridges Through Sensory Integration

- Practical Solutions for Making Sense of the World

**Self-Awareness:** Children and young people with AS can have difficulty understanding their own feelings and as such it is often beneficial to provide them with strategies that help them understand their emotions and react to them in an appropriate manner. Through the use of a Stress Tracking Chart, a Summary of Stress Signals Worksheet, and Stress Thermometer, they can learn the following:

- To identify and label their emotions using nonverbal and situational cues.
- To assign appropriate values to different degrees of emotion, such as anger.
- To redirect negative thoughts to positive thoughts.
- To identify environmental stressors and common reactions to them.
- To recognize the early signs of stress.
- To select relaxation techniques that match student needs.

A systematic programme of research is required to identify which techniques are most appropriate for children and young people, the context in which they can be used, and methods to ensure that children and young people with AS generalize these skills to home, school, and community.

**Full Reference**

Smith Myles, B. (2003). Behavioral forms of stress management for individuals with Asperger Syndrome. *Child Adolescent and Psychiatric Clinics of North America*, 12, p. 123– 141.





# Social Skill Deficits and Anxiety in High-Functioning Adolescents with Autism Spectrum Disorders

## RESEARCH AIMS

The authors examined the prevalence and types of anxiety exhibited by high functioning adolescents with autism spectrum disorders (ASD) and factors related to this anxiety. They had three key research questions:

1. Are adolescents with Autism, Asperger's Syndrome or Pervasive Developmental Disorder Not Otherwise Specified more likely to experience symptoms of anxiety than members of the general population?
2. What types of anxiety are adolescents with ASD likely to experience?
3. Are social skill deficits associated with social anxiety in adolescents with ASD?

## RESEARCH METHOD

Forty-one adolescents aged 12-18 years old, diagnosed with an ASD (with and without suspected anxiety symptoms) and their families took part. The adolescents completed the Social Skills Scale of the Social Skills Rating System (adolescent sections) and the Multidimensional Anxiety Scale for Children and Social Anxiety Scale for Adolescents (SAS-A).

Parents completed the Social Skills Rating System (parent section) and the Behaviour Assessment System for Children (BASC).

## RESEARCH FINDINGS

The authors found that their sample of adolescents with ASD experienced anxiety at greater levels than members of the general population. They also found that the types of anxiety experienced by these adolescents were diverse; the SAS-A revealed that participants

experienced high levels of social anxiety while the BASC revealed high levels of internalizing symptomatology. These results support previous literature indicating that individuals with autism spectrum disorders have high levels of anxiety.

The authors also found a link between self-reported social skills deficits and social anxiety, although the strength of the association is dependent on the particular social skill being considered, for example; cooperation, assertion, self-control and responsibility. In particular the authors found that as assertion skills decreased, social anxiety increased. Furthermore, it is likely that the relationship between social anxiety and assertion skills is reciprocal, that is individuals with poor assertion skills may be more likely to experience anxiety related to social interactions. Conversely, individuals with high social anxiety may be less likely to initiate social interactions, thereby limiting their ability to develop and master assertion skills.

Results also suggest that low empathy scores are related to low social anxiety, and as empathy scores increase, so does social anxiety. However, as empathy scores rise further (just past the mean in most cases), social anxiety scores begin to drop. The researchers highlight that it is conceivable that adolescents scoring low in empathy may be unaware of, and perhaps unconcerned with, how people perceive and evaluate them socially, and as a result display very little social anxiety. As empathic skills increase, so does the awareness that other people may perceive their skills as lacking and their behaviour as deviant, thereby increasing social anxiety. Finally, better empathic skills may

# Social Skill Deficits and Anxiety in High-Functioning Adolescents with Autism Spectrum Disorders CONTINUED

be associated with more effective emotional coping skills and an ability to modify behaviour based on feedback from others. This ability to effectively modify behaviour, would likely promote more positive social interactions. Although, the author does acknowledge that more research is needed to understand the relationship between empathy and social anxiety.

## IMPLICATIONS FOR PRACTICE (by the authors)

- The relatively high levels of anxiety and broad range of anxious symptoms experienced by individuals with ASD makes it imperative to check for the presence of anxiety and perhaps other mood disorders when working with adolescents with ASD. Such an assessment would be particularly relevant for those individuals who are struggling with the increased interpersonal demands of adolescents.
- The adolescents in this study experienced a wide range of anxiety including physiological arousal, social anxiety and separation/panic. When assessing for anxiety, it would therefore be important to clarify the type of anxiety experienced by the adolescent and tailor support to the specific type of anxiety being exhibited.
- Social skills training for adolescents, who experience anxiety, should perhaps include large components focusing on *assertion skills* and *empathy skills* as these two elements, in particular, were highlighted by the study as impacting on anxiety experienced by the participants.

