How is Emotional Regulation supported in Mainstream Pupils and those with Autism?

A thesis submitted to The University of Manchester for the degree of Doctor of Educational and Child Psychology in the Faculty of Humanities

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Abstract

Methods/ participants: Paper one is a systematic literature review of eight studies' effectiveness at intervening at the parent level to support emotional regulation in children with autism. Paper two is exploratory, six school teachers were interviewed and data analysed thematically with the aim to answer the following research questions;

1. How is emotional regulation operationalised in mainstream primary schools?

2. How do schools adapt their emotional regulation practices to support autistic pupils?

Analysis/ findings: The findings from paper one, though tentative given the number of studies, suggest that parents benefit from participating in interventions aimed at supporting their child's emotional regulation. Parents also report improvements in their child's behaviour following the intervention. However, child outcomes were mixed, with children themselves not always noticing an improvement in their emotional regulation. Paper two, showed that although there is an increase of prioritisation of emotional regulation in schools, there is considerable variability in how it is operationalised and measurement outcomes are limited. A whole school embedded curriculum appeared to be the most chosen method and often perceived to be effective. However, teachers were aware that adaptations to interventions and tools may be needed for individual children, with or without autism. Collaboration with parents and the child themselves, served as a key contributor for many.

Conclusion/ implications: Further research into emotional regulation is needed, especially for children with autism. However, the findings suggest that children with autism can learn to develop positive emotional regulation skills through the support and intervention of their key social partners.

Introduction

Research Background and Preliminary Work

The initial commissioner for the research was an EPS in a local authority which was part of a large cohort study, part of which focused on early identification of autism and intervention to support identified children. The proposed research focused on intervention in schools. It was intended that the empirical research would be a structured evaluation of the impact of an interactive based training model, SCERTS (Social Communication, Emotional Regulation and Transactional Support) (Prizant et al, 2003) a video coaching intervention for children, parents, and school staff.

SCERTS was developed for primary school settings to address social interactions and learning activities for children with autism (Morgan et al, 2018). Two of the major components of the programme, social communication, and emotional regulation, have been cited as the most critical priorities in promoting the development of life skills for those with autism (Yu and Zhu, 2018). The programme focuses on the use of a multi- disciplinary team as the most successful way of supporting those with autism as outlined by the UK's National Autism Plan for Children (NIASA, 2003) and later supported by NICE guidelines (National Institute for Health and Care Excellence, 2013). The SCERTS programme incorporates an assessment process that allows the team around the child to set targets specifically for their needs (Molteni et al., 2013). Much like the work of Vykotsky (1978), learning is seen as being socially mediated and the role of social partners is emphasised (O'Neil et al., 2010). Rather than being a focused intervention, SCERTS is intended to be used in line with the current curriculum to support the needs of children with ASD.

The individual components of SCERTS are based in research evidence (Morgan et al., 2018), however the programme as a whole does not have the same level of research evidence. When trialled in schools, staff have reported SCERTS as a beneficial programme, but it required a change of mindset, approach and a large allocation of time for it to be rolled out thoroughly (Molteni et al., 2013), which could be a reason for schools not using it. However, when schools have been provided with extensive 3-day training and ongoing coaching of

SCERTS, it has been shown to improve outcomes for children in the areas of social participation, adaptive communication, social skills, reduction of problem behaviour and executive functioning (Morgan et al., 2018). As the model emphasises a multi-disciplinary approach, participants found the hardest obstacle was liaising with all professionals and ensuring a full understanding of the process. Benefits identified were, that it provided space for exchange of perspectives and expertise that freed staff from the constraints of the curriculum, which meant they could focus on developmental progress and not just academic demands (Molteni et al., 2013).

Positioning of the Data

With the outbreak of the worldwide Coronavirus pandemic and the training in SCERTS no longer being rolled out to schools, the TEP had to change the direction of their research. This meant rethinking their research questions and the methods used to investigate the area. As a result, the research moved from a quasi-experiment to an exploratory study using interviews. The focus moved to one main aspect of SCERTS, emotional regulation (ER). This area was specifically chosen as it was one of the components of SCERTS which seemed to be increasingly popular with mainstream primary schools but the evidence for its application in schools was limited. The researcher was interested in how school staff perceived the concept of emotional regulation and how this is used in practice.

Further ethical approval was sought for the TEP to conduct the new research. The researcher was able to utilise contacts via the research commission and within her placement EPS to recruit participants. Two of the participants were from schools that the TEP was link EP for. As such, she ensured that she explained thoroughly the separation of her role as their EP and her role as researcher. All correspondence was shared through the TEP's university account in order to keep the two roles separate. Further to this, the TEP asked participants to keep personal details confidential, and to explain roles and supports systems in full, regardless of if the TEP was already familiar with them.

With national restrictions in place, resulting in schools closing to most children and EPs working from home, interviews for paper two had to take place online. This was not the initial plan for the TEP, who originally had scheduled face-face interviews with each participant. There were advantages and disadvantages to conducting the research in this manner. Firstly, as the research took place with SENCOs across the north of England, the use of the internet greatly decreased cost of travel, for the TEP. The use of technology also made it easier for the TEP to arrange times to meet with the SENCOs and at times even conduct more than one interview in the same day, as there was no travelling involved. As many teaching staff were managing additional pressures due to Covid this also made the interviews less time consuming for them (Pressley, 2021). With the growth of online video platforms, such as Skype, Zoom and many more, online interviews can take place in a manner that closely mimics face-to-face interviews, therefore, allowing the interviewer to still pick up on non-verbal cues (Sullivan, 2015) however as this is mostly based on a headshot, the researcher still may miss out on broader non-verbal cues from the participant's full body language (Cater, 2011).

In contrast, the use of the internet and technology did result in some difficulties. For interviews to run smoothly both parties needed to have access to technology and high-speed internet. Before one of interviews took place, the TEP ran into some technical difficulties, which meant she had to delay the start of the interview. Further to this, after completing another interview she then had to re-do the interview as her laptop broke and she lost the data. This impacted the responses of the participants as they were able to think about how they originally responded and improve on their original answers. This could possibly put into question the validity of the data collected, though this may not have had too great of an impact, due to the exploratory nature of the research.

Thesis Outline

Paper 1 presents a systematic literature review (SLR) that aimed to evaluate ER interventions for children with autism where parents were also participants in the intervention. Parent intervention was a focus as social partners are important for children to develop key skills, which is also emphasised in the SCERTS programme. The SLR included

eight studies that aimed to support ER in children and young people aged 3-18 years old with autism, where parents were a focus for intervention. A number of studies had multiple components, which included intervening with parents and children simultaneously. As all of the studies measured outcomes of the interventions, an evaluative SLR was undertaken in order to understand the effectiveness of these interventions, their strengths and limitations.

As teachers are another key social partner in children's lives, paper 2 explored how ER was perceived and utilised within mainstream primary schools. As adoption of ER approaches in schools appears to be quite varied, the research aimed to capture this breadth of application. This also included exploring whether any further adaptations were made for specific groups, such as children with autism. Five SENCOs and one Pastoral Lead were interviewed via Zoom.

Finally paper 3, looked at the concepts of evidence-based practice and practice-based evidence and their relevance to educational psychology and the field of autism. A strategy for dissemination was discussed in relation to the implications of paper 1 and 2.

Axiology

Axiology refers to the researcher's beliefs around values and ethics (Killam, 2013). This includes the researcher's beliefs systems, values underpinning the research and how they choose to go about it.

The researcher had various previous roles supporting children and young people (CYP), within education and mental health settings. Through this experience, she developed strong beliefs around not only engaging parents in decision making relating to their children's care, but also ensuring that they too are trained and skilled to intervene where needed. As such the researcher was keen to evaluate the outcomes of interventions that involve parents, to support the skills of their child(ren).

Throughout the researcher's doctoral training, this is an area of her practice she has developed, as she believes EPs are well positioned to support work with parents. This has been evidenced by inviting parents to training sessions, encouraging schools to share

resources they use at school with the family and where necessary signposting parents to workshops, parent groups and parenting sessions.

Ontology and Epistemology

Ontology is about understanding what reality is, whilst epistemology is about how reality is created (Scotland, 2012).

Critical realists argue that "*we are born into a world in which meaning has already been made; we are born into culture.*" (Scotland, 2012 p.5)

This position fits with the current research, as ER is perceived as an aspect of development and there are benefits of being able to employ effective ER strategies. However, adaptive regulatory strategies may differ for different people and within different contexts. How such strategies are acquired also varies dependent on a person's experience. Similarly, practitioners' understanding of the concept and application of ER strategies will also vary and be influenced by contextual factors.

Critical realists focus on a stratified ontology, which categorises the empirical, the actual and the real (Vincent & O'Mahoney, 2018). Personal perceptions (empirical) and the reality (actual) are all understood by causes and factors that may not always be tangible or known (the real) (Vincent & O'Mahoney, 2018). Paper 1 tried to understand the actual benefits of interventions targeted at parents, paper 2 went further to explore perceptions and development of ER and the way it was utilised within mainstream primary schools. However, without further investigation with individual teachers and students, a true understanding of the actual and real is still limited.

Researcher's Professional Background

The researcher has previous experience of working with children and young people (CYP) across a wide age range. She began her career as a Teaching Assistant in a primary school where 50% of her role was to work in conjunction with the SENCO to provide additional support to children with additional needs. During this role, the researcher was trained to deliver an intervention for children with identified social communication difficulties. In

addition to work at the primary age, she also worked as an A-level psychology teacher, for 16–19-year-olds, from various cultural and social-economic backgrounds.

Outside of education, the researcher worked for CAMHS (child and adolescent mental health services), in a newly developed role to increase mental health access within schools. During this role, she was trained in CBT (Cognitive Behavioural Therapy) based interventions to support CYP and their families with mental health difficulties such as anxiety, school refusal, phobias and more. This role in particular drew attention to how vital it is to work in conjunction with parents to achieve positive outcomes. Working in a clinical setting enabled the researcher to reflect on how much parents/carers are often left out of decision making and often not given support themselves to assist with their child's difficulties, when the main stakeholder is school.

Through her previous experiences, the researcher was able to see first-hand how much ER played a pivotal role in the way in which CYP were able to conduct themselves in the classroom and beyond. Furthermore, the researcher had a personal and professional desire to gain greater understanding about autism. Therefore, the focus on social communication difficulties and a great emphasis on social partners, part of the SCERTS model, drew the researcher to the original research commission.

References

Cater, J. K. (2011). Skype a cost-effective method for qualitative research. Rehabilitation Counselors & Educators Journal, 4,10-17.

Killam, L. (2013). *Research terminology simplified: Paradigms, axiology, ontology, epistemology and methodology*. Laura Killam.

Molteni, P., Guldberg, K., & Logan, N. (2013). Autism and multidisciplinary teamwork through the SCERTS Model. *British Journal of Special Education*, *40*(3), 137-145.

Morgan. L., Hooker. J.L., Sparapani. N., Reinhardt. V.P., Scharschneider.C. & Wetherby. A. M. (2018). *Cluster Randomized Trial of the Clasroom SCERTS Intervention for Elementary Students with Autism Spectrum Disorder*. Journal of Consulting and Clinical Psychology. 86 (7), 631-644.

NIASA (National Initiative for Autism: Screening and Assessment*)* (2003) *National Autism Plan for Children (NAPC).* London: National Autistic Society.

National Institute for Health and Care Excellence (2013). Autism spectrum disorder in under 19s: support and management. Clinical guideline [CG170].

O'Neill, J., Bergstrand, L., Bowman, K., Elliott, K., Mavin, L., Stephenson, S., & Wayman, C. (2010). The SCERTS model: Implementation and evaluation in a primary special school. *Good Autism Practice (GAP)*, *11*(1), 7-15.

Pressley, T. (2021). Factors Contributing to Teacher Burnout During COVID-19. *Educational Researcher*, doi: [10.3102/0013189X211004138](10.3102/0013189X211004138).

Prizant, B.M., Wetherby, A.M., Rubin, E. & Laurent, A.C. (2003) *'The SCERTS Model: a transactional, family-centred approach to enhancing communication and socioemotional abilities of children with autism spectrum disorders'*, Infants and Young Children, 16 (4), 296-316.

