



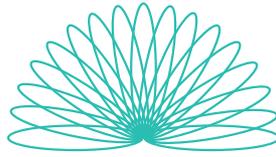
CENTRE FOR AUTISM
MIDDLETOWN

Emotional Regulation



RESEARCH BULLETIN ISSUE NO. 8

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



CENTRE FOR AUTISM
MIDDLETOWN

Emotional Regulation

CONTENTS

Introduction	3
Interview	4
Research Articles Reviewed	11
1. Emotion Regulation in Asperger's Syndrome and High-Functioning Autism	11
2. Emotion Regulation in the Context of Frustration in Children with High Functioning Autism and Their Typical Peers	13
3. Improving Emotional Regulation with CBT in Young Children with High Functioning Autism Spectrum Disorders: A Pilot Study	15
4. Don't Anger Me! Bullying, Victimization and Emotional Dysregulation in Young Adolescents with Autism	16
5. Using Externalisation as a Means to Regulate Emotion in Children with Autism Spectrum Disorders	18
6. Surviving in the Mainstream: Capacity of Children with Autism Spectrum Disorders to Perform Academically and Regulate Their Emotions and Behaviour at School	20
7. Increasing the Understanding and Demonstration of Appropriate Affection in Children with Asperger Syndrome: A Pilot Trial	22
8. Emotion Regulation and Internalising Symptoms in Children with Autism Spectrum Disorders	24
9. The Need for a Broader Approach to Emotion Regulation Research in Autism	26
10. Challenges in Emotional Regulation in Asperger Syndrome and High-Functioning Autism	27
Conclusion	30

Emotional Regulation

This is the eighth Research Bulletin produced by Middletown Centre for Autism; the aim of the Centre's Research Bulletins is to provide accessible summaries of relevant peer-reviewed research articles and literature reviews.

The current bulletin contains ten summaries of articles related to emotional regulation and commences with an interview with Barry Prizant.

Dr. Barry Prizant has more than 40 years experience as a clinical scholar, researcher and international consultant to children and adults with autism and their families. He is an Adjunct Professor, Brown University, and Director of Childhood Communication Services, a private practice. Barry is co-author of *The SCERTS Model: A comprehensive educational approach for children with Autism* (Prizant, Wetherby, Rubin, Laurent & Rydell, 2006) and the assessment instruments, CSBS and CSBS-DP (Wetherby & Prizant, 1993, 2002). He has published more than 120 articles and chapters and has presented more than 700 seminars and keynote addresses in the US and internationally. Barry developed and co-facilitates an annual weekend retreat for parents of children with autism, and is the recipient of the 2005 Princeton University-Eden Foundation Career Award for being a “improving the quality of life for individuals with autism”.

For further information, go to www.barryprizant.com, or contact Barry at Bprizant@gmail.com

QUESTIONS ON EMOTIONAL REGULATION

Barry M. Prizant, Ph.D., CCC-SLP

1. Please explain the terms emotional regulation and emotional dysregulation.

From a longitudinal perspective, emotional regulation is a life-long developmental process underlying attention and social engagement, and is essential for optimal social, emotional and communication development and the development of relationships for all children and adults. Emotional regulation may also be considered from the perspective of changes that occur over short periods of time, even from moment to moment. When one is well-regulated emotionally, he or she is most available for learning and engaging. In contrast, when one is emotionally dysregulated, he or she is less available for learning and engaging.

Emotional regulation and dysregulation must be viewed on a continuum, from well-regulated states, to mild, moderate and even extreme states of dysregulation. A person may be able to continue to engage and learn, albeit less effectively so, in mild and moderate states of dysregulation. However, in extreme states of dysregulation, a person is no longer available for learning and engaging and may have little control over his or her actions. Both positive and negative emotional states may vary along this continuum, as one may be mildly anxious or experience extreme panic attacks, or may be mildly content or giddy/ecstatic. Common terminology referring to extreme negative states includes “meltdown”, “out of control” or “shutdown”.

There are two interrelated dimensions that impact emotional regulation. The first is an individual’s physiological state. There are many factors that affect physiological state, including health status, sleep, arousal bias (low or high arousal) and associated biomedical conditions such as food sensitivities, environmental allergies, seizure activity and so forth. The second dimension is a person’s emotional state and emotional experience, for example, whether a person is feeling content, fearful, anxious, joyful and so forth. Neuroscientists who study human emotion have indicated that it is extremely difficult to separate out physiological state from one’s emotional state in real time as they are closely related and intertwined, even on a neurochemical level.

Emotional regulation may also be described in reference to the strategies that a person uses or benefits from to maintain a well-regulated state.

- **Self-regulation** is emotional regulation achieved independently by an individual. When effectively utilizing self-regulatory strategies, a person is able to achieve a more optimal state of arousal and emotional well-being. In typical development self-regulatory strategies become more sophisticated through socialization and experience. It is important to understand that self-regulatory behaviours vary as to how socially acceptable, conventional and effective they may be. Students and older individuals with autism and other developmental disabilities may be limited to more primitive, unconventional or ineffective self-regulatory strategies due to their neurologically-based disabilities. Some self-regulatory patterns that are attempts to stay well-regulated may be regarded by some as problem behaviours, such as repetitive motor behaviours (rocking, flapping, finger flicking), vocalizing to shut out loud or aversive sounds and avoiding certain people, activities, or settings.
- **Mutual regulation** is emotional regulation that occurs in the context of social interaction. Effective mutual regulatory abilities allow a person to achieve a more regulated emotional state primarily due to the actions or presence of another person or other people. At more advanced levels of ability, a person may actively seek out mutual regulation by requesting support or assistance from others. As with self-regulation, attempts to maintain a well-regulated state through mutual regulation vary along the dimensions noted above: social acceptability, conventionality and effectiveness. Examples of less conventional or socially acceptable strategies may include persistent questioning about upcoming events, seeking out particular kinds of sensory input from others through climbing on or “crashing” into others, or verbal or nonverbal expression of refusal or protest in response to demands that may be perceived as threatening and anxiety-provoking.

2. Why do children and young people with autism have difficulty in staying well-regulated emotionally and therefore experience difficulty in regulating emotional responses?

There are many categories of factors that put individuals with autism at high-risk for experiencing emotional dysregulation. Some are directly related to the neurological basis of autism, while others are related to characteristics of environments and social demands. It is helpful to think of two categories of factors, which we have referred to as risk factors and protective factors. Both risk and protective factors may be associated with either the presence or the prevention of dysregulation that may result in problem behaviours. Risk factors are psychological, biological and social factors that make a person more vulnerable to experiencing emotional dysregulation. Protective factors are those that make it less likely that dysregulation will occur. An emotional regulation approach, discussed in greater detail below, strives to minimize risk factors and maximize protective factors.

The following is a non-exhaustive list of key risk factors that are critical to our understanding of emotional regulation in autism.