## Full Reference

Bellini, S. (2004). Social skill deficits and anxiety in high-functioning adolescents with Autism Spectrum Disorders. *Focus on Autism and Other Developmental Disabilities*, 19, p. 78-88.

# The Relationship between Autism Spectrum Disorders and Anxiety: The Moderating Effect of Communication

## RESEARCH AIMS

The authors examined whether communication deficits differentially affect children with Autism Spectrum Disorders (ASD) compared to those without ASD.

## RESEARCH METHOD

Ninety-nine children aged 2-14 years old with ASD, Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) and no diagnosis were examined using the verbal communication subscale of the Autism Spectrum Disorders - Diagnostic for Children, and the Autism Spectrum Disorders - Comorbidity for Children which helped to ascertain the extent of any communication deficits. Additionally, the worry/depressed and avoidant behaviour subscales of the Autism Spectrum Disorder - Comorbidity for Children, were used to assess anxiety symptoms in the sample. Parents and primary caregivers completed the ASD-DC and ASD-CC either in a clinic or via mail.

## RESEARCH FINDINGS

The authors found that participants who had a diagnosis of PDD-NOS or no diagnosis displayed increased anxiety levels as their communication deficits increased. Contrastingly, in the children diagnosed with autism, it was found that as their communication deficits increased, symptoms of anxiety decreased. The authors propose two possible explanations for this:

1. Severe communication deficits in those with an autistic disorder are indicative of decreased anxiety. This is because they reflect a severe presentation overall across areas of functioning and a decreased ability to be anxious.

2. Increased communication deficits in autistic children, impair those children from being able to express or evince symptoms of anxiety as they are currently defined and evaluated.

## IMPLICATIONS FOR PRACTICE (by the authors)

- It is crucial that mainstream therapies, for example, Cognitive Behavioural Therapy, continue to be modified to support children with autism. They should also take into account the impact of the child's communication deficits, and build upon the child's strengths as much as possible.
- The authors stress the need for a multi informant, multi method and trans-disciplinary approach to the assessment of symptoms, needs and functioning of the individual child. These should be considered as the starting point for evaluating and treating anxiety in children with autism spectrum disorders.
- The typical evidence based 'one-size fits all' approach to providing treatment may not be advisable given the differences observed between ASD and PDD-NOS, even if anxiety is the focus of treatment in either case.
- Staff should remain aware that interventions designed to improve communication skills in children with ASD could well impact on anxiety symptoms.

## Full Reference

Davis III, T.E., Moree, B., Dempsey, T., Reuther, E., Fodstad, J., Hess, J., Jenkins, W., Matson, J. (2010). The relationship between Autism Spectrum Disorders and anxiety: The moderating effect of communication. *Research in Autism Spectrum Disorders*. Online version accessed 10/11/2010.

# The Clinical Practice of Cognitive Behaviour Therapy for Children and Young People with a Diagnosis of Asperger's Syndrome

## RESEARCH AIMS

Cognitive approaches are being increasingly used with children and young people with ASD who experience anxiety. Research in this area is largely positive.

The aim of this research was to provide good practice points for the use of cognitive approaches with children and young people with ASD who experience anxiety.

## RESEARCH METHOD

The researchers used the PRECISE framework to comment on the delivery aspects of the cognitive approach. The PRECISE framework is a set of objectives the practitioner should consider when using a cognitive approach with a child or young person. These are listed in Figure 1.

## RESEARCH FINDINGS

The researchers recorded the findings under the PRECISE framework headings.

### Partnership Working

It is important to work with the child to clearly define the goals of the work you are about to do,

provide clear and written information about the session structure and what the child can expect to happen. Some children may benefit from having a written schedule.

### Right Developmental Level

When working with a child or young person with ASD it is important to accommodate their developmental stage and also any difficulties they may experience in relation to Theory of Mind or Executive Function. Check with the child/young person that the information has been properly understood. Concrete and clear language should always be used and, if possible, incorporate the child's own language and words into the dialogue to ensure a shared understanding is reached.