Scotland, J. (2012). Exploring the Philosophical Underpinnings of Research: Relating Ontology and Epistemology to the Methodology and Methods of the Scientific, Interpretive and Critical Research Paradigms, *5*(9), 9–16. https://doi.org/10.5539/elt.v5n9p9

Sullivan, J. R. (2012). Skype: An appropriate method of data collection for qualitative interviews? The Hilltop Review, 6,54-60.

Vincent, S., & O'Mahoney, J. (2018). Critical realism and qualitative research: An introductory overview. *The Sage handbook of qualitative business and management research methods: History and traditions*, 201-216.

Vygotsky. L. S. (1978). *Mind and society: the development of higher psychological process.* Cambridge, MA: Harvard University Press.

Yu, L., & Zhu, X. (2018). Effectiveness of a SCERTS model-based intervention for children with autism spectrum disorder (ASD) in Hong Kong: A pilot study. *Journal of autism and developmental disorders*, *48*(11), 3794-3807.

Paper 1: Supporting Emotional Regulation in Children with Autism- The Role of the Parents: A Systematic Literature Review

Abstract

Emotional regulation is (ER) a key skill that helps people engage in effective social relationships. Parental relationships are a key factor to ER development in children. ER difficulties are common in children with autism, which can present challenges for their parents. Interventions have been developed to support parents and their children with autism. This systematic review evaluates the effectiveness of interventions at the parent level to support emotional regulation in children and young people, aged 3-18 years old, with autism.

A systematic search of databases took place between September 2019 and July 2020, following the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) guidelines. Additional searches were made through reference harvesting and papers were also recommended through database notification. This resulted in eight studies, which were assessed for their Weight of Evidence. All papers aimed to evaluate the usefulness of interventions that aimed to support ER in children with autism. Every study had a specific focus of intervening at the parent level. The most common form of interventions used were CBT (Cognitive Behavioural Therapy) informed programmes to teach children emotional states, whilst the parent elements were aimed at supporting parent's confidence in dealing with their children's behaviours.

Parent outcomes were consistently positive across all studies. Parents were more confident and reported significant improvements in their own efficacy towards understanding and managing their children's emotions and behaviours. However, child self-reports did not always yield the same positive outcomes and showed variability in results.

Introduction

Emotional regulation (ER) is an important developmental skill that helps people to socialise with others and enables them to be ready to learn. However, children with autism sometimes develop their emotional regulation later or not to the level expected for their age (Factor et al., 2019). This can impact on their social relationships with peers and family and act as a barrier in the classroom, therefore impeding their ability to access the curriculum to their full potential.

A long-established definition of emotional regulation is:

> *The extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals* (Thompson, 1994, p,27).

The above definition infers that emotional regulation is not solely a within person characteristic, and that extrinsic factors, such as social partners, are a key component to developing effective emotional regulation. This is specifically true for children and young people, where parent and child relationships are essential for all round development, including emotional regulation. Other social partners such as, school teachers and peers, also create the context for emotional regulation and the personal belief that one is capable of utilising strategies available to self-regulate effectively (Thompson, 1994).

Redirecting your attention from emotional arousing stimuli is one of the earliest emotional regulation strategies cited in children aged 4 and 5 (Cummings, 1987), such as turning away or putting their hands over their ears. This attention process is often adopted by parents of young infants to soothe their child, by distracting them with favourite toys or limiting their knowledge and exposure of emotional evoking situations (Miller & Green, 1985). Using the external environment as a tool for regulation is promoted and modelled to babies and toddlers from their parents at an early age. This becomes a technique young children later then turn to as a self-regulating strategy. As children mature and they acquire a more complex understanding of emotions, they move to more intrinsic strategies of emotional regulation. This can still be based on attention but focuses more on internal thoughts, and positive self-talk (Thompson, 1994). However, older children and even adults still turn to social partners in times of distress to support their emotional regulation. Friends, family members and peers are often a source of advice and comfort when adults are experiencing negative affect (Mccoy & Masters, 1985). Showing that whilst we become more emotionally literate and develop intrinsic coping strategies, social partners still play a significant role in our ability to regulate emotions; and for children the most important social partner is arguably their parents and/or carers.

Autism is defined as a social communication disorder, characterised by deficits in communication, both verbal and non-verbal, repetitive behaviours, reduced understanding of emotions and/or affect and social emotional reciprocity (American Psychiatric Association, 2013). Although research into emotional regulation and autism is still growing, the literature suggests that those with autism are likely to show less effective emotional regulation strategies. Identification of deficits in emotional regulation in this population may be partially associated with the increased use of psychiatric services (Mazefsky et al., 2013).

The use of less effective emotional regulation strategies may be linked to a lack of motivation to achieve a particular goal (Mazefsky et al., 2013), as suggested in the definition by Thompson (1994). Research has shown that children with autism tend to use methods such as suppression and avoidance (Jahromi et al., 2012; Samson et al., 2012). In addition to a potential lack of motivation, Theory of Mind (Frith & Frith, 2003) has also been cited as an explanation for the use of less effective ER strategies. Theory of Mind is also related to understanding and processing of your own mental state as well as that of others (Frith & Frith, 2003). Not being able to understand and communicate your own emotions, increases the difficulty for caregivers to understand their children's emotions, mirror them and teach them adequate and effective strategies for regulation. Not being able to attend to your child's emotions effectively can be disheartening for parents and often leads to stress of their own which can in turn result in parents being less emotionally available to their child (Tomanik et al., 2004). Decreased joint regulation may then lead to longer term emotional regulation difficulties in autistic children (Gulsrud et al., 2010).

There is evidence that Cognitive Behavioural Therapy (CBT) is effective in supporting emotional skills in children with high functioning autism (Beaumont & Sofronoff, 2008; Derosier et al., 2011). In addition, transdiagnostic cognitive behaviour therapy (tCBT) has been used to improve ER in children without autism (Newby et al., 2015). Such research has highlighted that interventions, specifically those with CBT elements, are successful in developing emotional regulation in children and specifically those with autism. Parents of children, more often mothers as the primary caregivers, can support development within their children and use joint attention as a means to support change and produce positive outcomes for social development (Aldred et al., 2004). Greater understanding of the vital role that parents and/ or carers have on their child's emotional development has led to more research into parent focused interventions to support emotional regulation in children and children with autism.

Given that parents of autistic children are likely to play a crucial role in scaffolding their child's emotional regulation, having a better understanding of the parent role within interventions for emotional regulation in children with autism is important. Therefore, the current review focuses on the following research question:

"How do interventions at the parent level support emotional regulation in children with autism?"

Method

A systematic search of databases took place between September 2019 and July 2020, following the Preferred Reporting Items for Systematic Reviews and Meta Analyses (PRISMA) guidelines (Moher et al., 2009) (see figure 1 below). The following databases were used; British Education Index, Google Scholar, Applied Social Science Index and Abstracts and Psych Info. Additional searches were made through reference harvesting and papers were also recommended through a database notification. The search terms used focused on; emotional regulation, autism, child*, interventions, young people and parent/carers. The initial search resulted in 71 hits. Abstracts were then analysed by the first author in consultation with the second author to ensure that the key terms were present, and subsequently the papers were analysed against the inclusion criteria. The inclusion criteria were that studies must include: a parent/carer component; children must have a diagnosis of autism; the main focus of the study must be emotional regulation; the study should be about a specific intervention or programme; children should be aged between 3-18 years and studies should be published in English between 2010-2019. This resulted in eight papers in total, inclusive of a follow up (Factor et al, 2019).

PRISMA framework

Identification

71 records identified through database searching

4 records identified through other sources

Screening

70 records after duplicates removed

53 records excluded after title and abstract screened

17 papers screened according to inclusion/exclusion criteria

6 records excluded

Eligibility

11 full text articles assessed for eligibility.

3 full text articles excluded, with reasons

Included

8 studies included in quantitative synthesis

Figure 1: PRISMA framework

The remaining papers were then assessed for their Weight of Evidence (WoE) based on (Gough, 2007). An adapted quantitative evaluation framework was used (Woods et al., 2011) for WoE A ,see table one below. Each paper was assessed against the criteria, with a maximum score of eight. The studies were then categorised as low (0-2.5), medium (3-5.5) or high (6-8) quality research, bands were evenly distributed for fairness. 25% of the papers were inter-rater coded by both authors. The initial scoring yielded 90% agreement initially but after both authors discussed their scores 100% agreement was reached. The first author subsequently coded the remaining papers.

WoE B measured the methodological appropriateness of each study, see table two. This was defined by looking at how well defined the samples were, the use of objective measures of autism, use of specific measures of ER and the use of parental outcome measures. Each area had a maximum score of 1. WoE C looked at the effectiveness of each study, with a maximum score of 2 for the studies which yielded positive outcomes with the use of a control group, see table three.

Table 1 Weight of Evidence A

Methodological Quality	Maximum score
Randomised Group Design	1
Focus on a well-defined disorder/problem	1
Comparison with treatment-as-usual, placebo, or less preferably, standard control	1

Use of manuals/protocols/training	1
Fidelity checking/supervision of intervention	1
Large enough sample (Cohen, 1992)	1
Use of outcome measure(s) that has demonstrably good reliability and validity *(2 points if more than one measure used).*	2

Table 2 Weight of Evidence B

Methodological Appropriateness	**Maximum score**
Well defined sample	**1**
Objective measures of autism	**1**
Specific measures of Emotional Regulation	**1**
Specific parental outcome measures	**1**

Table 3 Weight of Evidence C

Effectiveness	**Maximum score**
The intervention had no or negative effect, or did worse than control	**0**
The intervention had a positive effect but had no control	**1**
The intervention led to better outcomes than the comparison or treatment as usual group	**2** • *1 point if improved outcomes are only present for the child or parent group* • *2 points if improved outcomes are present for both the parent and child group*

Findings

The eight included papers were dated 2010-2019, one of them was the follow up to an original study (Factor et al., 2019). Four of the papers originated in the United States, two in Canada, one in Switzerland and one in Australia. The studies took place in a variety of settings: four were in a clinic or purpose-based laboratory or a university (Factor et al., 2019; Gulsrad et al., 2010; Scarpa & Reyes, 2011 and Weiss et al., 2018); one was mixed between community settings, school and university (Wood et al., 2014); Sofronoff et al., (2017) was a self- directed study and the remaining two did not specify their location. The ages of child participants ranged from 3 to 18 years across the studies and intervention duration ranged from 4 to 18 weeks.

All papers aimed to evaluate the usefulness of interventions that aimed to support emotional regulation in children with autism. Every study had a specific focus on intervening at the parent level. All studies except Enav et al., (2019) also intervened at the child level simultaneously with the parent intervention. Although emotional regulation was the area of interest not all papers used specific emotional regulation outcome measures and often measured this through other related skills, such as pro social behaviours. All children had a prior diagnosis of autism before participation and many of the studies then went on to confirm diagnoses through additional measures such as the Autism Diagnostic Observation Schedule (ADOS) (Lord et al., 2000, 2012).

All of the papers employed quantitative methods and used a variety of outcomes measures to evaluate the effectiveness of each intervention. Four papers used randomised control trials, one of which used the pre- and post-design method (Scarpa & Reyes, 2011), one used randomised controlled observation (Gulsrud et al., 2010), one used quasi-experiment using pre- and post-methods (Thomson et al., 2015), one presented a non-randomised study (Enav et al., 2019) and two were solely pre and post designs studies (Shaffer et al., 2019; Sofronoff et al., 2017). Treatment as usual and waitlist controls were the most common use of comparison groups, whilst two papers did not use a comparison group (Shaffer et al., 2019; Thomson et al., 2015).

The most common form of interventions used was CBT informed programmes to teach emotional states to children (Thompson et al., 2015; Shaffer et al., 2018; Scarpa & Reyes, 2011; Weiss et al., 2018; Sofronoff et al., 2017) however the parent elements were aimed at supporting parent's confidence in managing their children's behaviours. All of the interventions were directed by the research group, often this was through the use of graduate students under the supervision of a clinical psychologist, whilst (Sofronoff et al., 2017) was a child self-directed programme and accredited researchers supported parents to facilitate the intervention.