Psychological/Emotional Factors

- Life is filled with uncertainty, unpredictability and unexpected changes. Due to neurologically-based learning style differences, people with autism often struggle to predict the actions of others and to understand how activities are logically connected in the “flow” of everyday life and therefore, they may have a difficult time coping with change and uncertainty. Some individuals with autism have noted that the behaviour of others often comes across as unpredictable, sudden and threatening, which may result in great anxiety and in some cases, problem behaviour.
- Lack of control of events and of the sensory

world are additional key factors impacting the physiological arousal level and emotional state of a person with autism. Being placed repeatedly in situations where one has little or no control over the level of stimulation or the behaviour of others can cause great stress.

- Emotional memory, or the memory of the feelings associated with people, places, and activities, is another factor. A relative strength of many people with autism is their strong rote memories, which enable them to recall each element of a place or activity precisely, based upon their previous experiences. Therefore if experiences are associated with negative or stressful feelings, strong negative emotional reactions may occur accompanied by attempts to avoid those people, places, and activities—often in the form of problem behaviour such as dropping to the floor, bolting, and/or vocal/nonverbal protesting.

Biological/Physiological Issues and Factors

Health status is a critical risk factor that may contribute to problems in staying well-regulated emotionally. If a person has allergies, gastro-intestinal issues, a sleep disorder, or is dealing with other chronic health issues, he or she will have significantly more difficulty tolerating transitions, delaying gratification and generally dealing with the stresses of daily life.

Sensory processing issues may also play a major role. Individuals with Autism are often hypersensitive and/or hypo-sensitive to environmental stimulation, referred to by some to unusual responses to sensory stimulation. These challenges often manifest themselves in states of overstimulation or understimulation, which may result in dysregulation that causes problem behaviour.

As with all human beings, individuals with autism have what is referred to as an arousal bias. One’s arousal bias may be towards a high state of arousal, putting the person at risk for overstimulation, fight or flight reactions, or withdrawal. Other individuals

with autism have a bias towards a low state of arousal, putting them at risk for under-stimulation and disengagement and difficulty focusing and staying alert. In this case, problem behaviours may be more related more to a lack of initiation, passivity and lethargy.

Social Factors

Problems in social understanding and the resulting social anxiety have a great impact on emotional regulation for persons with autism and are significant risk factors. Many persons with autism share that they feel confused and perplexed by how social rules and demands change from one situation to the next; how difficult it is to understand the feelings and intentions of others; and by people who often do not “say what they mean” (e.g., use sarcasm or cynicism). Seemingly simple social acts such as initiating interactions or requesting support when needed may cause overwhelming anxiety and result in problem behaviour.

Social communication limitations also serve as risk factors, since the ability to use language or other communicative means for social control, to express emotions, or to seek assistance reduces the need to do so through socially undesirable means such as the use of physical means to protest, refuse, or escape from challenging circumstances.

3. What are the signals of emotional dysregulation that may be observed in individuals with autism?

Many examples have already been cited above and may include nonverbal and physical behaviours, as well as vocal or verbal behaviours. Some patterns may be observed commonly (e.g., nonverbal refusals such as dropping to the floor, or bolting out of a room), while others may be more idiosyncratic to a particular individual. Interestingly, many of these signals of emotional dysregulation may also be thought of as attempts to stay well-regulated.

Once again it is important to understand that signals of emotional dysregulation as well as regulatory strategies may be expressed through means that are considered socially acceptable or not acceptable (e.g., refusing by saying “no thank you”, or refusing by screaming or throwing objects), conventionality (e.g., using delayed echolalia or scripting to express emotions using phrases that come from videos, in contrast to expressing emotions using easily understood emotion words) and effectiveness (e.g., rocking may help an individual to stay calm and participate in an activity, or become frenetic and decrease ability to participate). A major focus of intervention is to help individuals with autism to acquire and use more socially acceptable, conventional, and effective means to stay well-regulated, for both self-regulation as well as mutual regulation.

4. Is there a developmental profile of emotional regulation?

We have delineated three developmental levels of emotional regulatory strategies that are derived from research on emotional regulation in human development. The first level is the Behavioural level in which an individual uses sensory motor strategies as the primary means to regulate. Behavioural Strategies are simple motor actions or sensory motor strategies that the child engages in to regulate his or her arousal level, remain alert and/or self soothe. Examples easily observed in a child’s behaviour include vocalizing, focusing attention on oneself for self-soothing or distraction (e.g., looking at one’s hands, seeking oral sensory input) and engaging in repetitive motor actions, such as rocking, spinning, or finger tapping. The purpose of such activity may be to shift attention away from dysregulating events to neutral or more organizing events, or to provide sensory or motor input that in and of itself has a regulating impact. The use of Behavioural Strategies for the purpose of regulation persists throughout the course of a child’s development and remains into adulthood for all persons.

The second level of regulatory strategies are Language Strategies, which develop as a child becomes a

symbolic communicator. Language Strategies include the use of words or other symbols (e.g., signs, pictures, photos) that the child uses, or can respond to, that regulate his or her emotional regulation. Such strategies may include a child's ability to respond to information conveyed by partners through the use of symbols (e.g., use of spoken language or visual supports to provide information), or the creative or imitative use of symbols (e.g., words, signs, pictures) to communicate with others or that may be observed in "self talk". as well as in inner language. A child may employ these strategies in an effort to organize actions, express emotional state, or to self-calm when too highly aroused. An example of a language level self-regulatory strategies is a child repeatedly saying or signing "Don't worry, it's OK" when feeling anxious. An example of a language level mutual regulatory strategy is responding to information from a partner such as "one more and we are all done", or requesting assistance from others when needed during a frustrating task.

The final and most sophisticated level of regulatory strategies are Meta-cognitive Strategies, involving a child's abilities to reflect on and talk about regulatory strategies that support organization, decrease anxiety and regulate attention to stay most available for learning or engaging. At this level, a child is able to make conscious choices and decisions in using strategies to stay well-regulated, based on an understanding of what has been helpful in the past. For example, in a very noisy room, a child may cover his ears, ask for a break in a quieter area or ask to leave the room. The use of more sophisticated symbolic strategies and increasing social awareness supports a child's abilities to reflect upon social conventions for appropriate behaviour in different social situations and to consider one's own actions in relation to others and in relation to accepted social standards. Therefore, metacognitive strategies involve the process of internalizing a "dialogue", inhibiting behaviour based on social and moral "rules," and using reflective problem-solving (e.g., "If ___ happens, I can always do ___"). For example, a child who is faced with a challenging activity might consider his or her ability to succeed in the activity and to remain well-regulated and, subsequently

formulate a plan for completing the activity. The plan might include specific regulatory strategies, such as knowing that help can be requested from the teacher if needed.

