

Adams, Tamsin (2017) To what extent are 5 children in a primary school in Kent with Autism Spectrum Disorder able to accurately recognise and regulate emotions? *The STeP Journal (Student Teacher Perspectives)*, 4 (4). pp. 52-60.

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To what extent are 5 children in a primary school in Kent with Autism Spectrum Disorder able to accurately recognise and regulate emotions?

The STeP Journal
Student Teacher Perspectives
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University of Cumbria
Vol 4 (4) pages 52-60

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Abstract

Throughout educational research, there are many suggestions that children with Autism Spectrum Disorder (ASD) have difficulty with regulating their emotions. However, despite the extensive research, there seems to be little about focussing on the amount that children with ASD emotionally regulate. This paper attempts to discuss what emotional regulation means and the importance of recognising and regulating emotions.

The small case study within the paper focusses on 5 children within a primary school in Kent who have ASD. These pupils are a range of ages, with one pupil in Reception, two pupils from a Year 3 class and two pupils from a Year 5 class. The case study took place over 8 days, and involves questionnaires and interviews which consider the emotional responses of the children involved within the study. Through conversational analysis, the paper first looks at the individual's ability to recognise emotions, followed by looking at the individual's emotional responses to different images or scenarios.

Introduction

This study will be considering whether five children who are Autistic can recognise and regulate their emotions. The children all attend the same primary school within Kent and from varying year groups- one individual from Reception, two from Year 3 and two from Year 5. For anonymity purposes the names of the children have been altered, with the name still being indicative of the gender of the individual.

Within the study there is a consideration of two key aspects; recognising emotions and regulating emotions. Buck (1990, p330) highlighted the difficulty of defining emotional regulation, by stating the term is "conceptual and definitional chaos". Despite this, Campos *et al.* (2011, p28) attempt to define emotional regulation is the process of altering one's own emotions to reach a desirable place.

However, Thompson (1994, p27-28) suggests there is more to emotional regulation than altering one's own emotions, and defines it as the process which allows individuals to observe others, evaluate and adjust emotions accordingly. This includes being able to read other people's emotions, and accounting for the environment. Uphill and Mills (2011, p A11) support this definition, by stating that it is "the ability to monitor one's own and other's emotions, to discriminate among them and to use this information to guide thinking and action". This will be the concept that is used when referring to emotional regulation within this report; the idea that emotional regulation is both being able to understand the emotions of others and oneself, and to adjust one's emotions to suit scenarios.

Literature Review

Emotional recognition and regulation are often developed to a functional standard from birth through to the early years of primary. Volterra et al (2004, p17) state that even in the earliest stages of the child's life, gestures and emotions are used to communicate feelings. Cole, Michel and Teti (1994, p76) further support the idea that emotional regulation is typically developed early on in an individual's

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life. They state during Early Years and the first couple of years within school, children develop a good understanding of emotions, allowing them to read and respond sufficiently to social situations. However, children with Autism tend to have difficulty both recognising and responding to emotions. Frith and Frith (2010, p176) go so far as to suggest that ASD is “defined” by its “core deficits” in understanding emotional behaviours. Emotional regulation impacts the relationships that an individual has with others (Jahromi, Bryce, Swanson, 2013, p236). The researchers state that as a result of poor emotional skills (reading others and the setting), children with Autism tend to have poor cooperative skills, making it difficult for some children with Autism in a school setting to sustain strong relationships.

The importance for emotional regulation goes beyond social interaction and understanding situations (Berking and Wupperman, 2012; Thompson, Burnham Riosa and Weiss, 2015, p3486). In terms of the individual in the classroom, children with autism often demonstrate their emotional difficulties in a way which is perceived as behavioural difficulties (Laurent and Rubin, 2004, p286). Furthermore, Berking and Whitley (2013, p6) suggest that not being able to regulate emotions leads to a “negative impact on mental health”. Samson, Huber and Gross (2012, p660) also support this, suggesting that children with emotional regulation difficulties do not have many coping strategies to utilise, or the adaptability to cope with stressful situations. Mahler (2012, pS133), also emphasised the impact that emotional dysregulation can have on a person by stating that the deficits within emotion and social communication impacts upon an individual’s entire life. These arguments all strongly suggest that not being able to regulate one’s emotions can have huge implications for a person’s life.

Targeting this issue however, might prove to be a huge challenge. Gross (2015, p8), states that identifying this issue of emotional dysregulation is more difficult than it sounds. The author states that it is difficult enough to recognise and predict the emotional responses of oneself, let alone correctly predict someone else’s emotions. As stated by Cambridge Studies (1982, p8), emotions are a “complex phenomena having neurophysiological- bio-chemical, behavioural- expressive, and subjective-experiential components”, making it a difficult area to study, with many links into other aspects of social sciences and the human domain. This means isolating emotions is nearly impossible- there will be all sorts of influences upon emotional regulation, including individual preferences, upbringing and a person’s experiences.