Table 4 Summary of Studies

Research study and country	Focus/Aim	Study Design	Setting	Intervention sample (age, type of autism, gender, and ethnicity)	Intervention (duration, intensity, modality, delivery)	Outcome	Follow up	WoE D
Enav et al (2019), Switzerland	To examine the impact of a mentalisation based group intervention for parents of children with autism.	Non-randomised study design	Not specified	68 parents of children (3-18 years) with prior diagnosis of autism. Participants aged between 31-64, 81.2% were female. Ethnicity not specified.	Weekly sessions of 90 minutes over 4 consecutive weeks, only aimed at parents. Sessions focused on emotions, emotional regulation, mentalisation strategies and specific challenges of emotional regulation.	Parents increased proximal measures of reflective functioning (parent development interview (PDI) (Slade et al.,2003) Parents increased their beliefs of emotions changing (Implicit Theories if Emotional Regulation (ITE)) (Tamir et al., 2007). Decreased symptoms in children and greater parental efficacy also reported. No significant effects for the emotional regulation of the parents (Emotional Regulation Questionnaire, Gross and John 2003).	No	Medium
Factor et al (2019), United States	Follow up study (see Scarpa and Reyes below) To see if STAMP (The Stress and Anger Management Programme) decreases negative affect in young children with autism and does STAMP increase parent confidence in managing their child's negative affect.	Randomised control trial	In Clinic	23 children (19 boys and 4 girls) aged 4-7 and their parent/carers (2 fathers, 20 mothers and 1 aunt). All children had a diagnosis of autism and met ADOS (Lord et al., 1898) criteria. All participants were white.	Children participated in nine group treatment sessions and their parents had complementary group sessions. The waitlist control participated in the same intervention, one week later. Sessions focused on understanding emotions and the teaching of relaxation tools.	The Emotional Regulation Checklist did not yield significant changes in emotional regulation (ERC: Shields & Cicchettii, 1997), for either group. However, significant decrease in negativity and lability were found for the experimental group. There was a significant increase in parent perceptions of their child's ability to regulate anger and anxiety.		Medium

Gulsrud, Jahromi and Kasari (2010), United States	To examine emotional self-regulation in toddlers and maternal scaffolding strategies; using an early intervention targeting joint engagement and joint attention in children with autism.	Randomised controlled observation	Laboratory playroom	34 mother and child dyads. 19 were white and the rest from minority backgrounds. Children ranged from 21-36 months old. All children were diagnosed with autism and also met criteria on the Autism Diagnostic Interview-Revised (ADI- R: Lord et al. 1994) and ADOS (Lord et al, 1989).	Three sessions per week over an 8-week period with 10 modules, targeting early joint attention, language skills and joint engagement between infants and their mother.	The behaviour coding showed there were improvements in the maternal co-regulation strategies and child emotional regulation. Child expressed negativity and avoidance decreased as did maternal emotional following.	No	High
Scarpa and Reyes (2011), United States	To investigate the efficacy of CBT to teach emotional states and emotional regulation strategies to young children (5-7) with high functioning autism. With additional focus on how CBT can improve parental confidence in their ability to manage their child's anger/anxiety.	Randomised experiment with pre- and post-measures.	In Clinic	11 children (2 boys and 9 girls) aged 5-7 years, with their mothers. All children met ADOS criteria. All children were European American.	Nine weekly 1 hour sessions, for children. Parents had 9 simultaneous psychoeducation sessions and homework tasks to practise with their children.	The experimental group showed significantly fewer outbursts and for shorter durations. Their parents showed significantly more confidence in their ability to deal with their child's behaviours; according to the parental confidence scale (created specifically for this study).	Yes- Factor et al (2019)	Medium

Shaffer et al (2018), United States	To assess the effectiveness of IO-PERT (Intensive Outpatient Programme for Emotional Regulation Treatment) on youth with autism.	Pre and Post Design	Not Specified	26 males and 8 females aged 8-12. 91.2% were white and 8.8% black and one participant did not specify their race. Parents also participated. 58.8% of the children had a primary diagnosis of autism, other diagnoses included ADHD (Attention Deficit Disorder) and GAD (Generalised Anxiety Disorder).	Two weekly sessions over five weeks. Sessions included youth groups and caregiver groups. Sessions focused on CBT and mindfulness both in session and as homework tasks.	All caregivers gave positive feedback on their satisfaction of the programme. Caregiver confidence in coping with their children's behaviours increased significantly. There was a decrease in many negative behaviours at post intervention including, anxiety/depression, somatic complaints, rule breaking and withdrawal.	No	Medium
Sofronoff, Silva and Beaumont (2017), Australia	Evaluation of multi component social and emotional skills training programme for children with high functioning autism, with therapist support to parents.	Pre-post follow up design	Self-directed.	41 children; 36 males; aged 7-12 years with prior ASD diagnosis and 38 parents. Ethnicity not specified.	10 -week online programme over 12 to 18 weeks, for the children. Focused on recognising unhelpful thoughts and learning problem solving skills. Parent Skype sessions lasted 30 to 60 minutes each week. They focused on enabling the child's participation and problem solving.	Parents reported decreased child anxiety and problem behaviours and increased in efficacy in managing child's behaviour. Children showed increased understanding of anger management, when assessed against emotion management vignettes post intervention.	Improvements maintained over a six week follow up.	Medium

Thomson, Riosa and Weiss (2015), Canada	Evaluation of CBT based programme, the Secret Agent Society, for children with autism	Quasi-experiment (pre and post)	Not specified	14 children: 8-12 years; 1 female; clinical diagnosis of Autism Number of parents not specified. Ethnicity not specified.	10 weekly 1-hour sessions which parents and children attended. Sessions targeted Emotional Regulation. They utilised activities such as video games, modelling and relaxation mindfulness activities.	Parents reported improved emotional lability internalising, behavioural dysregulation, and adaptive behaviours; as shown on the Behaviour Assessment System for Children-2nd Edition (BASC-2: Reynolds and Kamphaus, 2006). Therapists reported decreased overall severity. Children reported reduced dysregulation and improved coping.	No	Medium
Weiss et al. (2018), Canada	To present results of the Secret Agent Society (SAS): a CBT intervention, for children with autism and their caregivers.	Randomised waitlist-controlled trial	At the university	68 children (60 male) aged 8-12 years and their parents (mostly mothers- 57). All children had a prior diagnosis of autism. 76.7 % of the treatment group were white and 23.3% were from minority backgrounds. In comparison, 84.6% of the waitlist group were white, 11.5% were visibly from minority backgrounds and the rest preferred not to disclose their ethnicity.	10 child sessions, where parents were encouraged to participate. Using in vivo practice, home/school diaries, systematic exposure etc. Using the theme of spy skills, the SAS: OR uses activities specifically designed to improve emotion regulation.	The BASC- 2 and the ADIS-P (The Anxiety Disorders Interview Schedule for Children for DSM-IV: Silverman and Albano, 1996), show that both parent and clinicians reported large effects for change. Treatments were associated with improvements in internalising and externalising symptoms and overall psychiatric symptom severity. However, no improvements were recorded from children reports.	Yes- Study Tajik- Parvinchi et al. (2020) Follow up focuses on moderators rather than intervention	Medium

Participants

Each intervention aimed to support children and young people aged 21 months to 18 years, with at least one child or young person with a diagnosis of autism. Across all studies, child participants were predominately male, which reflects the over representation of male diagnoses of autism in the wider population (Chiarotti & Venerosi, 2020). Whilst the children participants were predominantly male, this was the opposite for the caregivers that participated, where parents were mostly mothers. In addition, there was limited ethnic representation, as most participants were white, such as Factor et al., (2019) where 100% of participants identified as white.

To be included in the studies all children had to have an existing professional diagnosis of autism. In addition, many of the studies did further screening to confirm child diagnoses. This was mostly done using the ADOS (Lord et al., 2000). Weiss et al., (2018) used the Social Communication Questionnaire- Lifetime Version (SCQ; Rutter et al., 2003) and the Social Responsiveness Scale, second edition (SRS-2; Constantino and Gruber, 2012), which was later followed by the ADOS if children did not meet the cut off criteria of the previous assessments. Whilst autism was the condition of focus, a couple of the studies included participants with comorbid conditions (Shaffer et al., 2018 and Sofronoff et al., 2017). Shaffer et al., (2018), focused on children with comorbid disorders such as Attention Deficit Hyperactivity Disorder (ADHD), and Generalised Anxiety Disorder (GAD) whilst many had up to three diagnoses. This contrasts with the exclusion criteria for Gulsrud et al., (2010), where children with comorbid diagnoses were not permitted to take part. A further inclusion criterion for many of the studies, was to have an average level of IQ (Weiss et al., 2018, Thomson et al., 2015, Sofronoff et al., 2017, Shaffer et al., 2019), where children were over the age of seven. For those who were younger, aged 4-7, intellectual functioning was not assessed, rather researchers ensured that children were verbal and were able to understand instructions (Scarpa & Reyes, 2011 and Factor et al., 2019) so that they were able to access the interventions they were enrolled on. The final two papers (Enav et al., 2019 and Gulsrad et al., 2010), had a greater focus on parents, therefore intellectual and verbal abilities were not highlighted in the inclusion criteria. All studies except Enav et al., (2019) included both parents and children in the intervention. Enav et al., (2019) only intervened at the parent level and included 68 parents. Most of the sample was made up of mothers, in line with the parent sample of the other studies.

Interventions

Many of the studies used a Cognitive Behavioural Therapy (CBT) informed intervention that was adapted to support emotional regulation in the target population. The use of social partners was a key element in all of the research papers. Some of the studies such as, Sofronoff et al., (2017) and Weiss et al., (2018) did not only intervene at the parent level simultaneously with child intervention, but they also provided teacher handouts that summarised skills that had been supported in sessions for teachers to use and assist within the classroom. The most used intervention was the Secret Agent Society programme (SAS) (Beaumont, 2013; Beaumont & Sofronoff, 2008) adapted specifically for the study's specific needs. Sofronoff et al., (2017) made the SAS programme self-directed, so that families were able to access the intervention in their own homes without constant professional input.

In addition to challenging parent and child perceptions around emotions and teacher's use of effective emotional regulation strategies, many of the studies added in relaxation techniques (Factor et al., 2019; Scarpa & Reyes, 2011; Shaffer et al., 2019; Sofronoff et al., 2017; Thomson et al., 2015; Weiss et al., 2018) and utilised mindfulness techniques for the children. These strategies and further psychoeducation, around emotions and emotional support, was provided to parents with the aim of increasing their responsiveness. Parents were also given support to increase their self-efficacy in supporting the emotions of their children whilst supporting them to manage their own emotions so that they could be more responsive to their children's needs.

However, there were two studies that did not decide to use CBT as part of their intervention. Mother and child mediation, to support joint attention and language skills was used in Gulsrud et al., (2010). Sessions were recorded and coded to assess emotional regulation outcomes through the level of parental engagement. Conversely, Enav et al., (2019) chose to only intervene at the parent level, by focusing on supporting parent's understanding of emotional regulation, successful techniques and what emotional regulation looks like in the autism population.

Measures

Many of the studies used emotion regulation measures completed by the parents to track and evaluate the children's emotional regulation at the start and end of the intervention. The most frequently used measure was The Emotion Regulation Checklist (ERC) (Shields and Cicchetti, 1997). This is a 24-item measure that is completed by parents to report on their child's regulation and negativity, two elements of emotion regulation. The Emotion Regulation and Social Skills Questionnaire (ERSSQ) (Beaumont and Sofronoff, 2008) was also used and completed by the parents to indicate the level of emotional regulation of their children. Shaffer et al., (2018) did not use any measures that directly measured emotional regulation, they instead used measures such as the Child Behaviour Checklist (CBCL) (Achenbach and Rescorla, 2001) and the Aberrant Behaviour Checklist Community (ABC-C) (Aman and Singh, 1986), which measure behaviours that have been commonly identified as indicators of emotional regulation.

Whilst most studies used parent measures to indirectly assess the emotional regulation of the child participants, two of the studies did use child self-reports (Thompson et al., 2015 and Weiss et al., 2018). Children were presented with vignettes and their responses were recorded to assess how they would respond in an emotionally turbulent situation. In addition, they completed the Children's Emotion Management Scale (CEM: Zeman et al., 2010 and Zeman et al., 2001) (Thomson et al., 2015 and Weiss et al, 2018).