5. What key strategies assist in emotional regulation for children and young people with autism?

In general, we may think of strategies in two general categories that help to form an emotional regulation plan for a child or adult: preventative strategies and reactive strategies. Preventative strategies may be used systematically throughout the day and ideally, across situations to help a child maintain a well-regulated state. Examples may include exercise and movement opportunities, extensive use of visual supports for schedules and for teaching academics, adjusting communication to a level of a child's understanding and adjusting/reducing sensory input when it proves to be dysregulating to a person. Reactive strategies are introduced when behavioural indicators of dysregulation are already observed, and the goal is to prevent the child from experiencing more extreme dysregulation and helping a child "recover" to a better regulated state. Other key approaches to support emotional regulation include: Targeting goals in self and mutual regulation: Emotional regulation may be supported by targeting goals for the development of self-regulatory and mutual-regulatory capacities at a developmentally appropriate level. That is, emotional regulation may be facilitated through presymbolic sensory-motor means (movement activities, oral sensory support, tactile or proprioceptive supports such as fidgets or deep pressure input), or through higher language (symbolic) level means consistent with a child's developmental profile and skill acquisition. Therefore, while the regulatory abilities of a young child are limited based on his or her developmental level (e.g. a presymbolic child cannot use language-based or other symbolic strategies), the abilities of an older developmentally advanced child may consist of both earlier developing sensory-motor strategies and higher level language and symbolic strategies (e.g., a symbolic child can use language as well as engage in

repetitive motor activity to remain well-regulated).

We must initially assess a child's capacities to maintain a well-regulated emotional state across situations, by documenting the primary factors supporting or interfering with emotional regulation and the specific signals that a child gives when he or she needs support. Different behavioural signals of dysregulation are categorized according to different levels, ranging from calm and well-regulated to extremely dysregulated, with gradations in between. Next, specific goals and a plan are developed for supporting a child in acquiring and applying self-regulatory or mutual-regulatory strategies that are indexed to each level of arousal. As emotional regulatory strategies are implemented, the efficacy of such strategies are documented with adjustments made to the plan as needed.

Self-regulatory strategies may include helping a child to discover ways to maintain an organized state in which he or she is available for active learning. For instance, self-regulatory, sensory motor strategies for self-soothing when a child is in a heightened state of arousal may include focusing on a particular calming activity (e.g., listening to music, holding a favorite toy, engaging in gentle swinging), or, for more able children, taking a break from an activity e.g. delivering mail in the school. Self-regulatory strategies may also include initiating and engaging in alerting sensory motor activities, such as increased physical activity, when a child is in a low state of arousal and not optimally engaged in activities and interactions. At a symbolic level, helping children to develop an awareness of the activity schedule, steps within activities or the duration of activities, transitions between activities and unexpected changes in routines may preclude negative reactions due to confusion or a lack of predictability and therefore promote greater self-regulation abilities. Helping to develop an awareness of time concepts as well as the ability to understand language about past and future events also contribute to self-regulation strategies.

In addition to self-regulatory capacities, mutual-regulatory strategies must also be targeted. When a child is experiencing a high degree of arousal, or is

under-aroused, partners need to read those signals indicative of different states and then support mutual regulation by responding in ways that promote a child's ability to focus, engage, and be in a state more conducive to relating, learning and processing information. Capacities for initiated mutual regulation strategies are also fostered in ways that best fit a child's developmental profile and needs. Children may be taught to request assistance or protest in socially acceptable ways through nonverbal means (e.g., acquiring and using early developing gestures to request, protest, or reject) or verbal means (e.g. acquiring and using specific vocabulary for expressing emotions, or to indicate refusal). These abilities have been demonstrated to be effective preventive measures to preclude problem behaviours precipitated by emotional dysregulation. The plan also includes proactive and preventative measures to support emotional regulation (e.g., alternating sedentary activities with movement activities, reducing the level of sensory input), as well as reactive strategies when faced with potentially dysregulating experiences (e.g., allowing a child access to a quiet space or calming activity, simplifying a task, reducing the duration of an activity). Dysregulating experiences may include overwhelming sensory input, changes in routine, inappropriate task demands related to difficulty or duration of an activity and disorganizing social and linguistic input. The use of supports, such as nonspeech communication systems and visual supports, play important roles in these efforts.

6. Is there research evidence to support the use of these strategies?

Research is lacking on the comprehensive implementation of emotional regulation plans involving a wide range of strategies. However, research is available on the use of specific strategies such as relaxation techniques, use of visual supports and visual schedules and how social communication supports emotional regulation and prevents problem behaviour. This is a critical area of need in research as progress in emotional regulation may be one of the best predictive factors for later outcomes for individuals with autism. Everyday experience

indicates that those children (and older individuals) with greater abilities in emotional regulation: 1) are more able to participate in more complex social settings such as inclusive school environments, 2) are sought out more by other children and 3) their families experience less stress and greater willingness to include their children in a wider range of activities.

Emotion Regulation in Asperger's Syndrome and High-Functioning Autism

RESEARCH AIMS

The aim of this study was to examine emotion functioning in individuals with Asperger's Syndrome/High Functioning Autism (AS/HFA) and make comparisons with their typically developing (TD) peers in the areas of:

- Emotion reactivity.
- Emotion labelling.
- Emotion regulation.

RESEARCH CONTEXT

The authors contend that those with AS/HFA experience difficulty with cognitive and affective Theory of Mind in particular understanding and relating to the thoughts, beliefs and intentions of others. They indicate that such difficulties can also be seen in individuals as they attempt to regulate their own emotions or label their emotional state which is seen as a pre-requisite for regulation. It is felt that those with AS/HFA may have difficulty with the cognitive emotion regulation process of taking personal control of regulation as they may not have learned from past experiences and be able to adapt their behaviour and beliefs accordingly.

RESEARCH METHOD

Fifty-four participants, 27 with HFA, 27 TD, matched by gender, age and academic achievement completed an on-line assessment. Three measures were used:

- The Positive and Negative Affect Schedule (PANAS); a 20-item self-report measure of positive and negative affect.
- The Toronto-Alexithymia-Scale (TAS-20); a 20-item measure to assess alexithymia (inability to describe emotions in a verbal manner).

- The Emotion Regulation Questionnaire (ERQ); to measure two types of emotion regulation reappraisal, trying to change the meaning of a situation in order to change its emotional impact, and suppression, trying to inhibit emotion-related behaviours.

RESEARCH FINDINGS

Emotional Reactivity: From analysis of the PANAS assessment it was found that those with AS/HFA reported experiencing higher levels of negative emotions than their TD peers; however, there was no difference in the experiences of positive emotions between the two groupings.

Emotion Labelling: The adults with AS/HFA displayed greater difficulty identifying and describing their emotions than the TD group, with the occurrence of alexithymia being significantly higher in those with AS/HFA.

Emotion Regulation: It was concluded that those with AS/HFA used fewer reappraisal strategies and more suppression and reported less reappraisal self-efficacy.

IMPLICATIONS FOR PRACTICE *(by the authors)*

Practitioners may consider affording time to teaching:

- Techniques that enhance the ability of individuals with AS/HFA to attend to and discriminate emotions.
- Strategies that aim to increase the ability to respond flexibly to one's own emotions.
- Emotional functioning encouraging the development of cognitive processes associated with reappraisal.