A feelings diary may be useful in helping some children understand their own emotions and can help with identifying emotional patterns; children may also benefit from the use of visuals to represent emotional material. Using planners, diaries and breaking tasks down into steps are also useful ways of helping children overcome difficulties with Executive Function.

FIGURE 1: The PRECISE Framework

Based upon **P**artnership working  
Pitched at the **R**ight developmental level  
Promotes **E**mpathy  
Is **C**reative  
Encourages **I**nvestigation and exploration  
Facilitates **S**elf-discovery and experimentation  
Is **E**njoyable

## Empathy

Children and young people with ASD may become extremely preoccupied with certain interests and engage in lengthy conversations about them. If a child or young person is engaging in this behaviour it may be useful to firmly interrupt the child and engage in a discussion about the communication issues taking place within the session rather than continuing to listen. It is also useful to consider one's own social skills and if necessary minimize social exchanges and adopt a more task focused approach. Non-verbal communication such as eye contact, facial expression and gesture may not be recognised or understood.

## Creativity

A creative approach using cartoons, videos, pictures and games can all be used with children with ASD. This can be as simple as communicating via text e.g. email and written notes. Digital cameras can be used to photograph places and situations that the child may find difficult and provide a focus to the discussion. Incorporating events from the child's everyday life can also be useful as can using fictional characters e.g. Harry Potter. An 'emotional toolbox' approach has been shown to be effective e.g. finding a tool to 'fix the feeling'.

## Investigation and Exploration

The child can be encouraged to investigate their own feelings through the use of questioning and also role play. For some children who are more concrete thinkers it may be necessary to provide actual lists of alternatives to consider in a range of situations; for girls it may be useful to ask

them to act out the role of someone that they admire.

## Self Discovery and Experimentation

Children can be encouraged to understand their own feelings and thoughts using metaphors and games such as playing the explorer, detective or astronaut.

## Enjoyable

Use a creative approach to make work with children enjoyable and not seem like hard work!

## IMPLICATIONS FOR PRACTICE

(by the authors)

- Cognitive approaches have been shown to be effective for helping children and young people with ASD manage their anxiety.
- Using visual material, providing structure and being creative in approach can enable professionals working with children with ASD understand their feelings and discover new ways of dealing with stressful situations.

## Full Reference

Donoghue, K., Stallard, P., Kucia, J. (2010). The clinical practice of Cognitive Behavioural Therapy for children and young people with a diagnosis of Asperger's Syndrome. *Clinical Child Psychology and Psychiatry*. Online version accessed 18/11/2010.

# Cognitive Behavioural Therapy for Anxiety in Children Diagnosed with Autism Spectrum Disorders: Modification Trends

## RESEARCH AIMS

- To examine the efficacy of Cognitive Behavioural Therapy (CBT) as a treatment for anxiety in children with Autism Spectrum Disorders (ASD).
- To evaluate the trends in adapting cognitive behavioural approaches for anxiety for use with those who have ASD.
- To discuss future research toward a standardised treatment model for anxiety in children with ASD and the recommendations and limitations of such a model.

## RESEARCH METHOD

The method is a review of the literature on the use of CBT with those having ASD and anxiety and particularly focuses on the trends in modifying CBT for use with children who have ASD and anxiety.

The review addresses the primary goals of traditional CBT and in particular the four components detailed below which make up CBT treatment models to address anxiety:

1. Assessment
2. Psycho-education
3. Cognitive restructuring
4. Exposure

## RESEARCH FINDINGS

Using the above components as its basis CBT has been shown to be an all round supportive treatment for typically developing children with anxiety issues.

**Assessment:** The assessment component obtains a clear picture of the presenting problem and then establishes a pattern of treatment.

**Psycho-education:** Using learning processes to improve behavioural control, learning ability and emotional development.

**Cognitive restructuring:** This is the beginning of the practical phases of intervention. This involves identifying negative thoughts and anxious self talk, challenging these with alternative thoughts or interpretations. Practice exercises such as narrative stories, role play, worksheets and feeling thermometers may be used to help identify thoughts.

**Exposure:** The primary goal of exposure is to challenge catastrophic thought patterns by putting people into problematic situations in a controlled setting and teaching them to face their anxiety by using the skills they have acquired. Parallel to this, approaches such as relaxation training are frequently part of the exposure sessions to aid the person in learning to experience anxiety without avoidance.