Enav et al., (2019) assessed parental reflective functioning, emotional regulation beliefs, emotional regulation, and parental efficacy, with The Parental Development Interview (PDI) (Aber et al., 1985), The Implicit Theories of Emotion Scale (ITE) (Tamir et al., 2007), The Emotional Regulation Questionnaire (ERQ) (Gross and John, 2003) and The Parenting Sense of Competence Scale (PSOC) (Gibaud-Wallston and Wandersmann, 1978). Children behaviours were assessed using The Child Behaviour Checklist (CBCL) and The Aberrant Behaviour Checklist (ABC) (Achenbach and Edelbrock, 1983 and Nakamura et al., 2009). These were used to assess psychiatric symptomatology and how the children internalised and externalised their behaviours.

Outcomes

Parent outcomes were consistently positive across all studies. Parents were more confident and reported significant improvements in their own efficacy towards understanding and managing their children's emotions and behaviours. In addition, parents also often reported they noticed a decrease in their children's behaviours post intervention. However, child self-reports did not always yield the same positive outcomes. Weiss et al., (2018) found no significant changes across most child report measures, which was in line with previous research that has used CBT for children with autism. However, they did find a significant increase in child reported emotional regulation knowledge.

Where parents were the main focus of the intervention (Enav et al., 2019; Gulsrud et al., 2010), improvements were still noted for both children and parents. Enav et al., (2019) found that whilst parents felt more confident in supporting their children's emotional regulation and reported a decrease in their children's behaviours, the intervention did not have any significant effect on their own personal emotional regulation.

Discussion

Although research in this field is early in its development and the number of studies included in this review were small, findings are positive. If emotional regulation is based on goal orientation and how this is achieved through intrinsic and extrinsic factors, as Thompson's (1994) definition implies, it provides an explanation as to why children with autism may struggle with emotional regulation, from an intrinsic perspective. Therefore, the studies reviewed in this paper, aimed to strengthen extrinsic factors to help increase emotional regulation in the cohort. This was mainly done through intervening at the parent level.

The results from each study evidenced that intervening at the parent level, produces positive outcomes for parent confidence and self-efficacy towards the way in which they understand and support their children's emotional regulation. This was seen to be true whether the intervention was done in clinic, self-directed or only included the parents and not the children themselves. However, how the interventions impacted the children specifically varied. Research suggests that multi-component interventions tend to yield greater positive outcomes for children with autism (Wong et al., 2014). Across the board, parents reported that they saw a decrease in their child's externalising behaviours and felt that their children improved their emotional regulation. However, results varied for the children involved. The measures used to assess child progress varied from study to study, which may be the reason for the inconsistent results. Some studies only assessed the outcomes for the children through parent self-reports (Enav et al., 2019; Factor et al., 2019; Shaffer et al., 2018). Whilst others used both child reports and parent reports (Thomson et al., 2015; Sofronoff et al., 2017; Scarpa & Reyes, 2011; Weiss et al., 2018). Gulsrud et al., (2010) used observational coding to assess the progress of ER for the children. Such variance in outcome measures puts into question the internal validity of the studies. Further research would benefit from clear robust measures that the child participants could complete themselves, in addition to those used with parents. This may lead to more consistent results from the impact of the interventions.

In addition, as Frith and Frith (2003) suggested, deficit in ToM may make it difficult for children with autism to identify their own mental states. Therefore, they may be unlikely to note a difference in their ability to regulate their emotions post intervention.

This group of studies appear to have a clear theoretical model of how emotional regulation operates with improvements in parents understanding of their child's behaviour, theorised to lead indirectly to children's improved emotional regulation. Measures of children's emotional regulation showed more mixed results, which may be due to the reliance on self-report measures. The difference between child reported outcomes and that of parents may be due to the way characteristics were measured. Self-report measures have an array of limitations, including the way items are perceived by the respondent and their subjective nature, which may explain the difference between adult and child responses (Emeh et al., 2018). The results of the current review suggest that perhaps the questionnaires used should have been specifically designed for an autism population and a multi-method approach should have been used to assess child progress, rather than being so heavily reliant on self-report measures. Follow up measures would be beneficial to assess the long -term effects of the intervention for the children and their parents. Previous reviews have highlighted that adapted interviews, specifically for engaging children with autism, are successful at increasing the accuracy of children reports (Fayette & Bond, 2018).

Whilst the studies shed light on the importance of using social partners to support emotional regulation in children with autism and to include them within interventions, the data could also be criticised for being androcentric, as most children involved were male, with very little data focusing on the development of ER in females with autism (Lai et al., 2015). In contrast, the reverse is true for the parents involved, as many were mothers or other female primary carers. Research has found that girls present differently to boys with autism and similarly, parents perceive their behaviour differently (Little et al., 2017), which indicate results may have varied with a more diverse participant pool. This may be more indicative of male behaviour and how this is experienced by their mothers, rather than a general overview of children with autism and how their parents can support their emotional regulation skills. With such polarised participants, due care needs to be taken when generalising the results in to practice. Research into this area would benefit from studies that include a more varied gender balance for the children and parents, as gender may have an impact on how symptoms are displayed and the interaction between parent and child.

In addition to gender inequalities, where ethnicity was referenced, there was also an over representation of white participants. The lack of racial representation also leads to lack of cultural representation, as culture and values have a great impact on how we perceive and express emotions, it is imperative that further research takes place with a wider and more diverse population (Thibault, 2014). Practitioners who work closely with families and children with autism from diverse communities should be particularly aware of these limits in the research, so that they can work to mitigate against the limitations within their practice. This will need practitioners to balance their evidence base practice with that of practice-based evidence.

Although the data set shows positive outcomes, research does highlight the lack of ecological validity in research that is clinic based as results may not always be generalised to the real world (Kasari & Smith, 2013). The results of the review can be used to support the practice of educational staff and specifically those that support children with autism. Studies have proved that greater

school (or educational context) and parent communication, leads to better outcomes for children, specifically those with Autism (Azad et al., 2018). These findings are consistent to those of the present review, which indicate the involvement of parents in interventions has a positive outcome for parents and can also lead to more positive outcomes for children. EPs should support schools to work collaboratively with parents to draw upon their expertise and strategies within meetings and joint training. This would help to ensure that there are consistence expectations across both settings and helps to reduce the power imbalance between teacher (professional) and parents.In addition, it is valuable that parents and school staff maintain an open dialogue around the use of strategies implemented to support emotional regulation, so that they both can support as social partners for the child, especially as children with autism find generalising learning across settings more difficult than their typically developing peers (Lord et al., 2001). Further research into the area of emotional regulation in children with autism, would benefit from interventions that include both parents and school as main stakeholders.

Further limitations derive from the review process itself. As the research into emotional regulation and specifically within the autism population is still within its infancy, many iterations had to be made to arrive at a final set of search terms for the review process. Therefore, the inclusion criteria had to expand across a broader age range than intended and therefore, the results may vary due to developmental differences across the age range. Once the literature in this area develops further it would be beneficial for more targeted reviews to take place which refine foci such as age range, explore the influence of individual characteristics such as gender or culture or evaluate interventions for CYP who are not included in the current research e.g., those with additional learning needs.

References

Aber, J., Slade, A., Berger, B., Bresgi, I., & Kaplan, M. (1985). The parent development interview. New York: The City University of New York.

Achenbach, T. M., & Edelbrock, C. S. (1983). Manual for the child: Behavior checklist and revised child behavior profile. Burlington: Department of Psychiatry, University of Vermont.

Achenbach, T. M., & Rescorla, L. (2001). *ASEBA school-age forms* & *profiles*. Burlington: ASEBA.

Aldred, C., Green, J., & Adams, C. (2004). A new social communication intervention for children with autism: Pilot randomized controlled treatment study suggesting effectiveness. Journal of Child Psychology and Psychiatry, 45, 1420–1430.

Aman, M. G., & Singh, N. N. (1986). *Aberrant behavior checklists: Manual*. East Aurora: Slosson Educational Publications.

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Washington, DC: Author.

Azad, G. F., Marcus, S. C., Sheridan, S. M., & Mandell, D. S. (2018). Partners in School: An Innovative Parent-Teacher Consultation Model for Children with Autism Spectrum Disorder. *Journal of Educational and Psychological Consultation*, *28*(4), 460–486. https://doi.org/10.1080/10474412.2018.1431550

Beaumont, R. (2013). Secret agent society: Operation regulation manual. Milton, Australia: Social Skills Training Institute.

Beaumont, R., & Sofronoff, K. (2008). A multi-component social skills intervention for children with Asperger syndrome: The Junior Detective Training Program. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *49*(7), 743–753. https://doi.org/10.1111/j.1469-7610.2008.01920.x

Chiarotti, F., & Venerosi, A. (2020). Epidemiology of autism spectrum disorders: A review of worldwide prevalence estimates since 2014. *Brain Sciences*, *10*(5). https://doi.org/10.3390/brainsci10050274

Constantino, J.N., & Gruber, C.P. (2012). Social Responsiveness Scale – Second Edition (SRS-2). Torrance, CA: Western Psychological ServicesAzad, G. F., Marcus, S. C., Sheridan, S. M., & Mandell, D. S. (2018). Partners in School: An Innovative Parent-Teacher Consultation Model for Children with Autism Spectrum Disorder. *Journal of Educational and Psychological Consultation*, *28*(4), 460–486. https://doi.org/10.1080/10474412.2018.1431550

Cummings, E. M. (1987). *Coping with Background Anger in Early Childhood* (Vol. 58, Issue 4).

Derosier, M. E., Swick, D. C., Davis, N. O., McMillen, J. S., & Matthews, R. (2011). The efficacy of a social skills group intervention for improving social behaviors in children with high functioning autism spectrum disorders. *Journal of Autism and Developmental Disorders*, *41*(8), 1033–1043. https://doi.org/10.1007/s10803-010-1128-2

Emeh, C. C., Mikami, A. Y., & Teachman, B. A. (2018). Explicit and Implicit Positive Illusory Bias in Children With ADHD. *Journal of Attention Disorders*, *22*(10), 994–1001. https://doi.org/10.1177/1087054715612261

Enav, Y., Erhard-Weiss, D., Kopelman, M., Samson, A. C., Mehta, S., Gross, J. J., & Hardan, A. Y. (2019). A non randomized mentalization intervention for parents of children with autism. *Autism Research*, *12*(7), 1077–1086. https://doi.org/10.1002/aur.2108

Factor, R. S., Swain, D. M., Antezana, L., Muskett, A., Gatto, A. J., Radtke, S. R., & Scarpa, A. (2019). Teaching emotion regulation to children with autism spectrum disorder: Outcomes of the Stress and Anger Management Program (STAMP). *Bulletin of the Menninger Clinic*, *83*(Specialissue3), 235–258. https://doi.org/10.1521/bumc.2019.83.3.235

Fayette, R., & Bond, C. (2018). A systematic literature review of qualitative research methods for eliciting the views of young people with ASD about their educational experiences. *European Journal of Special Needs Education*, *33*(3), 349–365. https://doi.org/10.1080/08856257.2017.1314111

Frith, U., & Frith, C. D. (2003). Development and neurophysiology of mentalizing. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *358*(1431), 459–473. https://doi.org/10.1098/rstb.2002.1218

Gibaud-Wallston, J., & Wandersmann, L. P. (1978). *Development and utility of the Parenting Sense of Competence Scale*. John F. Kennedy center for research on education and human development.

Gough, D. (2007). *Weight Of Evidence : A Framework For The Appraisal Of The Quality And Relevance Of Evidence*. 213–228.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes:

Implications for affect, relationships, and well-being. Journal of Personality and Social Psychology, 85 (2), 348–362. https://doi.org/10.1037/0022-3514.85.2.348.

Gulsrud, A. C., Jahromi, L. B., & Kasari, C. (2010). The Co-regulation of emotions between mothers and their children with autism. *Journal of Autism and Developmental Disorders*, *40*(2), 227–237. https://doi.org/10.1007/s10803-009-0861-x

Jahromi, L. B., Meek, S. E., & 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 and Allied Disciplines*, *53*(12), 1250–1258. https://doi.org/10.1111/j.1469-7610.2012.02560.x

Kasari, C., & Smith, T. (2013). Interventions in schools for children with autism spectrum disorder: Methods and recommendations. *Autism*, *17*(3), 254-267.