- Interventions could focus more directly on the reappraisal process by teaching and training reappraisal strategies.
- An emotional intervention treatment that specifically aims to teach and ameliorate reappraisal strategies, focusing on improving the perspective changing abilities.

Full Reference

Samson, A. C., Huber, O. and Gross, J. J. (2012). Emotion Regulation in Asperger's Syndrome and High-Functioning Autism. *American Psychological Association*, 12 (4), p. 659-665.

Emotion Regulation in the Context of Frustration in Children with High Functioning Autism and Their Typical Peers

RESEARCH AIMS

This study aims to highlight the differences in the outward manifestation of frustration and the independently developed coping strategies for emotion regulation of children with High Functioning Autism, (HFA), from their typically developing (TD) peers and how this interaction can negatively impact on development and motivation to engage in specifically designed interventions.

- The first objective of the study was to examine constructs of negative reactivity and regulation for a sample of 20 children with HFA, and their 20 TD peers.
- The second aim was to test any differences in the effectiveness of individual coping strategies at regulating negativity.

RESEARCH CONTEXT

Difficulties surrounding emotional regulation are defined as, “the process of modulating the intensity or duration of internal feeling states or motivational states to achieve social adaptation or individual goals” (Eisenberg and Spinrad, 2004). The authors assert that these difficulties are widely experienced in children with autism. They claim that difficulties with emotion regulation or dysregulation, can lead to an increased risk of disruptive behaviour, poor interpersonal relations and difficulties with academic achievement. TD children have an array of coping strategies to alleviate difficulties including:

- distraction
- help or comfort seeking
- goal-directed strategies
- physical venting depicting a level of self-monitoring and flexibility.

Less is known of the avenues of support employed independently by children with HFA to ascertain the

same regulatory function.

RESEARCH METHOD

The researchers recruited 40 participants, 20 children with HFA and 20 TD children. The children were matched in terms of expressive language, using the Preschool Language Scale, fourth edition, (PLS-4), the Differential Ability Scales-11 (DAS-11), the attractive toy in a transparent box task, from the Laboratory Temperament Assessment Battery (LABTAB) and the unsolvable puzzle task.

The researchers were aware of previously held knowledge that children with HFA experience difficulties with temperament in terms of attention focusing, shifting attention and inhibiting extremely powerful responses, along with an aversion to being soothed. The study involved observing the negative responses in the children’s facial expressions, body posture and movement, using the Facial Action Coding System (FACS) as a guide, and in their vocalisations, measured in 10-second intervals. They took note of the child’s perseverance or resignation, again recorded in 10-second intervals, during a difficult or frustrating activity or task and again using the 10-second interval rule, coded the emotion regulation strategies employed by the child. These included:

- goal-directed action
- alternative strategies
- distraction
- self-speech
- vocal venting
- physical venting
- social support: orientation to parent/experimenter
- social-support: verbal assistance seeking
- social support: verbalisations without assistance seeking
- self-soothing
- disruptive behaviour
- avoidance
- other-directed comfort-seeking.

RESEARCH FINDINGS

- When faced with frustration, children with HFA display a higher intensity and duration of resignation, which is exacerbated if a supportive and known adult does not intervene. The authors felt that emotion regulation difficulties are significant in such children.
 - Coping strategies designed and implemented by children with HFA are significantly different from their TD peers. They have a tendency to rely on verbal venting, “I give up”, displaying their frustration, and avoidance of completion or interaction, rather than devising constructive or instrumental strategies. This resignation from a complex task may also de-motivate the child to engage with this task on a future occasion.
 - When the children with HFA employed the disengaged strategy of physical venting this may be seen as a regulatory rather than offensive action.
 - There was no significant difference in the observable facial/bodily negativity, yet children with HFA were less likely to persevere with a task and their periods of resignation were longer.
 - Children with HFA were most likely to give up when they worked alone, which may indicate that such children rely on adult support as a prompt for task completion.
 - There was no perceived strategy employed by the children with HFA, which appeared to adequately deal with their emotion regulation.
- influence academic achievement, which is then not reflective of their cognitive ability. Such an approach supports the recorded difficulties with flexibility of thought, finding a new or innovative approach to solving a problem, which many children with HFA experience.
- Practitioners must be acutely aware that children with HFA may display signs of learned helplessness when they approach a task where they have previously failed, due to their disengaging and quick resignation.
 - The authors pose the theory that resignation, disengaging and de-motivation may actually be affect-regulation strategies employed by children with HFA whenever they do not accept or understand the relevance of the task or activity provided.
 - Children with HFA may need the physical reassurance of an adult close by, yet this adult must not see this as an occasion for social interaction, as support to complete activities, making independent work an integral area to be considered in academic life.
 - The physical venting by a child with HFA may not be a display of challenging behaviour, but could be viewed as a positive attempt by the child to self-regulate. However, greater research is needed to support fully this hypothesis.
 - Strategies to support positive and effective emotion regulation need to be taught specifically to children with HFA.
 - Greater research in this area is recommended.

IMPLICATIONS FOR PRACTICE *(by the authors)*

- Difficulties arise for teachers and practitioners if they cannot recognise that the children are displaying difficulties with emotion regulation, or with a task.
- The children may also disengage from completion of a task, which may negatively

Full Reference

Jahromi, L. B., Meek, S. E. and Ober-Reynolds, S. (2012). Emotion Regulation in the Context of Frustration in Children with High Functioning Autism and Their Typical Peers. *Journal of Child Psychology and Psychiatry*, 53 (10), p. 1-8.

Improving Emotional Regulation with CBT in Young Children with High Functioning Autism Spectrum Disorders: A Pilot Study

RESEARCH AIMS

The authors of this study investigated two hypotheses:

1. **Cognitive Behaviour Therapy (CBT) will benefit young children with high functioning autism by improving their knowledge of emotional regulation strategies and their ability to regulate emotions, specifically anger and anxiety.**
2. **CBT will benefit parents through increased confidence in their own ability, as well as confidence in their child's ability, to manage the child's anger/anxiety.**

RESEARCH METHOD

Participants: participants included 11 children aged 4.5-7 years old and their mothers. Children were randomly assigned to either the experimental group or delayed treatment control group.

Measures:

- Children were presented with a number of vignettes designed to provoke anger/anxiety. Their emotional regulation ability was measured by the strategies they chose to deal with the situations in the vignettes.
- Parental reports on an emotional regulation scale were recorded and their observations of frequency per hour and duration in minutes of anxiety/anger episodes.

Intervention: children attended one hour sessions for nine consecutive weeks. The intervention focused on skill building via affective education, stress management and understanding expressions of emotions. A group therapy approach was used to teach the children to recognise emotions in themselves and others. The therapy facilitated emotional regulation by teaching relaxation, physical, social and cognitive tools to “fix” intense emotions.

Parent group meetings: psychoeducational parent group sessions occurred simultaneously with the children's sessions and were used to review and discuss session material and to troubleshoot how strategies were implemented outside of the clinic setting. Parents were also provided with hand outs outlining every session and were given homework assignments to practice skills with their child.