However, Jahromi, Meek and Ober- Reynolds (2012, p1250) state that difficulty with emotional regulation can have the following implications: holding back an individual’s development, increasing negative behaviours and difficulty with focus in class time. They further this (2012, p1251) by stating that there is a requirement for more of an understanding of the frustrations that children with autism face, no matter how difficult this might be. This information can be used to personalise interventions which support emotional development. This has a huge impact upon classroom practice and teaching, as a crucial aspect of teaching is being aware of barriers to learning, and supporting the whole child. (Department of Education, 2013, p5). Ware Balch and Ray (2015, p429) stated that for children with autism to be effectively supported within the classroom, there is a requirement for intervention sessions with a focus on social and emotional development.

Callaghan *et al.* (2011, p4) identify two main skills which children develop at a young age in relation to emotions; understanding others emotions and intentions by reading their gestures and participating with others based on understanding these emotions. They further state that children with Autism have “atypical biology”, meaning that these two stages are often a key area of weakness. Mazefsky (2015, p3405) furthers this by suggesting that children with Autism often show signs of “emotional distress”,

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caused by “atypical emotional regulation”. This demonstrates that children with ASD tend to struggle with emotional recognition, and have difficulty with managing their emotions in stressful situations. Bachevalier and Loveland (2006, p98), also highlight the importance of being able to understand and interpret other people’s emotions before understanding emotions of the self. They identify that for children to self- regulate, or respond, to emotions they need to go through three stages (2006, p99); recognising emotions in others, recognising emotions of self and being able to interpret/ understand the emotions to respond effectively to them. Recognising emotions is the first step, which children demonstrate the ability to distinguish the difference between expressions, and name the emotions (Golan *et al.*, 2010, p269).

“ASD research has historically been focused on language, social processing, behavior, and cognition, while largely overlooking the emotional domain” (Mazefsky, 2015, p3405). Within the field of education there has been extensive research into Autism Spectrum Disorder, however many researchers (Bachevalier and Loveland (2006, p97), Mazefsky 2015, p3405, Mazefsky, Pelphrey and Dahl, 2012, p93, Rieffe *et al.* 2011, p658) suggest that, despite the in-depth research, there is little understanding of the condition.

Emotional awareness and understanding expressions (including gestures) were highlighted as being areas which children with ASD tend to struggle (Bachevalier and Loveland, 2006, p97; Lanoue, Hough and Powell, 2011, p176; Thompson, Burnham Riosa and Weiss, 2015, p3486). An understanding of emotions, and how to regulate them, is a necessity for social interactions and is a crucial aspect of responding well to different environments (Laurent and Ruben, 2004, p287). Samson, Huber and Gross (2012, p660), suggest that children with ASD tend to “experience more negative and less positive emotions” and have difficulty with recognising their personal emotions. This demonstrates how difficulty with emotional regulation can cause distress to children, a lack of understanding how to manage emotions means that some children react in a more negative way to stressful situations than perhaps is needed.

Mazefsky, Pelphrey and Dahl (2012, p95), go so far to suggest that research into emotional regulation with children with ASD might “lead to advances in conceptualization of treatment, diagnosis, individual differences, and the biological basis of ASD.” While one research study alone will not make such a profound impact, considering whether children with ASD are able to recognise and regulate emotions is a starting point. This shows the relevance of studying the impact that emotional regulation has on children with ASD. This report aims to look at whether a select group of children with ASD are able to recognise and regulate their emotions, and the extent to which they are able to do this.

Methodology

Method

As defined by Bratlinger *et al.* (2005, p197) in Figure 1, the qualitative research will be based upon a combination of conversational analysis – which includes an analysis of speech, facial expressions, tone and gestures – and questionnaires. This concept of using a variety of methods to focus upon one area of study is known as triangulation (Carter *et al.*, 2014, p545). The idea of using mixed method research is not only approved but suggested by Thompson, Burnham Riosa and Weiss (2015, p3494), who state that this is the best way of accurately measuring emotional regulation.

The interviews will be reviewed using qualitative methods, focussing upon conversational methods. Steckler (2005, pxiii) supports the use of qualitative data when considering social sciences, and

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suggests the data method allows insight into these areas which cannot be achieved to the same extent using quantitative data methods. Cambridge Studies suggest that the only way to find out the true emotion another person is feeling is for the person to say it (Cambridge Studies, 1982, p5; Gross, 2015, p8). This is further supported by Silverman (2006, p21) who suggests that the use of transcripts provides a strong record of the data which allows the researcher to return and analyse.