Lai, M. C., Lombardo, M. V., Auyeung, B., Chakrabarti, B., & Baron-Cohen, S. (2015). Sex/gender differences and autism: setting the scene for future research. *Journal of the American Academy of Child & Adolescent Psychiatry*, *54*(1), 11-24.

Little, L. M., Wallisch, A., Salley, B., & Jamison, R. (2017). Do early caregiver concerns differ for girls with autism spectrum disorders?. *Autism*, *21*(6), 728-732.

Lord, C., Bristol-Power, M., Cafiero, J. M., Filipek, P. A., Gallagher, J. J., Harris, S. L., et al. (2001). Educating children with autism. Washington, DC: National Academy Press

Lord, C., Risi, S., Lambrecht, L., Cook, E. H., Leventhal, B. L., DiLavore, P. C., Pickles, A., & Rutter, M. (2000). The Autism Diagnostic Observation Schedule—Generic: A standard measure of social and communication deficits associated with the spectrum of autism. *Journal of autism and developmental disorders*, *30*(3), 205-223.

Lord, C., Rutter, M., DiLavore, P. C., Risi, S., Gotham, K., & Bishop, S. (2012). *Autism diagnostic observation schedule: ADOS*. Western Psychological Services.

Lord, C., Rutter, M., Goode, S., Heemsbergen, J., Jordan, H., Mawhood, L., & Schopler, E. (1989). Austism diagnostic observation schedule: A standardized observation of communicative and social behavior. *Journal of autism and developmental disorders*, *19*(2), 185-212.

Lord, C., Rutter, M., & Le Couteur, A. (1994). Autism Diagnostic Interview-Revised: a revised version of a diagnostic interview for caregivers of individuals with possible pervasive developmental disorders. *Journal of autism and developmental disorders*, *24*(5), 659-685.

Mazefsky, C. A., Herrington, J., Siegel, M., Scarpa, A., Maddox, B. B., Scahill, L., & White, S. W. (2013). The role of emotion regulation in autism spectrum disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, *52*(7), 679–688. https://doi.org/10.1016/j.jaac.2013.05.006

Mccoy, C. L., & Masters, J. C. (1985). *The Development of Children ' s Strategies for the Social Control of Emotion Author (s): Charles L . McCoy and John C . Masters Published by : Wiley on behalf of the Society for Research in Child Development Stable URL : http://www.jstor.org/stable/1130*. *56*(5), 1214–1222.

Miller, S. M., & Green, M. L. (1985). Coping with stress, fear, and frustration: Origins, nature, and development. *Laboratory Medicine*, *33*(2), 101–105. https://doi.org/10.1309/QK47-YX7T-P7UM-D5FM

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. T., & Group, T. P. (2009). PRISMA Checklist. In *PLoS*

medicine (Vol. 6, Issue 6, p. e1000097).

Nakamura, B. J.,Ebesutani,C.,Bernstein, A.,&Chorpita,B.F. (2009). A psychometric analysis of the child Behavior checklistDSM-oriented scales. Journal of Psychopathology and Behavioral Assessment, 31 (3), 178–189. https://doi.org/10.1007/s10862-008-9119-8.

Newby, J. M., McKinnon, A., Kuyken, W., Gilbody, S., & Dalgleish, T. (2015). Systematic review and meta-analysis of transdiagnostic psychological treatments for anxiety and depressive disorders in adulthood. *Clinical Psychology Review*, *40*, 91–110. https://doi.org/10.1016/j.cpr.2015.06.002

Reynolds, C. R., & Kamphaus, R. W. (2006). BASC-2: Behavior Assessment System for Children (2nd ed.). Upper Saddle River, NJ: Pearson Education Inc.

Rutter, M., Bailey, A., & Lord, C. (2003). SCQ. *The Social Communication Questionnaire. Torrance, CA: Western Psychological Services*.

Samson, A. C., Huber, O., & Gross, J. J. (2012). Emotion regulation in Asperger's syndrome and high-functioning autism. *Emotion*, *12*(4), 659–665. https://doi.org/10.1037/a0027975

Scarpa, A., & Reyes, N. M. (2011). Improving emotion regulation with CBT in young children with high functioning autism spectrum disorders: A pilot study. *Behavioural and Cognitive Psychotherapy*, *39*(4), 495–500. https://doi.org/10.1017/S1352465811000063

Shaffer, R. C., Wink, L. K., Ruberg, J., Pittenger, A., Adams, R., Sorter, M., Manning, P., & Erickson, C. A. (2019). Emotion Regulation Intensive Outpatient Programming: Development, Feasibility, and Acceptability. *Journal of Autism and Developmental Disorders*, *49*(2), 495–508. https://doi.org/10.1007/s10803-018-3727-2

Shields, A., & Cicchetti, D. (1997). Emotion regulation among school-age children: the development and validation of a new criterion Q-sort scale. *Developmental psychology*, *33*(6), 906.

Silverman, W. K., & Albano, A. M. (1996). *Anxiety disorders interview schedule for DSM-IV: Child version*. Oxford University Press.

Slade, A., Aber, J. L., Berger, B., Bresgi, I., & Kaplan, M. (2003). Parent development interview, short version. New York: City University of New York.

Sofronoff, K., Silva, J., & Beaumont, R. (2017). The Secret Agent Society Social-Emotional Skills Program for Children with a High-Functioning Autism Spectrum Disorder. *Focus on Autism and Other Developmental Disabilities*, *32*(1), 55–70. https://doi.org/10.1177/1088357615583467

Tajik-Parvinchi, D. J., Farmus, L., Cribbie, R., Albaum, C., & Weiss, J. A. (2020). Clinical and parental predictors of emotion regulation following cognitive behaviour therapy in children with autism. *Autism*, *24*(4), 851–866. https://doi.org/10.1177/1362361320909178

Tamir, M., John, O. P., Srivastava, S., & Gross, J. J. (2007). Implicit theories of emotion: Affective and social outcomes across amajor life transition. Journal of Personality and Social Psychology, 92 (4), 731–744. https://doi.org/10.1037/0022-3514.92.4.731.

Thibault, R. (2014). Can autistics redefine autism? The cultural politics of autistic activism. *Trans-Scripts*, *4*, 57-88.

Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the society for research in child development*, *59*(2-3), 25-52.

Thomson, K., Burnham Riosa, P., & Weiss, J. A. (2015). Brief Report of Preliminary Outcomes of an Emotion Regulation Intervention for Children with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, *45*(11), 3487–3495. https://doi.org/10.1007/s10803-015-2446-1

Tomanik, S., Harris, G. E., & Hawkins, J. (2004). The relationship between behaviours exhibited by children with autism and maternal stress. *Journal of Intellectual and Developmental Disability*, *29*(1), 16–26. https://doi.org/10.1080/13668250410001662892

Weiss, J. A., Thomson, K., Burnham Riosa, P., Albaum, C., Chan, V., Maughan, A., Tablon, P., & Black, K. (2018). A randomized waitlist-controlled trial of cognitive behavior therapy to improve emotion regulation in children with autism. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *59*(11), 1180–1191. https://doi.org/10.1111/jcpp.12915

Wong, C., Odom, S. L., Hume, K., Cox, A. W., Fettig, A., Kucharczyk, S., et al. (2014). *Evidence-based practices for children, youth, and young adults with autism spectrum disorder*. Chapel Hill: The University of North Carolina, Frank Porter Graham Child Development Institute, Autism Evidence-Based Practice Review Group. Retrieved from

Wood, J. J., Fujii, C., Renno, P., & Van Dyke, M. (2014). Impact of cognitive behavioral therapy on observed autism symptom severity during school recess: A preliminary randomized, controlled trial. *Journal of Autism and Developmental Disorders*, *44*(9), 2264–2276. https://doi.org/10.1007/s10803-014-2097-7

Woods, K., Bond, C., Humphrey, N., Symes, W., & Green, L. (2011). *Systematic Review of Solution Focused Brief Therapy (SFBT) with children and families.* (DfE Research Report RR179). Retrieved on 18.9.14 from https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RR179

Zeman, J. L., Cassano, M., Suveg, C., & Shipman, K. (2010). Initial validation of the Children's worry management scale. Journal of Child and Family Studies, 19(4), 381-392. doi: http://dx.doi.org/10.1007/s10826-009-9308-4

Zeman, J., Shipman, K., & Penza-Clyve, S. (2001). Development and initial validation of the Children's Sadness Management Scale. Journal of Nonverbal Behavior, 25(3), 187-205. doi: 10.1023/A:1010623226

Paper 2: How does emotional regulation inform teachers' thinking and practice at universal, targeted, and individual levels in mainstream primary schools?

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How does emotional regulation inform teachers' thinking and practice at universal, targeted, and individual levels in mainstream primary schools?

Emotional regulation (ER) has been highlighted as a key element of school readiness and academic success. Pupils who are not able to effectively regulate their emotions are at higher risk of poorer outcomes. Much like academic skills, ER is developmental and can be supported through adequate intervention.

The current study explores who ER is utilised with in mainstream primary schools and how this may be adapted for individual children, such as those with autism. Five SENCOs and one pastoral lead were interviewed to gain an understanding of how ER was perceived and supported within their settings. The data were analysed using an inductive thematic analysis which highlighted three main themes. The findings suggested that ER is often part of broader social emotional mental health needs (SEMH) provision and approaches varied from school to school and in some cases from teacher to teacher. Limitations of the research and future directions are also discussed.

Keywords: Emotional regulation; schools; interventions; autism

Introduction

Emotional regulation (ER) can be defined as:

"the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions. Emotion regulatory processes may be automatic or controlled…" (Gross, 1998, p,275)

However, there are several terms which overlap with ER and are not always clearly differentiated in practice, for instance, ER strategies, behavioural self-regulation, achievement emotions and teacher-student-interaction (Schlesier et al., 2019). One term that has great similarity to ER is emotional intelligence, a somewhat broader concept which has grown in popularity and may be more familiar amoungst educators. One definition of emotional intelligence is: "how a person demonstrates competencies that constitute self-

awareness, self-management, social awareness and social skills appropriately and effectively for the situation" (Boyatzis et al., 2000).

ER is developed over time, with young children already showing signs of ER by the time they start nursery (Zeman & Shipman, 1996), their tools and strategies will become more sophisticated and effective as they grow older (Zeman et al., 2006). Like many skills, ER development can be supported by others. Alongside parents, school staff can serve as role models and help to educate and support effective ER in children (OECD, 2015). To date there has been limited exploration of how the concept of ER is informing practice in schools.

The impact of emotional regulation

Poor ER can have significant effects on children's well-being and learning. Children who have difficulty regulating their emotions are twice as likely to be officially recognised as having special educational needs (SEN), experience unauthorised absences and be excluded from school (McGinnity et al., 2005). Prolonged negative emotions may also be linked to different forms of psychopathology, such as anxiety and depression (Braet et al., 2014). Those who are not able to regulate their emotions or employ maladaptive ER strategies, tend to experience greater peer rejection (Kim & Cicchetti, 2010), experience higher levels of anxiety (Carthy et al., 2010) and behavioural problems (Zeman et al., 2002).

In addition to effects on mental wellbeing, ER has been linked to school readiness (Eisenberg et al., 2010) and academic success (Zhou et al., 2007). Children with better emotional regulation are able to regulate goal directed behaviour and have high levels of mastery motivation and engagement, while those who are less able to regulate their emotions, are more likely to have greater difficulties with their reading, mathematics and spellings (McGinnity et al., 2005).

The role of teachers in supporting ER

For teachers to support ER in children and serve as good emotional role models, they must first see ER as an important skill. Furthermore, ER difficulties need to be understood as a barrier to learning such as a SEN, rather than a child that is poorly behaved. The most recent SEND Code of Practice (DfE, 2015) indicates that difficult behaviour may be a manifestation of social or emotional needs. The way in which teachers perceive and understand pupils' emotions is linked to how they define positive or negative behaviours (Lanas & Huuki, 2017). Teachers' understanding of pupil emotions further impacts the teacher and pupil relationship, which is known to serve as a protective factor for externalising behaviours in children (Sabol & Pianta, 2012). However, perceptions around the importance of an emotional based curriculum are variable.