RESEARCH FINDINGS

According to parent reports, children in the experimental group displayed significantly fewer outbursts and there was a trend towards shorter duration per episode compared to the delayed-treatment control group. Parents also reported significantly higher levels of confidence in their own and their child's abilities to deal with anger and anxiety related emotions after treatment. Furthermore, children responded to the vignettes with significantly more strategies to control anger and anxiety.

IMPLICATIONS FOR PRACTICE *(by the authors)*

Until recently, children with autism have received pharmacotherapy for anxiety and anger related difficulties; this study shows that there is a need for empirically based psychosocial interventions and those young children with autism can respond positively to CBT oriented programmes. Furthermore, while a handful of studies showed improvement in emotional functioning after CBT in older children (aged 8-14 years), the current findings show similar patterns and suggest that a cognitive behavioural approach may also be feasible and potentially helpful for teaching emotion regulation skills to younger children with autism.

Full Reference

Scarpa, A. & Reyes, N.M. (2011). Improving Emotional Regulation with CBT in Young Children with High Functioning Autism Spectrum Disorders: A Pilot Study. *Behavioural and Cognitive Psychotherapy*, 39, p. 495-500.

Don't Anger Me! Bullying, Victimization and Emotional Dysregulation in Young Adolescents with Autism

RESEARCH AIMS

The main aim of this study was to examine the association between emotional functioning and bullying/victimisation in children with autism compared to their typically developing peers. The authors proposed that anger would be closely associated with bullying in both typically developing children and those with autism. The authors also examined how two major moral emotions, guilt and shame, impact on bullying and victimisation in typically developing children and those with autism.

RESEARCH METHOD

One hundred and thirty children participated in the study, 64 had been diagnosed with high functioning autism and 66 were termed typically developing. All children were tested at home, at school or in their institutions (in the case of some of the children with autism). Participants were asked to complete a series of questionnaires on a laptop computer.

The Bully Questionnaire: this consists of nine items and is based on the Bully/Victim Inventory which provides children with a definition of bullying and asks them if they have displayed any bullying behaviours over the past two months. Children were told that their answers would be anonymous.

The Victim Questionnaire: this consists of a short introduction about bullying and the same items on The Bully Questionnaire, reformulated to ask if they have been bullied within the past two months.

The Mood Questionnaire: this is a self-report measure assessing the child's affective states over the past four weeks including fear and anger.

Maladaptive and Adaptive Scales: this was used to assess moral emotions. Children were asked to read 12 vignettes and then asked how much of the intended emotion (guilt and shame) they would feel in these situations (1= not at all, 2=a little, 3= a lot).

RESEARCH FINDINGS

The study found that children with autism reported more victimisation than typically developing peers but children in both groups report bullying others equally often. Additionally, children with autism reported higher scores on fear than typically developing children but not on anger and children in the typically developing group reported more guilt and shame than their peers with autism. Higher levels of anger were associated with victimisation in the autism group but not the typically developing group.

IMPLICATIONS FOR PRACTICE *(by the authors)*

- The moderate to high outcomes for internal consistency suggest that children with autism are capable of responding to self-report questionnaires about their own internal states and their social behaviours.
- Bullying and victimisation were found to be significantly interrelated in children with autism, but not in typically developing children, implying that children with autism might both be targets and perpetrators of peer harassment more often than typically developing children.
- It seems likely that anger experienced by children with autism is more related to frustration and misunderstandings than to controlled anger expressions for dominance;
- this could imply that bullying in children with autism is less strongly related to antisocial behaviours, as observed in typically developing children, but more to emotional dysregulation instead.
- Education professionals should bear in mind that children with autism commonly try to gain control over socially difficult or unpleasant

situations which can cause uncontrollable arousal in the child. The child then often attempts to gain control by behaving in an aggressive manner towards others, trying to evoke typical negative reactions, so that the child knows when and what to expect.

- Children with autism who were victims were more likely to experience higher levels of anger compared to their typically developing counterparts; this may be because autism victims may react angrily to being provoked, ridiculed or feeling misunderstood and may resort to anger because they lack social competence or have no solutions to respond to provocations.

Full Reference

Rieffe, C., Camodeca, M., Pouw, L.B.C., Lange, A.M.C. & Stockmann, L. (2012). Don't Anger Me! Bullying, Victimization and Emotional Dysregulation in Young Adolescents with Autism. *European Journal of Developmental Psychology*, 9 (3), p. 351-370.

Using Externalisation as a Means to Regulate Emotion in Children with Autism Spectrum Disorders

RESEARCH AIMS

To explore the use of the narrative therapy technique of externalisation (White, 2007) on families with children diagnosed with autism, in particular, those children who have previously demonstrated a capacity to both identify and address their emotions. This technique may assist children with autism to gain a greater understanding of a variety of expressed emotions and develop self-regulation skills. This in turn may help those children to better integrate into their families, schools, and communities and increase their understanding of the conventions of social interactions.

RESEARCH METHOD

The intervention process primarily involves the child with autism but also includes the parent or primary caregiver. The parent/caregiver will comment on any positive changes they note taking place in the child's world as a result of the process. The therapist helps the child to facilitate the externalisation process and name his or her emotions as well as foster the child's the ability to keep emotions from getting out of control and taking over his or her life (White, 2007).

- The first step in the process is for the therapist to ask the child about his or her understanding of emotions in a global sense (e.g. what does it mean to be sad?). If necessary the therapist can ask the child to draw a picture of someone who is scared etc. or use an "emotion chart," which consists of rows and columns of circular faces expressing different emotions.
- The second step is to gain an understanding of the child's individual experience of emotions. This can be achieved through questions related to which emotions the child experiences most and least often; which emotions are most confusing, problematic, or difficult to control; and which emotions the child would like to experience more often or less often. The child's parents or primary caregivers can be asked questions such as which emotions they see the child experiencing most/least often etc.
- The third step involves presenting the child with a variety of objects (such as dolls, figurines, puppets, or any other object of the child's choosing) and asking the child whether they could pick an object that best portrays the most upsetting emotion he or she felt most often over the course of the past few hours or days. The therapist should also ask the child to explain why they chose a particular object and to have a conversation with the object (which represents the externalised emotion). For example, the therapist could ask the object questions about itself such as "What do you like to do for fun?" and "How are you able to get [child's name] in trouble so often?", and "What do you do for [child's name]?" This can be accomplished by the therapist interviewing the object and the child answering on the object's behalf. This should be a fun activity for most children and also a great opportunity for parents or caregivers to get involved in the therapy through their participation in the conversation between the child and the object.
- The final step in the intervention is to develop a plan, based on the understanding of the child's externalised emotion and with regard to how to assist the child and the family to manage the problem emotion. Development of the plan should involve the whole family. In addition, important figures in the child's life such as teachers, social workers, relevant relatives and friends should be notified of the plan in order to help the family best execute it. The plan may involve the externalisation of other, more adaptive emotions, more dialogue with the problem emotion to help it find a new place in the child's life, or putting the child in situations in which he or she is less likely to experience the problem emotion's negative effects.