The questionnaires based on emotional recognition will be recorded as quantitative data, using a scoring system to record the answers. If the individual has named the correct emotion they gain a score of 1, identified an emotion which is not the predominant one they gain a score of 0.5, or named an incorrect emotion they gain a score of 0. The concept of using a point scale to record emotions is not an unfamiliar one (Samson, Huber and Gross, 2012, p660). Leuven (Laevers, 2003, p16) developed an Involvement Scale which provides a scale from 1-5 on children's emotions in different scenarios. The interview, which will be used for conversational analysis, looks at a series of 6 images and will give a rough idea of which individuals have good facial recognition of emotions, and who are less secure on this. The data will be compared to 5 other classmates, as children's concept of emotion differs in different year groups (Golan *et al.*, 2010, p269).

Ethics

Before any research could take place, there needed to be ethical consideration for the impact of the project within a primary school setting. The ethical consideration for this project was based upon the BERA guidelines (BERA, 2011). One of the most important aspects of the ethical issues with my research project was child consent, for the questionnaire and the interview (p5). This included ensuring children were aware of what I would be asking of them, and that they agreed to take part. Children also had the right to withdraw from the process at any point (p6). The other aspect which needed considering included privacy (p7-p8), for which the data was stored safely under password and any sensitive information relating to the individuals were kept from the report. These issues were discussed and agreed with by the school prior to the research taking place.

Results and Analysis

Lily (Year R)

Berkovits, Eisenhower and Blacher (2017, p69) state children with emotional dysregulation have difficulty recognising facial expressions. This contradicts the data found for Lily's ability to recognise emotions from facial features, for which Lily could accurately name 4 of the 6 emotions which she was questioned on. This was higher than the average score formed by her and five of her classmates, suggesting that her ability to recognise emotions is good in comparison to her peers.

In the interview, Lily showed ability to identify how the children are feeling in the images shown. With each different picture, she can correctly identify how they are feeling and explain why they are feeling that way. This correlates with the results found from the questionnaire: Lily demonstrates a consistently good ability at recognising emotions.

Interestingly, Lily struggled to relate these emotions onto herself. Throughout the interview, she struggled to answer questions about when she has experienced said emotion, and how she might manage it. For most of these questions, she was unable to think of a time when she experienced the emotion and she struggled to explain how she might manage those emotions. However, when compared to the data collected by her peers, this is a consistent theme across the Year R data, with every participator struggling with knowing how to manage their feelings, and most children in Year R also struggling at points to identify occasions when they have felt the same.

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This suggests that Lily has good emotional recognition, and can pick up on which expressions relate to which emotions, but that she struggles relating that to herself. However, the data also suggests that this is typical of her year group, so age-related factors need to be considered.

Sarah (Year 3)

With regards to emotional recognition, Sarah demonstrated a very strong ability at matching the facial expressions to emotions. With a score of 5.5 out of 6, Sarah managed to correctly identify all but 1 emotion correctly, and managed to gain 0.5 for recognising an emotion which was demonstrated in the picture but was not the predominant one. Her score is above the class average, suggesting that she has strong emotional recognition.

Within the interview, Sarah demonstrated a strong understanding of what is happening within the images, recognising the emotion and explaining why they feel like that. However, Sarah demonstrates heightened emotional responses to the questions about relating the emotion to herself and how she might manage it. This is particularly noticeable for negative emotions, which she identified as angry and disappointed. When asked how she would manage them she responded in a quick paces tone, one of which she shouted and both the times she mentioned how she would struggle to control her emotions due to 'hating' the situation. This is clearly a heightened response to the situations, which are meant to be minorly stressful situations. Berkovits, Eisenhower and Blacher (2017, p69) suggest that some of the emotional responses that children with autism have include "tantrums, 'meltdowns,'" aggression". While Sarah's response is not aggressive or at the point of a tantrum, the fact Sarah shouted her responses demonstrates that she experienced a heightened negative emotion towards those feelings.

Sarah demonstrates good recognition of emotions, and can identify expressions with accuracy. However, she struggles with relating the emotions to herself and managing her emotions, which is suggestive that she struggles with emotional regulation. She clearly has difficulty considering negative emotions in a way which allows her to regulate her feelings and respond to the situation.

Jack (Year 3)

From the questionnaire, Jack correctly recognised 4 of the 6 emotions shown to him. This score is 0.8 below the class average, suggesting his ability to recognise emotions is slightly less than his peers. However, the difference is very small, and it could still be said that Jack has good emotional recognition among his age group.

Jack demonstrates good emotional recognition throughout the interview. He can identify how the people in the images are feeling and why. However, he was unable to answer for every set how he might manage those feelings. He also struggled to identify, for the negative emotions, examples of when he felt that way.

Jack appears to have good emotional recognition, but struggles to understand how to manage emotions and regulate them. Except for Sarah, the other individual from Year 3 involved in the study, Jack's class peers are all mostly able to explain situations in which they have felt similar to the emotion being displayed, and how they have managed those feelings.