Pirskanen et al (2019) explored teacher perceptions across Australia, China, Finland, Japan and Spain. The teachers believed that teaching of emotional skills and emotion management, were important, particularly at the start of school. However, most teachers focused on what happened in school and only Australia's teachers saw collaboration with parents to develop emotional skills as part of their role.

Differences in perceptions can also be apparent between teachers within the same school. Whilst many teachers may feel that ER is an important factor and would like to support their pupils, not all teachers may feel they have the skills to do this or there may be systemic barriers preventing them focusing on this area (Perry et al., 2008). For ER strategies to be effective, the school ethos needs to embed emotional understanding and regulation into the overall school curriculum (Kelly et al., 2004) and be supported by school leaders so that classroom teachers are more open to seeing this as within their scope (Zeidner et al., 2002).

ER is an important skill for teachers themselves, as emotional exhaustion has been linked to difficulties managing pupils misbehaving (Friedman, 2006). If the demands of the

job are having a negative effect on the wellbeing of the staff, it is likely to lead to poor academic achievement in their students (Chan, 2006). This would suggest the need for senior leaders in schools to actively support the emotional wellbeing of their staff.

Although staff have been found to employ an array of different ER strategies, such as diverting attention, deep breathing and controlling facial expressions (Sutton, 2004), pupils are still likely to pick up on subtle teacher distress signals (Sutton & Wheatley, 2003) potentially leading to pupil dysregulation. Teachers may therefore need additional tools such as self-efficacy (Bandura,1989). Teachers who have higher self-efficacy have been found to be more adaptive when working with children who were misbehaving than those with a lower self-efficacy (Friedman, 2006).

Social and emotional learning in schools

Historically emotional aspects of learning were not seen to be important within the school curriculum (Humphrey et al., 2007). However, over recent years this has begun to change with a growing emphasis on social and emotional interventions at the whole school and group levels such as SEAL (Social and Emotional Aspects of Learning) (Humphrey et al., 2010) and PATHS (Kusche et al., 1994).

Initiatives such as SEAL are likely to have raised teachers' awareness of emotional skills as something that they should be developing in children. However, implementation in schools can be difficult as there are many factors which influence implementation, such as consistency between teachers, the balance between universal and targeted interventions (Thorley, 2016) and the extent to which the programme can be personalised (Humphrey et al., 2010). Piecemeal implementation can result in uncoordinated (Banerjee et al., 2014) approaches and inconsistent outcomes (Humphrey et al., 2010).

ER interventions

ER interventions are a relatively new area. Research indicates that the most effective way to teach and develop ER is not only during specific times of need but as an integrated approach throughout school practices and routines (Hoffmann et al., 2020). When introducing new interventions for ER, staff will also need training (Hoffmann et al., 2020) to enable them to support children effectively, this could include approaches such as Emotion Coaching which focuses on underlying skills such as attunement and is beginning to show promising effectiveness within educational settings (Gus et al., 2017).

ER is often a component of broader universal interventions such as Incredible Years (Webster- Stratton & Hammond, 1997). This programme focuses on supporting parents, training teachers and delivery within the classroom. Whilst the overall aim of the approach is to reduce conduct behaviours within the classroom and at home, it has a particular focus on ER as an indicator for school readiness. When used in a randomised trial, results indicated that children did in fact show an increase in emotional self-regulation (Webster- Stratton et al., 2008).

Whilst there is a growing body of universal primary school interventions which incorporate ER, Schlesier et al's (2019) systematic review highlighted that many studies do not explicitly measure ER, instead focusing on other areas such academic progress, which leaves gaps in the literature around how ER programmes impact ER directly. ER is often embedded within broader evidence based SEMH interventions e.g., PATHS and SEAL but these can be complex and time consuming due to their prescribed models and manualised delivery. These factors have the potential to reduce their appeal to staff unless they are perceived as contextually relevant and feasible (Daniel & Lemons, 2018; Tremblath et al., 2019).

Research into ER seems to be more specific at the group level. Where interventions have been created to support children and young people with specific difficulties, such as borderline personality disorder. Dialectical Behaviour Therapy (DBT) is an intervention created for this reason, where ER skills are explicitly taught within the programme. Research has found that after following a DBT treatment plan, there is a significant increase in ER and a decrease in mental health symptoms related to emotional dysregulation (Lenz et al., 2016), showing it to be an effective treatment.

Programmes to support ER within the autism population have also been created. ER is a key skill which many autistic children require additional support with from social partners (Phillip, 2021). Some autism specific interventions have been developed which incorporate aspects of ER such as SCERTS (Social Communication, Emotional Regulation and Transactional Support) (Prizant et al., 2003) and Cognitive Behaviour Therapy (CBT). SCERTS has yet to be recognised as an evidence-based practice (Steinbrenner et al., 2020) and is at an early stage in demonstrating effectiveness in school settings with diverse groups of autistic children (Bond et al., 2016). Although CBT has a stronger evidence base, it tends to be delivered within clinical settings (Wong et al., 2015) as opposed to schools.

Other emerging interventions such as Emotion-Based Social Skills Training, have mixed evidence of effectiveness in supporting ER in children with autism. Whilst positive effects are found from teacher reports the same is not found from parent reports (Ratcliffe et al., 2014).

Although the evidence base for emotion regulation interventions for schools to use to support autistic children are limited, programmes such as Zones of Regulation have become popular with schools. Zones of regulation was developed to support ER in children with neurobiological differences (Kuypers, 2011), and has been well received by teachers. Although yet to be formally evaluated, it provides a clear focus for intervention which can

potentially benefit all pupils and is likely to meet a perceived school need as it is easy to implement in schools (Daniel and Lemons, 2018). Recommendation from other teachers or trusted sources such as speech therapists (Holdaway & Owens, 2015) is also often a key factor in selecting and implementing interventions (Lalor, 2020) which impacts staff motivation for implementing the intervention and potentially the effectiveness of the intervention itself (Rose et al., 2019).

The limited evidence for ER focused interventions at the universal level and group level highlights a significant gap in the literature around the application of ER within school settings. Whilst SEAL and PATHS are broad SEMH focused programmes, they do not explicitly support ER. Given the potential importance of ER for school readiness and educational achievement, this in an important area of development that warrants further research.

ER is an emerging and increasingly popular area, but its limited evidence base, makes it likely there will be variability in school practice. Variability in practice is often due to, inadequate training, limited access to research evidence and lack of support from within the organisation (Cheung et al., 2013). As the evidence base for ER strategies is mostly limited to clinics and exploratory research studies, this poses a significant barrier for teachers. Therefore, this paper aims to add to the literature by exploring how primary school staff perceive ER, how ER informs their practice and how this may be adapted for children with autism. The study will aim to answer the following research questions:

(1) How is emotional regulation perceived and utilised in mainstream primary schools?

(2) How do schools adapt their emotional regulation practices to support individual needs, such as the needs of autistic pupils?

Materials and Methods

A qualitative survey was undertaken using semi- structured interviews, to explore the understanding of emotional regulation, from the perspective of mainstream primary school teachers. The interviews further examined whether emotional regulation was a school priority and if so, how it was supported in their student population and specifically those with an autism diagnosis. In addition, the research explored whether staff emotional wellbeing was supported within schools, as it has been highlighted as a key component for student outcomes (Chan 2006).

Participants

Purposive sampling was used to recruit five mainstream primary school SENCOs (Special Educational Needs Co-ordinators) and one Head of Pastoral Care, in the North of England. All participants had expressed prior interest in taking part in research relating to emotional wellbeing. Recruitment took place through email advertisement, sent specifically to SENCOs that the researcher had contact with. One SENCO requested to have his Head of Pastoral Care involved in the interview, as he felt that her role was heavily linked with his and she was greatly involved with emotional wellbeing.

Interviews

The research received ethical approval from the host institution in May 2020 and participant consent was gained prior to interviews. Due to the COVID-19 pandemic restrictions, online interviews took place in June 2020.

The interviews were semi-structured, and the interview schedule was shared with all participants prior to the interview to allow them to prepare for the interview.

Analysis

All interview recordings were transcribed anonymously prior to analysis. The transcripts were analysed using Thematic Analysis (Braun & Clarke, 2006; Braun & Clarke, 2020). Given the exploratory nature of the research an inductive analysis was undertaken by the lead author and emerging themes discussed with the second author (Braun & Clarke, 2006; Braun & Clarke, 2020).

The process followed the six steps outlined in Braun and Clarke's (2006) paper. Though described as a liner process, in line with Braun and Clarke (2020) it consisted of iterative refining and reflection before the themes were finalised.

Findings

The findings are presented according to the themes that emerged from the data analysis.
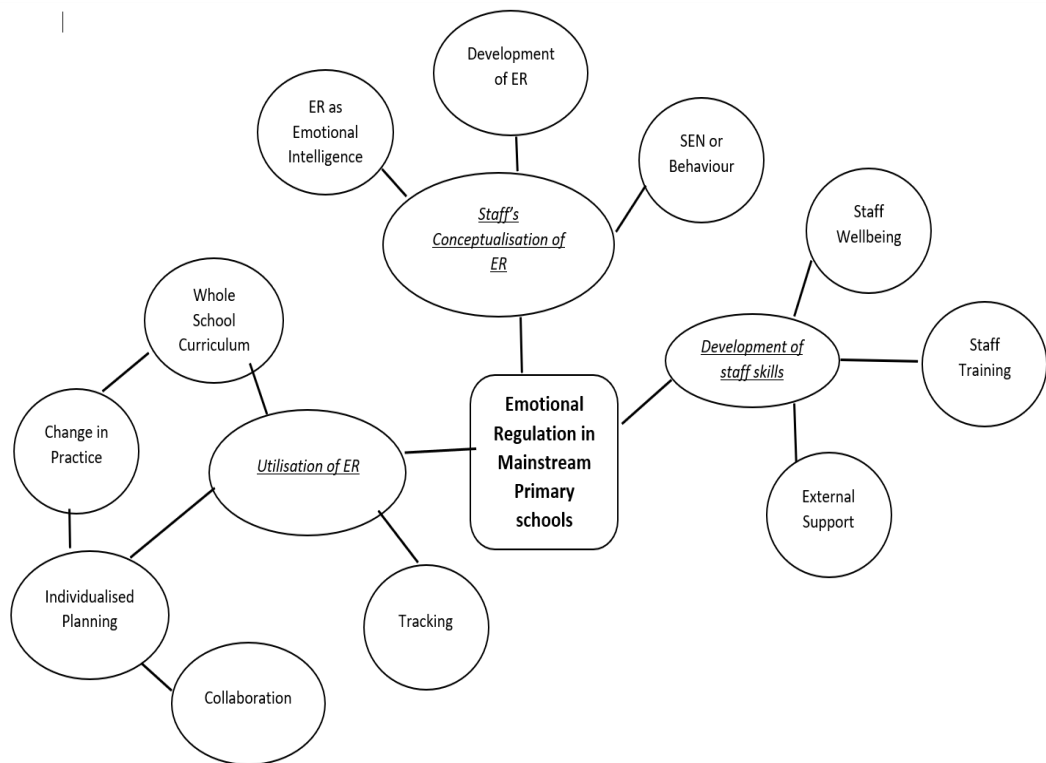
Figure 2: Thematic Map

Staff's Conceptualisation of Emotional Regulation

-Emotional Regulation as Emotional Intelligence

When asked to define emotional regulation, many SENCOs used words such as 'control', 'understanding' and 'manage', some of which might be associated with the broader concept of emotional intelligence.

> (R1): "…it's the ability to control your emotions… understand how they're feeling and what's made them feel that way…"

> (R3): "… how well an individual can regulate their emotions, how well they can identify… how they're feeling and those around them as well…"

-Development of Emotion Regulation

SENCOs understood that ER was a developmental skill and that many children would get better at it with age. However, there was also acknowledgement that ability to self-regulate could change dependent on context at the time.

> (R3): "… might have previously been very confident… and suddenly we might see behavioural changes… where children might suddenly start to become aggressive or very tearful…"

Here the SENCO is commenting on the variability in ER over time. She later goes on to talk about how the adults around the child would need to unpick what was causing changes in the child's behaviour and support them to increase their adaptive ER skills in light of their new context. Similarly, the SENCO and Pastoral Lead duo (respondent five and six, respectively), noted that ER is something that can be "built on". Whilst the SENCO also acknowledged how this can vary from person to person, stating that "It comes naturally to some people."