According to the authors it is agreed that with certain specific adaptations CBT can be used to address anxiety in higher functioning children who have ASD. A cognitive component can actually be beneficial in therapy with children with ASD.

While some guidelines have been set forth relating how to approach CBT with this population no one thus far has agreed on a specific set of modifications.

It has been recommended that visuals should be used during intervention coupled with a special interest. Material used should be

adjusted to suit developmental levels and a social skills model should be incorporated into the treatment. Despite this the authors note that the most appropriate pattern of practical, facile and functional strategies has yet to be determined.

The authors, however, indicate that the best approach to the treatment of anxiety issues within the ASD population would be the specific combination discussed below:

- The use of more concrete, visual tactics.
- Using the child's specific interest.
- Incorporating the child's parents in some way.
- The development of disorder specific hierarchies (looking at the disorder that the child contends with as a whole).

An entirely new CBT protocol for addressing anxiety in children who have ASD might be more appropriate than modifying what was previously in use. This would focus on deficits associated with ASD such as poor social skills, self-help skills and stereotypes as well as a modified version of a traditional CBT approach. This would utilise primarily cognitive restructuring and exposure techniques as there is some evidence to support the efficacy of this approach.

Adjusting material to be more developmentally appropriate for each child by using a larger amount of concrete, visual tactics can be beneficial to the child.

Five techniques which are based on concrete, visual tactics commonly used are:

1. Emotion statements
2. Pictures and drawings

3. Visual worksheets
4. Narratives and social stories
5. Role play

## IMPLICATIONS FOR PRACTICE

(by the authors)

No single treatment has been established to holistically treat anxiety in children with ASD.

- The level of the child's functioning, how each modification is varied and how different CBT programs are used across studies affect the generalization of the modifications.
- This intervention has yet to be examined as to its effectiveness with children with severe ASD or in cases where there is more severe intellectual disability. Those who are higher functioning may be able to better understand the cognitive components of modified CBT than those who have severe ASD. Therefore clear boundaries within the population as to the effectiveness of CBT are yet to be determined.
- To ensure standardization of a modified CBT treatment for children with ASD a threshold of effectiveness relating to the child's level of functioning would need to be looked at particularly because those who are higher level functioning tend to be more anxious than those who are lower functioning.
- Each modification may not be necessary to use in every case.
- Future research should focus on showing clear differences between the different modifications to help show the best format for a standardized model.
- Varied CBT programs were used despite the fact that the same pattern of modifications persisted throughout each study, this made it

## Cognitive Behavioural Therapy for Anxiety in Children Diagnosed with Autism Spectrum Disorders: Modification Trends CONTINUED

difficult to suggest a single best approach for treating anxiety in children with ASD.

- Future research should focus on determining a basic CBT model to which these useful modifications can be successfully united. In addition to this, the level to which different CBT approaches are needed for specific anxiety disorders should be determined.
- Assessment is also a limitation. It is difficult to say to what extent many anxiety symptoms seen in those with ASD are disorders in their own right. When these disorders can be separated this will provide a clearer overall diagnostic picture and allow for a more effective treatment approach. The best evidence based approach is likely to be a combination of these instruments for typically developing children, with those for atypically developing children (e.g. ASD etc.) in conjunction with functional assessments and behavioural avoidance tasks. Finding an effective and widely accepted treatment for anxiety in children with ASD is paramount whether or not CBT is used.
- Future research should be based on determining the status of modified CBT for children with ASD by the establishment of a standardized approach incorporating the adaptations mentioned in this article.

### **Full Reference**

Moree, B. and Thompson, E. (2010). Cognitive-Behavioural Therapy for anxiety in children diagnosed with Autism Spectrum Disorders: Modification trends. *Research in Autism Spectrum Disorder*, 4(3), p. 346-354.



# Sensory Processing and Classroom Emotional, Behavioural, and Educational Outcomes in Children with Autism Spectrum Disorder

## RESEARCH AIMS

The primary aims of the study were to:

1. Confirm that children with Autism Spectrum Disorder (ASD) respond differently to sensory input when compared to typically developing children (as found in previous research).
2. Explore the associations between sensory processing patterns and emotional, behavioural and educational outcomes in the classroom.