Phoebe (Year 5)

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Phoebe demonstrated good emotional recognition from the questionnaires, with a score of 4.5. Her score was 0.07 below the class average, which is a very small margin. This suggests that Phoebe's ability to recognise expressions is strong.

Phoebe has good emotional recognition, as demonstrated in her questionnaire and her ability to identify and explain the emotions as shown in the interview. She can identify the emotions that the pictures demonstrate, and relate them to her own experiences. When it comes to managing emotions, Phoebe can explain how she might manage her emotions depending on the situations, but these are often avoidance strategies. For example, when asked how she would manage feeling sad she stated that she would "manage those feelings by going away from the feeling". This avoidance strategy is identified by Jahromi, Meek and Ober-Reynolds (2012, p1251), who state that children with autism struggle to manage their emotions using self-soothing strategies. Instead, autistic children tend to vent frustrations or avoid dealing with them.

Phoebe shows good emotional recognition skills, and to some extent good regulation. She can identify situations where she has felt certain emotions. However, in terms of managing emotions, Phoebe usually avoids the emotions rather than facing them. While this is one strategy of managing emotions, it is important to be able to regulate emotions in a way which faces them, rather than avoiding them (Jahromi, Meek and Ober-Reynolds, 2012, p1250).

Ryan (Year 5)

From the questionnaire, it was clear that Ryan had good emotional recognition skills. Ryan's score of 4.5 was just 0.07 below the average formed by his class peers. This margin of difference is not significant enough to suggest that Ryan has difficulty with emotional recognition.

Ryan demonstrates a good ability at recognising expressions. Within the interview, he can correctly name emotions, and explain why the people feel that way. However, when it comes to talking about relating the emotions to his own life, for two of the emotions (happy and bored/ sad), Ryan struggled to identify a time when he has felt that way. He also demonstrated signs of frustration when asked how he managed his emotions, such as "I'd barely manage it", "I'd be screaming" and "crazy celebrations". These all demonstrate emotions which seem quite heightened in comparison to the emotions being discussed.

Discussion, Limitations and Future Directions

All the children who were questioned demonstrated good emotional recognition for their age, either being over the average for their class peers, or minorly below it. None of the results suggested a significant deficit in reading emotions of others, contrary to suggestions from research (Rieffe et al. 2011, p657). If this research project were to be continued, it might be worth considering why this is the case- perhaps the children have targeted interventions, or maybe there are other factors to consider.

This section will be also considering some of the flaws in the research methods used for this report. It will discuss the limitations of the research, and this might feed into considerations for future directions.

With regards to the questionnaire and interview, the use of still pictures could be critiqued as an insufficient way to study children's ability to recognise emotions. As Hansen (2015, p1) states, recognising emotions in real-life situations include the skills of reading body language and the social

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situation, in a short space of time. This differs hugely from reading emotions from a picture where the individual has the time to consider carefully how they may be feeling.

One of the flaws of the research project, which cannot be altered for this project but could be taken in consideration for future projects is the length of the project. One way of approaching this project with a more effective methodology might be through an ethnography (Bratlinger et al. 2005, p196). This involves researching an area over an extended time frame to accurately immerse the research within the area and to gain a strong insight into the patterns. Such an approach might lead to a clearer and deeper understanding of the level at which individuals with ASD are able to emotionally regulate emotions, and how this develops over a person's life.

Conclusion

This report has considered whether there is a link between emotional regulation and ASD. Through research in literature, it was clear that there was a gap within research considering whether children with ASD can recognise and regulate their emotions. This has been considered on a small-scale sample, with 5 individuals from one primary school. The use of questionnaires and interviews has elicited information about the individual's ability to recognise and regulate emotions, which has been used in comparison with same- age class mates.

In conclusion, the data analysis suggests that the 5 children with ASD share similar traits in relation to recognising and regulating emotions. The questionnaires appear to suggest the children have relatively good emotional recognition skills when compared to their age group, and the interviews demonstrate the varying abilities at managing emotional regulation. The research implies that the children within the study can identify the emotional state of others, but struggle with relating the emotion to the self, and managing that emotion. This appears to be a particular trend with negative emotions, but that would need further research to consider whether this is the case.

While the data has not come to a clear definitive answer, the research undertaken is a starting point for considering whether children with autism can effectively regulate emotions. Future research would need to consider a long- term study of individuals with ASD, and would need to be based on a wider variety of children in order to come to a conclusion on whether there is a relationship between emotional regulation and ASD.

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Citation

Adams, T. (2017) 'To what extent are 5 children in a primary school in kent with autism spectrum disorder able to accurately recognise and regulate emotions?', *The STeP Journal*, 4(4), pp. 52-60.