SEN or Behaviour

One of the most interesting aspects around understanding and defining ER, was the extent to which school staff perceived this as a special educational need (SEN) or a behavioural need. The way in which schools categorised ER, impacted who in school mostly oversaw it and how it was addressed. Furthermore, the way in which schools defined SEN differed and this was the biggest indicator as to whether they classed ER as SEN and therefore under the remit of the SENCO or not.

> (R1): "… everybody's got wellbeing needs… and we're not going to put everyone on the SEN register!"

Here the SENCO separates the idea of mental health and wellbeing from SEN. She sees wellbeing as an aspect that everyone has, and SEN as only experienced by a small few. Therefore, ER was wellbeing and would be treated as such, unless that child was identified as having SEN because of other presenting needs.

For respondent two, she went on a journey on her categorisation of ER through the course of the interview.

> (R2): "… they wouldn't see it as SEN, that's just people's perception."

> (R2): "I think they think it is SEN…again, at that level where it's obvious and you know, there's external agencies involved."

> (R2): "… I think mental health is just linked to SEN…"

> (R2): "…like talking to you now…like yeah, I can definitely see that it's SEN, part of SEN…"

Here you see how she starts off with the idea of ER being separate to SEN, unless there was an obvious SEN explanation and external agencies involved to identify and support

this. However, throughout the discussion and the interviewer exploring why she felt this way, she realised that in some cases she would classify ER as SEN.

Interestingly, respondents five and six had a more flexible approach to the classification. As pastoral lead and SENCO, who worked closely together and shared an office, they saw ER a responsibility for them both.

> (R5&6): "… a lot of our work overlaps… it's really fluid…to use a modern term. And… because SEMH is part of the…SEN role".
> "… staff just think we're the same thing…"
> "… they don't see a line or it's a very blurry line… so I'm SENCo but also behaviour lead…"

They felt it was important for the two areas to be seen as interchangeable as they felt it could lead to conflict if not and ultimately leave the children without the correct support.

> (R6): "And it can sometimes in schools…can sometimes end up as a battle… you know and a very different mindset so… in this office, I think we're pretty much all on the same page, so it works well."

Development of Staff Skills

Staff Wellbeing

Staff wellbeing was addressed differently within each school. Some schools prioritised the wellbeing of their staff, as they saw this an integral part of supporting their pupils.

> (R1): "… because we are the most important resource for the children in class and making sure that we were in the right place and then every session after that…"

> (R2): "So, we do… every… last week of... the half term, on the Monday… do a wellbeing activity…"

These two schools ensured that the wellbeing of their staff was a school priority, it was embedded into the ethos of the school and staff felt supported. There was a clear understanding that a social partner could not support the ER of a child if their own wellbeing was not supported.

However, this was not the case for all schools.

(R4): "Not really… we do have a supportive head who if you approach him and say you're struggling with certain things, he offers advice…"

Although staff wellbeing was not a school priority, the SENCO felt the headteacher positioned himself in a way that allowed staff to feel comfortable to approach him on an individual basis if they needed some support.

Staff Training

Staff knowledge and understanding of ER also varied amongst staff. For some it was based on experience and training from previous roles, "… but the previous school…we did have various training…" (R6)

Whereas for some it would be knowledge gained only when it was identified that the teacher needed extra support for a child or class. "… mostly on an almost need -to- know basis…" (R5)

Where ER was a priority within school and had therefore become part of a whole school offer, greater effort was made to ensure that all staff received adequate training and understanding around the intervention, in this case Zones of Regulation, and how that applied to ER.

(R4): "It was whole staff training… and support staff were there as well." "…sharing good practice."

For this school it has become embedded into practice, regardless of role, that all members of staff have an understanding of ER. Staff were also encouraged to share with one another anything they had learned or found helpful, so that good practice could be shared across the school.

External Support

One aspect that was consistent across most schools, was the use of additional training via external professionals to support children on an individual basis.

(R1): "The Zones of Regulation, our speech therapists have trained specific staff…"

(R4): "… we've got SENAS involvement as well, so we have been taking advice and trying different things…"

(R5&6): "… move towards bringing a lot of these skills in house… through speech and language therapy…"

Knowledge from these training sessions was either used solely for the child in question or extended across a wider cohort.

(R1): "The Zones of Regulation, our speech therapists have trained specific staff…"

(R1): "… one of our resource provisions have been working with the Zones of Regulation… in the last twelve months we've sort of rolled that across the older Key Stage…"

Utilising Emotional Regulation

Tracking

Tracking was done through various methods. Where provision was based on more formal

interventions for individual children, such as Zones of Regulation, targets were tracked by external professionals and on specific school tracking data systems.

(R1): "Children with autism, we do use…the autism assessment framework…"

(R5&6): "…we track every intervention in terms of…more like attendance and so on…CPOMS… but in terms of effectiveness of it…we have… a spreadsheet… we start off at weekly and then we went to… beginning, middle and end of intervention…"

(R1): "…I suppose we'd see the impact because there'd be less…number of times that they were getting trouble…"

However, a lot of tracking was done informally amoungst staff and so there was not always a clear way of identifying whether the interventions were working or not.

(R3): "…a half termly like monitoring report from TAs…"

(R3): "…we see… progress… often, very…immediately after we've had one of those wellbeing days… you see that quite a lot of incidents taper down… which kind of helps us to informally monitor how much of an impact it has."

Whole School Curriculum

Rather than targeting individual children, schools often used whole school curricula, to support SEMH more broadly, across the entire cohort. This was often implemented through the PSHE scheme or woven into the curriculum through other means, such as whole school assemblies.

(R1): "So we used to use PSHE and that sort of lesson… to address emotional regulation… we've sort of rolled that across the older Key Stage…"

(R2): "…understanding our emotions through our PSHE curriculum…we all have a worry box in our classrooms which are well used and embedded."

(R3): "…every half term we have wellbeing day- from reception to year 6…"

Amoungst the general SEMH curriculum and support, one common method used to help children understand and recognise their emotions, was to use tools that allow them to externalise their emotions from themselves.

(R1): "…having a scale from green…one and up to red for five, with pictures in between of different sort of faces… it's that sort of visual helps children…"

(R3): "…the school thought that actually giving it a character, if you will, helped them to see it a little bit more…"

(R5&6): "…I think the externalising thing can be quite helpful for children because it…it's more understandable…"

Externalising emotions and using characters or other symbols to describe emotions, was also a tool that staff adopted to help support their own emotional wellbeing.

(R2): "…like for us, we talk about our 'balloon' and if your 'balloon' is getting ready to pop…so you can hear staff occasionally being like… 'I can't take anymore; my balloon is ready to burst!'…"

Individualised Planning

However, there was one school that did not take this approach, rather they worked more on an individual basis.

(R5&6): "…not even on a class-by-class basis, but more on a one-to-one basis..."

(R5 &6): "…but yeah we don't have a specific… you know, whole school approach at the moment."

Whilst schools often used whole school curricula as a way to address ER, there were still times when the provision needed to be adapted specifically for individual children. This

was something that was available for all children regardless of whether they had a diagnosis or not.

> (R3): "Whereas another teacher's class might not need that, so it's a bit more tailored to cohort…"

> (R5&6): "…If I look at the children we have in school now… that have been diagnosed with autism, they are very, very different… and some of them… benefit from certain strategies… but not everything is the same…"

Collaboration

The 2015 SEND code of Practice (DfE, 2015), emphasised the importance of collaboration, in order to produce better outcomes. This meant children and parents are more active in agreeing on the support children receive rather than the decisions being made solely by professionals. The results highlighted that collaboration is a key part of the process in support for ER in their schools. One way of doing this, is allowing pupils themselves to express what support they need and how they would like to receive the support.

> (R1): "… so he knew what would help him to calm down and what would… what he needed…"

> (R3): "And we kind of let him choose… so if he chooses a ten minute one… that's fine…"

> (R5&6): "We do an awful lot of pupil voice… pupil voice is important…"

In addition to involving the children themselves, the use of other social partners such as parent and carers, were key contributors to supporting ER in children.

> (R1): "…just talking to children doesn't help. We…we'd be liaising with parents to find out what works… and what works at home…"

(R3): "…we have parents in every term to review the IPPs (Individualised Programme Plan)."

Social partners extended to the role of peers and teachers in modelling and scaffolding ER in pupils who were less regulated, such as those with autism.

(R1): "Or she'll say, 'I can see you're looking anxious, are you at number three?"

(R3): "…encourages everyone to work together to have a good morning…"

(R5&6): "…we use one-page profiles here…from the teacher's perspective as the strategies that work for different children".

Change in Practice

Whilst the schools had clear strategies that they adopted; some identified that they wanted to make some imminent changes. Specifically, respondents five and six saw the need for a more whole school approach as opposed to the more reactive approach they were currently implementing.

(R5): "…that would be on my wish list to make it a whole school strategy…"

It was evident that the pastoral lead had plans to establish a more whole school strategy however she was new to the school and was still developing her role.

The impact of COVID-19 was also something that staff were thinking about and how this may lead to changes in their practice. SENCOs were aware that children and their parents were likely to need a high level of emotional support, once they returned to school.

(R4): "…I think it's going to be even more so after the COVID outbreak… it's going to affect us more than we think at the moment…"

Discussion

The current exploratory study has investigated how mainstream primary school staff understand the concept of ER and have applied it at different levels. This section links the findings from the study back to the initial research questions and also considers the implications from the research and its limitations.

In relation to the conceptualisation of ER by school staff, the current research found that ER itself is often used simultaneously with other terms of a similar nature (Schlesier et al., 2019). This was also common within the data. SEN, behaviour, wellbeing, emotional intelligence and mental health were all terms which were used by the SENCOs to encapsulate ER and the way in which it manifests. In response to research question one, the breadth of terminology was often part of the reason why there were varying practices amongst the schools. ER was not perceived as one specific skill; it was in fact often conceptualised within the broad area of SEMH. There seemed to be a tension between ER difficulties being considered a within child factor or a response to the context (Cooper, 1999). As such this impacted the way in which schools intervened. Where ER was perceived to be more contextually bound, there were greater strategies for change, such as respondent three's introduction of calm spaces in each classroom where environmental changes were the focus. Where ER was prioritised within schools, this was often implemented at a whole school level, which is positive as this has been highlighted as the most effective way to intervene (Humphrey et al., 2007). However, this was not the case in all schools leading to interventions being implemented less, especially where ER was not a main priority. Overall, it appeared that teachers were conceptualising ER within broader concepts such as mental health, emotional intelligence and wellbeing.

The findings of the current study, highlight the mixed perceptions and utilisation of ER within mainstream primary schools. SENCOs were generally able to give a definition of

ER, though how ER was translated into practice, supported in schools and managed was not so clear. Research indicates that evidence-based interventions in schools may often be significantly adapted thereby reducing fidelity (Kasari & Smith, 2013), and therefore not necessarily achieving the intended results (Durlak and DuPre, 2008). This is likely to be greater for less formalised and emerging interventions in areas such as ER. In this research schools took interventions designed for groups and extended them into whole school approaches or used knowledge from various training sessions and popular texts to create interventions of their own. This is reflective of the literature, which emphasises that teachers often draw upon a range of sources, rather than the evidence base (Lalor, 2020). The lack of coherent frameworks to support implementation meant aspects such as training, staff knowledge and tracking were often limited. Whilst the interventions may have been perceived as relevant and responsive to local need (Daniel & Lemons, 2018), further research is needed to establish an evidence base for these adapted interventions and their implementation within education (Lendrum & Humphrey, 2012). Other studies of schools implementing their chosen interventions have also highlighted poor tracking of intervention and differences between staff in their perception of and engagement with the intervention (Evans & Bond, 2021). Where SENCOs were able to highlight effectiveness, this was likely to relate to individual factors such as, the knowledge of the class teacher and how much they themselves saw ER as important. Such variability is commonplace in schools, as many teachers note that their biggest barriers are time, training, resources and reinforcement from senior leaders (Perry et al., 2008). Whilst there are negatives for a lack of intervention fidelity. There is utility in schools developing their own practice that is specific to their individual needs. EPs (Educational Psychologists) have the skills and knowledge to support schools develop robust practice, that can be implemented across the school and reduce

variance. Bespoke practice-based evidence may lead to greater utility for schools which in turn would increase positive outcomes.