## RESEARCH METHOD

Twenty-eight children with a confirmed diagnosis of ASD aged 6 to 10 years (with an IQ of 80 or above) were compared with 51 age and gender-matched, typically developing peers on sensory processing and educational outcomes. Sensory processing was measured using the Short Sensory Profile (SSP) (McIntosh, Miller, Shyu, & Dunn, 1999). Classroom emotional and behaviour regulation and educational outcomes, were measured using the Conner's Teacher Rating Scale-Revised Long Version (CTRS-R:L; Conner's, 1997) and the Achenbach System of Empirically Based Assessment: Teacher Report Form (ASEBA:TRF; Achenbach & Rescorla, 2001).

## RESEARCH FINDINGS

Highly significant group differences on all SSP scores (except movement sensitivity) were found confirming previous research findings that the responses of children with ASD to sensory input differ from those of typically developing children. The most significant difficulty for children with ASD on the SSP was auditory filtering (i.e.

difficulties in ignoring competing background noise), followed by under responsiveness/seeking sensation and then low energy/weak.

In children with ASD, significant correlations were found between sensory processing difficulties and emotional, behavioural and educational outcomes. For example:

1. Reduced auditory filtering negatively affected attention on cognitive tasks and academic performance.
2. Under responsiveness to sensory input and sensation seeking behaviours were also associated with reduced attention and academic performance.
3. Hypersensitivity to touch was associated with inattention and hyperactive behaviours.

## IMPLICATIONS FOR PRACTICE (by the authors)

This study confirms the findings of previous studies that children with ASD have unusual responses to sensory input, with significant difficulties evident in auditory filtering, hypersensitivity to touch, under responsiveness and sensation seeking. These difficulties are directly correlated with emotional, behavioural and educational outcomes, including reduced attention and academic performance.

Additionally, pupils with these difficulties will present with increased anxiety in the classroom due to their processing of sensory input. For example, a pupil with poor auditory filtering may feel overwhelmed by the noise in the classroom and may not be able to follow the teacher's verbal instructions due to the competing background

# Sensory Processing and Classroom Emotional, Behavioural, and Educational Outcomes in Children with Autism Spectrum Disorder

CONTINUED

noise. A pupil that is hypersensitive to touch may also experience elevated levels of anxiety in the classroom due to the physical proximity of classmates.

The authors emphasise that pupils with unusual responses to sensory input will experience particular difficulties in modern classrooms due to the 'advent of interactive learning styles'. Classrooms tend to have significant visual clutter, high noise levels and unpredictable touch input from other children when seated in groups. This is then likely to lead to emotional and behavioural responses.

In order to reduce negative emotional and behavioural responses and to facilitate learning, the authors recommend the use of the following strategies in the classroom:

- Simplify classroom environments by reducing the amount of competing sensory input e.g. reduce background noise and amount of visual input.
- Use of visual strategies to reduce the reliance on complex verbal instructions.
- The effect of the volume of the teacher's voice against competing background noise should be further explored.
- Classroom acoustics should be considered.
- Reduce unpredictable touch input, e.g., seat the child at an appropriate distance from classmates.
- Increase predictability in activities.
- Present information at a slower pace.

## Full Reference

Ashburner, J., Ziviani, J., Rodger, S. (2008). Sensory processing and classroom emotional, behavioural, and educational outcomes in children with Autism Spectrum Disorder. *The American Journal of Occupational Therapy*, 62(5), p. 564-573.