- The article provides a vignette of the intervention with a family and child with autism.

IMPLICATIONS FOR PRACTICE *(by the authors)*

- This intervention may not be suitable for all families. It may be contraindicated for children whose levels of emotion regulation are so low that they must first work on self-soothing techniques before being able to adequately work on externalising particular problem emotions.
- It should also be limited to use with children with autism who have the verbal and cognitive abilities to understand their emotions and describe them to others.
- It may be potentially harmful to children whose families have rules, covert or overt, against expressing emotions or discussing certain family matters in public. This may lead to a child being punished (consciously or unconsciously) if they raise an issue that the family is not supposed to talk about openly. The therapist must first assess how a family deals with emotional content prior to utilising this technique. Failure to do so may actually result in the child experiencing it as safer to suppress emotion than to express it openly and have to deal with the consequences.

Full Reference

Johnson, J. (2012). Using Externalisation as a Means to Regulate Emotion in Children with Autism Spectrum Disorders. *Journal of Family Psychotherapy*, 23(2), p. 163-168.

Surviving in the Mainstream: Capacity of Children with Autism Spectrum Disorders to Perform Academically and Regulate Their Emotions and Behaviour at School

RESEARCH AIMS

This paper was developed in Australia and reports on teachers' perceptions of the capacity of their students with autism to perform academically and regulate their emotions and behaviour in the classroom as compared to their typically developing peers.

RESEARCH METHOD

A comparison of a group of students with autism and age- and gender-matched typically developing peers was developed using a case-control research design. The typically developing control participants were drawn from the same classrooms as the pupils with autism. The children with autism participating in the programme were between six and ten years old, diagnosed by a paediatrician and educated in mainstream classrooms with support. They all had an average range IQ.

RESEARCH FINDINGS

The findings of this study are commensurate with other research suggesting that students with autism exhibit significantly higher levels of behavioural and emotional difficulties at school than their typically developing peers. A higher proportion of students with autism (53%) exhibited clinically significant problems in the areas of emotional ability than on any other scale. This outcome reflects difficulties in emotional regulation including temper outbursts, a tendency to cry frequently, unpredictable mood swings and a tendency to be easily frustrated. A high proportion of the students with autism (43%) also had clinically significant issues with perfectionism. This reflects their tendencies to over-focus on details, and a preference for order. This scale may therefore reflect the rigid and inflexible behaviours that are characteristic of many students with autism. Many of the students with autism scored in the clinically significant range for externalising behaviours such

as Oppositional Behaviour (39%) and Aggressive Behaviour (14%). Oppositional behaviours such as arguing with adults, temper outburst and explosive behaviours were commonly reported. This indicates that school staff may struggle to manage the behaviours of these students, increasing the likelihood of suspension or exclusion.

The high rates of academic under-achievement of the students with autism (54%) compared to (8%) typically developing students are alarming. This indicates that these students are not achieving their full academic potential in mainstream educational systems. Poor academic achievement and consequences of poor behaviour may have a detrimental impact on students' self-esteem and motivation to succeed. In addition it should be considered that the pupils in this study were relatively young (aged between six and ten years) and were educated in primary schools. The difficulties are likely to increase in secondary school when pressures are exacerbated and adolescence begins. Adreon and Stella (2001) noted that secondary school placements often demand a level of flexibility that students with autism do not possess.

IMPLICATIONS FOR PRACTICE *(by the authors)*

The students with autism in this study were supported by special education teachers, classroom assistants and in some cases speech and language therapists, occupational therapists and physiotherapists. However, many were underperforming and were struggling with attention maintenance, emotional regulation, and displays of challenging behaviour in mainstream classrooms. These findings reflect the need for alternative models of supporting these students and 'assisting them to develop coping strategies necessary to manage the requirements inherent in attending school'. The authors of this paper suggest that future studies should examine the impact of autism-specific teacher training 'and the types of adjustments to curricula,

classroom environment and pedagogy that can make education programs more autism-friendly.’

Full Reference

Ashburner, J., Rodger, S., Ziviani, J., (2010).
Surviving in the Mainstream: Capacity of Children
with Autism Spectrum Disorders to Perform
Academically and Regulate Their Emotions and
Behaviour at School. *Research in Autism Spectrum
Disorders*, 4, p.18–27.

Increasing the Understanding and Demonstration of Appropriate Affection in Children with Asperger Syndrome: A Pilot Trial

RESEARCH AIMS

The study was undertaken to explore relationships between affectionate behaviour in children with Asperger Syndrome (AS) and variables such as tactile sensitivity and social skills likely to influence its expression. It also evaluated the impact of a cognitive behavioural based intervention aiming to improve a child's understanding and expression of affection.

RESEARCH METHOD

The sample included twenty-one children aged 7 to 12 years. Nineteen children had a primary diagnosis of AS, and two children had a primary diagnosis of high functioning autism (HFA). The study was conducted in Brisbane Australia.

Inclusion criteria for the study required that each child have a diagnosis of AS or HFA as well as meeting criteria on the Asperger Syndrome Diagnostic Interview and an IQ score of 79 or higher. Difficulties with affectionate behaviour were established based on parent report.

Five, two hour sessions were held on the topic of loving or liking someone with a combination of project work, social stories and role play being used to teach the participant the required concepts and behaviours. It was entitled the "Exploring Feelings: Affection" programme. Parental training ran parallel to the sessions conducted with the children. Measures were taken after the initial programme and three months later at a follow up session.

RESEARCH FINDINGS

The results indicated a significant increase in the overall appropriateness of children's affectionate behaviour towards others. However, there was no record of a significant improvement in the appropriateness of children's responses to the

affection they received from others. The authors suggest two reasons for this: the fact that the programme focused on initiating appropriate affection and the fact that children with autism can predict self-initiated affectionate behaviours. They are often less able to predict those behaviours from others and may therefore be less comfortable in these situations. The authors also suggest that the children's typically awkward responses to affection from others may also be associated with tactile sensitivity issues. Overall it appears that the programme is effective in increasing affectionate behaviour in children who exhibit unusually low levels of affection. It also appeared to help a child who was displaying overly affectionate behaviour. These results are commensurate with other studies that demonstrated that children with autism can learn to display appropriate affectionate responses. 'The results suggested that there was a significant improvement in child understanding of the purpose of affection. This finding suggests that the children not only made changes on a behavioural level but also at a cognitive level.' Parents reported an increase in appropriate affectionate behaviour from their child in the home environment and again results suggested that children retained an understanding of the importance of displays of affection towards others.

IMPLICATIONS FOR PRACTICE *(by the authors)*

- The results imply that social behaviours can be taught and understood by children at a cognitive level.
- Children and young people with autism have a tendency to think logically. Therefore if they can understand the reason for behaving in a certain way they are more likely to do so. Professionals and parents may see benefits from teaching children and young people the reasons for appropriate behaviour rather than teaching them to simply engage in the targeted behaviour.

- The improvements were reported by parents and may therefore be subject to bias. The results should be read in this context.

Full Reference

Sofronoff, K., Johann, E., Sheffield, J., Attwood, T. (2011). Increasing the Understanding and Demonstration of Appropriate Affection in Children with Asperger Syndrome: A Pilot Trial. *Autism Research and Treatment*, Vol. 2011, Article ID 214317, 8 pages doi:10.1155/2011/214317.

Emotion Regulation and Internalising Symptoms in Children with Autism Spectrum Disorders

RESEARCH AIMS

The aim of the research was to examine the contribution of the strategies 'awareness' and 'coping' in the development of depression and anxiety in children with autism in comparison to their typically developing peers.

Emotional awareness is a term given to the understanding of one's own emotional responses and functioning. Awareness locates, monitors and differentiates between emotional and tries to locate their causes.

Coping describes attempts by the individual to diminish emotional arousal; the effectiveness of coping depends on using the right strategy at the right time. Altering thinking patterns or one's perception of a problem is known as a cognitive strategy and these are most commonly used with depression and anxiety.

RESEARCH METHODS

The researchers recruited 66 children with autism with a mean age of 11 years and 118 age-matched typically developing peers. The participants completed five self-report measures, which explored: depression, physical symptoms related to mental state, worry and rumination, levels of emotional awareness and coping strategies. The children's parents completed a measure which rated the child's degree of mental health and behavioural problems.

The results of these measures were subject to statistical analysis in order to identify any correlations or patterns between emotional awareness, coping, depression and anxiety.

RESEARCH FINDINGS

The researchers found correlations between

depression and anxiety and poor or maladaptive coping strategies.

The ability to differentiate between various emotions, identify their causes, and communicate them to others and not to pay too much attention to physical symptoms was not associated with depression and anxiety. The main differences in 'awareness' between children with autism and their typically developing peers were:

- Children with autism were less likely to place importance on the value of emotions as a source of important information.
- Children with autism were less likely to place importance on the experience of physical symptoms of emotions.

The authors suggest that there are positives and negatives to each of these for children with autism. Not focusing on the importance of emotions can result in the child not learning from the emotional experience or trying to determine what caused the emotional experience and what to do if it happens again. Conversely the authors also suggest that not focussing overly on the importance of emotional experiences can reduce their impact. Too much attention to emotions can result in non-productive circular thoughts such as worry or rumination. Equally children who do not pay attention to their physical arousal in relation to their emotional state may fail to understand the role of physical symptoms in emotional arousal and this may impact on their coping strategies.

The authors suggest that in having low levels of awareness in these areas children with autism have a less comprehensive and more fragmented understanding of their emotional experiences.

Children with autism in this research were also more likely to hide their emotional state from others and as a result of this may be less likely to ask for help

with difficulty that resulted in emotional arousal.

There was a significant relationship between maladaptive coping strategies and anxiety and depression.

IMPLICATIONS FOR PRACTICE *(by the authors)*

- Children with autism may not have the same awareness of the importance of emotions.
- Children with autism may not be aware of the relationship between physical symptoms and emotional arousal.
- Children with autism may have a more fragmented understanding of their emotional state and their levels of emotional arousal.
- Poor coping strategies can increase the likelihood of depression and anxiety.

Taking these implications into consideration it is important to teach children about their emotions to increase their awareness of their emotional state. It is also critical to teach children useful and appropriate coping strategies to deal with emotions.

Full Reference

Rieffe, C., Oosterveld, P., Meerum Terwogh, M., Mootz, S., Van Leeuwen, E., Stockman, L. (2011). Emotion Regulation and Internalising Symptoms in Children with Autism Spectrum Disorders. *Autism*, 15 (6), p. 655-670.

The Need for a Broader Approach to Emotion Regulation Research in Autism

RESEARCH AIMS

The authors argue for a broader approach in understanding of emotional responses in people with autism. They seek to explore aspects of autism from an emotional regulation perspective. They indicate that previous research investigates the emotional understanding of people with autism, rather than their emotional responses.

RESEARCH METHOD

The authors reviewed articles relating to emotional regulation and discussed these with reference to aspects of autism.

RESEARCH FINDINGS

The authors provide some evidence for differences in the processing of emotional information in people with autism. This indicates that people with autism may have different neural responses to behaviours and processing tasks such as making and receiving eye contact, or experiencing negative emotions.

The authors discuss the possibility that there may be an emotional component to perseveration. They present some evidence to suggest emotional regulation may have an impact on attention shifting and that this can encourage perseveration, particularly focused on negative emotions. They argue that there may be a difficulty switching off negative thoughts and moving onto a more positive emotional state, leaving the person perseverating in a circular and negative way. They use the example of a parent saying 'there is no getting through' to her son once he has been triggered into a negative mindset; the emotional salience of a negative experience outweighs the ability to attention shift. This inability to attention shift when engaging in negative emotional perseveration has a direct impact on emotional regulation.

IMPLICATIONS FOR PRACTICE *(by the authors)*

The authors recommend the use of strategies to sustain a positive emotional status, these can only be developed when there is a better understanding of emotional responses and reactions in people with autism.

Overall the main implication of the research is that a better understanding of emotional regulation in people with autism would also give an insight into the biological basis of autism.

Full Reference

Mazefsy, C., Pelphery, K., Dahl, R., (2012). The Need for a Broader Approach to Emotion Regulation Research in Autism. *Child Development Perspectives*. 6 (1), 92-97.

Challenges in Emotional Regulation in Asperger Syndrome and High-Functioning Autism

RESEARCH AIMS

This is a discussion paper that examines the impact of challenges in social communication and differences in neuro-physiology on emotional regulation.

RESEARCH METHODS

Discussion Context:

This discussion paper contends that emotional regulation is a critical skill underlying competence in social communication and in an individual's ability to transition along the continuum of emotional and arousal states and aims to compare and contrast the experiences of those with AS and HFA and typically developing individuals.

The authors claim that individuals, who display greater emotional regulatory capacities, are better able to maintain social engagement when compared to those with AS and HFA. Emotional regulation is considered crucial to achieve social communicative competence as it is based on the acquisition of both understanding the social situation and communicating appropriately based on the environment and the interactions within it.

Developmental achievements in emotional regulation can be differentiated into two domains, self-regulation and mutual regulation.

- Self-regulation refers to emotional regulatory capacities internal to an individual.
- Mutual regulation refers to those that occur in the social environment.

When competence is achieved in both, the individual can cope with familiar and new situations, using an array of appropriate tools.

The following six key areas were compared in table one below:

- Self regulation.
 - Tolerating social and sensory experiences.
 - Developing behaviour strategies to regulate arousal.
 - Using language strategies to guide behaviour.
 - Using metacognitive strategies to plan and complete activities.
- Mutual regulation.
 - Expressing emotional states in socially appropriate ways.
 - Responding to assistance by others.