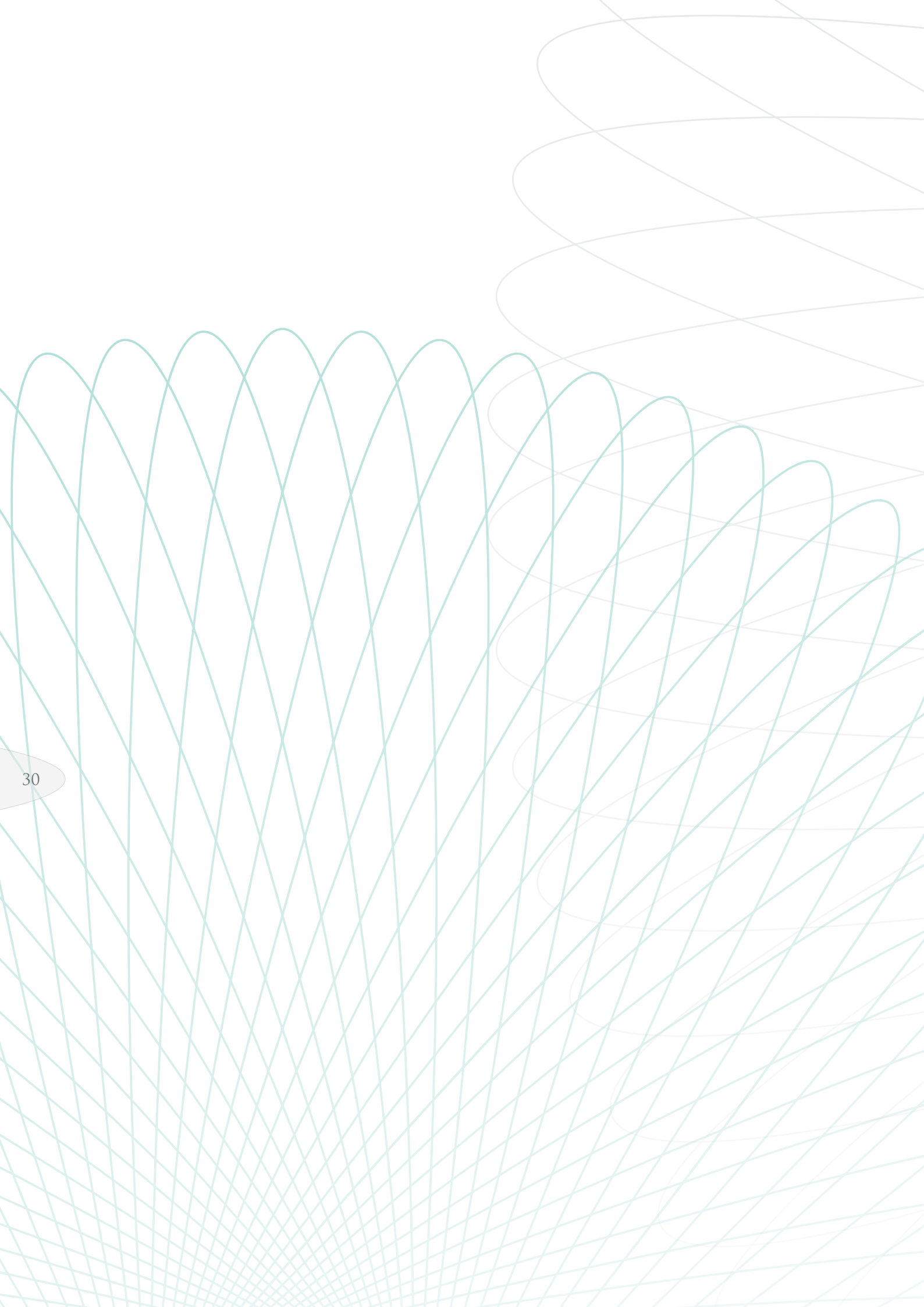


**Anxiety is a fact of life for many children, young people and adults with ASD; this is evidenced in some of the papers detailed in this Bulletin and also in the autobiographical accounts of people with ASD.**

The experience of anxiety can have a significant impact on the child or young person's experience of the world and also on their behaviour as a result of this. Professionals are urged to give consideration to the impact of anxiety on a child or young person's behaviour and, if possible, ensure their learning and recreational environment is free from anxiety provoking stimuli. This Bulletin has detailed a number of strategies that professionals can use to reduce the experience of anxiety.

- Use of visual information, timetables, timers, visual structure.
- Consider the presence of sensory stimuli in the classroom and how this might be reduced or how breaks from the stimuli can be factored in.
- Using strategies to promote communication and developing a system of understanding and communicating levels of anxiety before a crisis situation is reached.
- Recognise the presentation and development of an anxious reaction.
- Understand the possible impact of anxiety on behaviour.
- Promoting the development of emotional intelligence and wellbeing and building this into the school day e.g. using 'personal tutorials'.

The use of cognitively based strategies is becoming more common and there is a growing body of research indicating that augmented forms of CBT may be useful for children and young people with ASD. Education professionals are advised to work with the child or young person's parents to develop a full understanding of the child's experience of anxiety and how it impacts on the child. The goal is to use a range of tools based on good practice, which will both alleviate the experience of anxiety and enable self-management of anxiety in the future.



## YOUR OPINION

We hope that you have found this Research Bulletin informative. We would appreciate if you would take a few minutes to give us feedback by simply clicking on the survey link below.

**Survey**  
**for Managing Anxiety in the  
Classroom**

The Centre's Research and Information Service welcomes any correspondence including suggestions for future Bulletins to: [research@middletownautism.com](mailto:research@middletownautism.com)

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