Normative/Typical Development	Difficulty for those with AS and HFA
Key Area: Self Regulation	
Tolerating social and sensory experiences	<p>Children can experience difficulties interacting with a new environment, a new activity, someone new and can use a basic response, which has helped in the past to get out of or impose rigidity on the situation.</p> <p>This response has not been modified to take in account:</p> <ul style="list-style-type: none"> ■ The environment ■ The nature of the interaction ■ The age of the individual or ■ The maturity of the responses expected. <p>The social and sensory difficulties can impact on learning.</p> <p>If the teacher relies on verbal interaction, using quality conversation, debate and discussion – child may not understand and may display inappropriate behaviour.</p>

Tolerating social and sensory experiences	If the teacher uses nonverbal communication and dynamic visual information, close proximity, facial expressions and gestures, again the child may respond inappropriately.
Developing behaviour strategies to regulate arousal	Older children and young adults may depend on immature self-regulatory behaviours such as thumb sucking or seeking comfort objects, whilst a more mature response to hunger for example would be to ask for something to eat. More suitable means of expression should be taught. Children with AS and HFA may not learn effective means of self-regulation from imitation or modelling. Frequently they demonstrate extremes of behaviour from calming socially inappropriate and immature behaviours such as chewing clothing, walking on tiptoes, to the more aggressive behaviours such as fleeing, throwing objects, leading professionals to deal with the outward manifestation of the difficulty rather than the root cause.
Using language strategies to guide behaviour	<p>Many with AS and HFA have developed language skills and may seem to have an understanding of some situations but problems can still arise:</p> <ul style="list-style-type: none"> ■ a limited ability to use advanced and graded emotion words for expression, tending to rely on immature and/or extreme expressions of emotional state, ■ a limited ability to use socially conventional language strategies modelled by partners to assist with emotion regulation, and ■ a difficulty using language to help engage productively in an extended activity. <p>Those with AS or HFA may use echolalia as a form of self-regulation, which can impact on relationships with others.</p>
Using metacognitive strategies to plan and complete activities	With difficulty in planning and completing activities, taking into consideration his/her skill set, knowing where to attain support and help, children and adolescents with AS or HFA are less able to plan for unexpected and emotionally challenging events by using knowledge from previous experiences. These difficulties play a significant role in the presence of unpredictable reactions to daily social events as well as difficulties with participating in new and changing situations often exhibited.

Key Area: Mutual Regulation

Expressing emotional states in socially appropriate ways	<p>The issue of developing mature and chronologically appropriate emotional responses is difficult for young people with AS and HFA due to their limited interactions and opportunities to learn from imitation and observation.</p> <p>This becomes pertinent for those emotional concepts for which social norms and conventions are intrinsic to the definition of the emotional experience, jealousy, pride, and guilt and relevant for advanced concepts related to the degree experienced by the emotional states, ecstatic, devastated, and annoyed.</p>
--	---

<p>Responding to assistance by others</p>	<p>If the child with AS or HFA feels a sense of being threatened due to physical contact from others in combination with the child's heightened arousal state due to not understanding the social situation, this may lead the child to feel that he/she is being physically attacked.</p> <p>The child may adopt an immature strategy, yet developmentally appropriate for a much younger child, for self-regulation and lash out at the adult. It is not uncommon for a child with AS or HFA to react in a similar way to the verbal soothing of another, as the auditory input may be unwelcome and causing discomfort.</p> <p>The perception of others due to perceived sophisticated language skills may lead to the setting of unrealistic targets without noting times when the child is anxious or experiencing some emotional turmoil. Teachers find it difficult when the child responds with socially inappropriate behaviours, fleeing, laughing, and closing his/her eyes instead of using their language to ask for support or assistance.</p> <p>The difficulty also manifests in limited friendships and peer interactions with a tendency towards withdrawal, controlling environments and interactions, rigidity in interactions and activities.</p>
---	--

IMPLICATIONS FOR PRACTICE *(by the authors)*

- Stress and anxiety are evident in children and young people with AS and HFA, therefore, as teachers and parents a greater understanding of the nature of these challenges is needed including the sharing of good practice of appropriate and effective strategies to support the child or young person's emotional health.
- Further research is needed to support the development of socially appropriate regulatory strategies, whilst addressing the child's capacity to remain actively engaged, adapt to novel stimuli and inhibit impulsive reactions.
- The child must also be taught developmentally appropriate strategies on an ongoing basis to take into account chronological development.
- Understanding that the child is experiencing

difficulties rather than seeing the behaviours as wilful and/or defiant can lead to a neglect of critical areas of need in that child's developmental profile, namely, limitations in both self-regulation and mutual regulation skills.

- As core challenges in emotional regulation clearly compromise the achievement of social communicative competence, these aspects of a child's development cannot be ignored and must be specifically addressed in all educational planning.

Full Reference

Laurent, A. C. and Rubin, E. (2004). Challenges in Emotional Regulation in Asperger Syndrome and High-Functioning Autism. *Topics in Language Disorders* 24 (4), p. 286-297.

CONCLUSIONS

The ten articles summarised in the current Research Bulletin provide some useful guidelines for parents and professionals as they live and work with children and young people with autism.

Teachers working with children and young people with autism should consider teaching the children techniques to attend to and discriminate between emotions and also to consider strategies that teach the child how to reappraise situations and potential responses in a positive and constructive way. The frustration levels of children and young people with autism should also be taken into consideration; they may become frustrated more quickly than their typically developing peers and have less personal strategies to help them deal with this.

Both parents and teachers should make themselves more familiar with the physical presentation of emotional dysregulation as this may often be the only sign that the child or young person is feeling distressed. In children and young people with autism anger may be more related to frustration and/ or misunderstandings.

From a wider perspective it is worth noting that all children and adults seek out emotional regulation on an ongoing basis and we all to a greater or lesser degree demonstrate behaviours that are related to our emotional regulation. Children and young people with autism may be less likely to recognise the need to seek supports for their emotional regulation and may also engage with seeming inappropriate regulation methods. It is an important support to be aware of these deficits in emotional regulation and also to recognise behaviours that are related to the regulation of emotions.

Middletown Centre's next Research Bulletin is on the area of Autism and Play. The Centre is always seeking ideas for future Bulletins and comments on the current Bulletins and wishes to hear from anyone interested in supporting the production of the Bulletin Series. Please contact research@middletownautism.com.

The Centre trusts that you have found this Research Bulletin informative. It would be appreciated if you would take a few minutes to provide the Centre with feedback in relation to this bulletin by clicking on the survey link below.

[Survey for
Emotional Regulation](#)





CENTRE FOR AUTISM

MIDDLETOWN

**The Centre's Research and Information
Service welcomes any correspondence
including suggestions for future Bulletins
to: research@middletownautism.com**

Middletown Centre for Autism

35 Church Street, Middletown, Co. Armagh BT60 4HZ

T. +44 (0)28 3751 5750 E. research@middletownautism.com W. www.middletownautism.com

Chief Executive: J G Cooper Registered in Northern Ireland, No. NI063661