In some schools, ER intervention was only implemented on a need-by-need basis, when a child presented as requiring additional support for their emotions. In these cases, the child was likely to be involved with other professionals such as EPs or Speech and Language Therapists (SaLT). This is often how schools learn about more specific interventions (Evans & Bond, 2021), such as Zones of Regulation, which in some of the schools led to subsequent uptake across wider groups or across the whole school. Further to this, the way in which ER was perceived was influenced by who oversaw its development. Whether it was classified as SEN or behaviour could vary within the same school. In most cases it would only be understood as SEN, if the child had already been previously identified as having SEN. Otherwise, it was treated as a behavioural need, and therefore would often be addressed when the associated behaviours became a distraction to the wider class and personal learning. The varying positioning of ER is such that it is a shared responsibility which causes inconsistent approaches being applied. This conflict was mentioned by respondent six, who recognised the difficulty this placed on staff. The importance of a clearly appointed lead or champion has been identified in the literature as an important factor for both universal (Durlak & DuPre, 2008) and group level support (Evans & Bond, 2021).

Whilst many of the schools prioritised ER in some manner, this was frequently for the benefit of the pupils. ER support for staff was limited and inconsistent, where it was in place. Respondent one mentioned that part of wider Growth Mindset training for the pupils, there was a session around teachers looking after themselves and this was then mentioned at the end of each session subsequently. However, she went on to mention how that was not continued for the staff in the same way it was for the pupils. This area is particularly important in the current climate, with school closures and changes in work delivery, due to

the COVID-19 pandemic. Whilst previously many teacher's stressors were workload and behaviour management (Abós et al., 2019), they are now experiencing further difficulties with the constant changes and uncertainty (Kim & Asbury, 2020). When teachers experience burnout and feel a lack of support it can often lead them to leave the profession (Burić & Kim, 2020). Supporting the ER of teacher's is not only beneficial for their personal wellbeing and staff retention, but it is also linked to positive outcomes for their pupils (Mansfield et al., 2016).

Though there were less data relating to research question two. One particular strategy that was often implemented to support children with specific SEN needs, such as autism, was collaboration. Although this is a generic strategy it has important implications for ER interventions specifically. Schools worked closely with parent/carers and in some cases the child themselves, to agree and review provision. This is an important factor as children, specifically those on the autism spectrum, benefit from wider support from their social partners (Kasari & Smith, 2013; Phillip, 2021). Parents also have a higher level of satisfaction with their children's education when involved in the intervention (Zablotsky et al., 2012) leading to a higher level of efficacy regarding their ability to support ER in their children themselves (Phillip, 2021). Families and schools should be viewed on the same level of importance when staff and professionals are deciding on impact and care for children. Linking to Bronfenbrenner's (1992) Ecological Systems Theory, both the family home and school are in the microsystem which is the most immediate and arguably the most impactful influences within a child's life. As such, these two factors should also be considered when deciding on provision and care for the development a child's skills, such as ER.

Implications for practice and future research

The findings of the current research, indicate that there needs to be further work done with

schools to provide them with greater access to research and evidence- based interventions and further support on how to implement them effectively. Though there are user friendly sites such as the Education Endowment Foundation (EEF, 2015), providing educationalists with information regarding various aspects of learning, it is apparent from the current data that many teachers are either unaware of such resources or lack time to access them. As a result, they tend to use their own discretion when deciding on strategies to implement in their classrooms (Kaufman & Moss, 2010). Collaboration between research sites and schools is important to ensure that schools buy into interventions and that interventions are created with daily practice in mind (Evans & Bond, 2021). Often fidelity is low due to schools not seeing the added value of interventions, especially when they are time consuming and require a high level of training for staff in addition to pre-exiting pressures (Humphrey et al., 2010). In addition, schools need support from professionals who serve schools such as EPs and SaLT, to keep them up to date with evidence-based interventions and support them in implementing and evaluating their chosen interventions (Sebastian et al., 2019).

An effective way of tracking the development of ER may be to assess ER across various settings and over time. This will allow teachers to see if ER has developed broadly and not just on one particular occasion. Often different contexts and pressures can impact the way in which people tend to express their ER and the strategies they tend to employ. This is where the importance of including parents is advantageous as provisions and assessment can be implemented across both home and school to support ER in the two main areas of a child's life. The continuity of provision and expectations will be particularly valuable for those with autism, as it will help them to generalise their skills across settings.

Future research could explore the two parts of ER. The understanding of emotions and appropriate skills and the application of such knowledge through behaviour. Younger children adopt behaviours that are modelled to them by their social partners (Miller &

Green,1985) whilst it is expected with cognitive development that older children and adults are able to use more sophisticated techniques due to their better understanding of emotions (Thompson, 1994). It could be argued that it is at this stage ER is truly developed. Research that can unpick the two will give better insight into the effectiveness of interventions for ER.

Purposive sampling, of participants who were already known to author one, and had an interest in ER, meant there was limited variance in the sample population and responses may have been impacted by researcher effects. Teachers may have been particularly keen to participate due to the current COVID-19 pandemic. Teachers are experiencing higher levels of worry for their pupils, especially the most vulnerable. The added worry and uncertainty may have resulted in teachers looking to each other for more emotional support in addition to government and policy makers, for more guidance (Kim & Asbury, 2020). Whilst the sample is small, it is hoped the results can help to guide future research in this area.

References:

Abós, Á., Sevil-Serrano, J., Kim, L. E., Klassen, R. M., & García-González, L. (2019). How should stressors be examined in teachers? Answering questions about dimensionality, generalizability and predictive effects using the Multicontext Stressors Scale. *International journal of environmental research and public health*, *16*(18), 3388; https:// doi.org/10.3390/ijerph16183388.

Banerjee, R., Weare, K. and Farr, W. (2014) 'Working with social and emotional aspects of learning (SEAL), associations with school ethos, pupil social experiences attendance and attainment', *British Educational Research Journal*, 40(4), 718-742.

Bandura, A. (1989). Regulation of cognitive processes through perceived self-efficacy. *Developmental psychology*, *25*(5), 729-735.

Bond, C., Symes, W., Hebron, J., Humphrey, N. & Morewood, G. (2016) *Educating Persons with Autistic Spectrum Disorders- A Systematic Literature and Country Review*. NCSE Research Reports No.20. Trim: National Council for Special Education.

Boyatzis, R. E., Goleman, D., & Rhee, K. (2000). Clustering competence in emotional intelligence: Insights from the Emotional Competence Inventory (ECI). *Handbook of emotional intelligence*, *99*(6), 343-362.

Braet, C., Theuwis, L., Van Durme, K., Vandewalle, J., Vandevivere, E., Wante, L., Moens, E., Verbeken, S., & Goossens, L. (2014) Emotion regulation in children with emotional problems. *Cognitive Therapy and Research*, *38*(5), 493-504.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Braun, V., & Clarke, V. (2020). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative research in psychology*, 1-25.

Bronfenbrenner, U. (1992). *Ecological systems theory*. Jessica Kingsley Publishers.

Burić, I., & Kim, L. E. (2020). Teacher self-efficacy, instructional quality, and student motivational beliefs: An analysis using multilevel structural equation modeling. *Learning and Instruction*, *66*; https//:doi.org/10.1016/j.learninstruc.2019.101302.

Carthy, T., Horesh, N., Apter, A., & Gross, J. J. (2010). Patterns of emotional reactivity and regulation in children with anxiety disorders. *Journal of Psychopathology and Behavioral Assessment*, *32*(1), 23-36.

Chan, D. W. (2006). Emotional intelligence and components of burnout among Chinese secondary school teachers in Hong Kong. *Teaching and teacher education*, *22*(8), 1042-1054.

Cheung, G., Trembath, D., Arciuli, J., & Togher, L. (2013). The impact of workplace factors on evidence-based speech-language pathology practice for children with autism spectrum disorders. *International Journal of Speech-Language Pathology*, *15*(4), 396-406.

Cooper, P. (1999*). Understanding and supporting children with emotional and behavioural difficulti*es. Jessica Kingsley Publishers.

Daniel, J., & Lemons, C. (2018). Teacher perspectives on intervention sustainability: implications for school leadership. *School Leadership & Management*, *38*(5), 518-538.

Department for Education. (2015). Special educational needs and disability code of practice: 0 to 25 years. *Government Policies: Education and Health*, (January), 292. https://doi.org/DFE-00205-2013

Durlak, J. & DuPre, E. (2008). 'Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting

implementation.' *American Journal of Community Psychology*, 41, 327–350.
https://doi.org/10.1007/s10464-008-9165-0.

Education Endowment Foundation, (2015). *Making Best Use of Teaching Assistants
Guidance Report*. [online] London. Available at:
<https://v1.educationendowmentfoundation.org.uk/uploads/pdf/TA_Guidance_Report
_Interactive.pdf> [Accessed 21 April 2016].

Eisenberg, N., Valiente, C., & Eggum, N. D. (2010). Self-regulation and school
readiness. *Early education and development*, *21*(5), 681-698.

Evans, V., & Bond, C. (2021). The implementation of Lego®-Based Therapy in two English
mainstream primary schools. *Journal of Research in Special Educational Needs,
21(1)*, 111-119.

Fallon, K., Woods, K., & Rooney, S. (2010). A discussion of the developing role of
educational psychologists within Children's Services. *Educational Psychology in
Practice*, *26*(1), 1-23.

Friedman, I. A. (2006). *Classroom Management and Teacher Stress and Burnout.* In C. M.
Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research,
practice, and contemporary issues* (p. 925–944). Lawrence Erlbaum Associates
Publishers.

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review
of general psychology*, *2*(3), 271-299.

Gus, L., Rose, J., Gilbert, L., & Kilby, R. (2017). The introduction of emotion coaching as a
whole school approach in a primary specialist social emotional and mental health
setting: Positive outcomes for all. *The Open Family Studies Journal*, *9*(1), 95-110.

Hoffmann, J. D., Brackett, M. A., Bailey, C. S., & Willner, C. J. (2020). Teaching emotion
regulation in schools: Translating research into practice with the RULER approach to
social and emotional learning. *Emotion*, *20*(1), 105-109.

Holdaway, A. S., & Owens, J. S. (2015). The effect of training and consultation condition on teachers' self-reported likelihood of adoption of a daily report card. *Journal of Educational Psychology*, *107*(1), 222-235.

Humphrey, N., Curran, A., Morris, E., Farrell, P., & Woods, K. (2007). Emotional intelligence and education: A critical review. *Educational Psychology*, *27*(2), 235-254.

Humphrey, N., Lendrum, A., & Wigelsworth, M. (2010). Social and emotional aspects of learning (SEAL) programme in secondary schools: National evaluation. *Department for Education*.DFE-RB049.

Kasari, C., & Smith, T. (2013). Interventions in schools for children with autism spectrum disorder: Methods and recommendations. *Autism*, *17*(3), 254-267.

Kaufman, D., & Moss, D. M. (2010). A new look at preservice teachers' conceptions of classroom management and organization: Uncovering complexity and dissonance. *The Teacher Educator, 45*(2), 118–136.

Kelly, B., Longbottom, J., Potts, F., & Williamson, J. (2004). Applying emotional intelligence: Exploring the promoting alternative thinking strategies curriculum. *Educational Psychology in Practice*, *20*(3), 221-240.

Kim, J., & Cicchetti, D. (2010). Longitudinal pathways linking child maltreatment, emotion regulation, peer relations, and psychopathology. *Journal of child psychology and psychiatry*, *51*(6), 706-716.

Kim, L. E., & Asbury, K. (2020). 'Like a rug had been pulled from under you': The impact of COVID-19 on teachers in England during the first six weeks of the UK lockdown. *British Journal of Educational Psychology*, *90*(4), 1062-1083.

Kusché, C. A., Greenberg, M. T., & Anderson, L. A. (1994). *The PATHS curriculum: Promoting alternative thinking strategies*. Developmental Research & Programs.

Kuypers, L.M. (2011). The Zones of Regulation: A curriculum designed to foster self-regulation and emotional control. San Jose: Think Social Publishing.

Lalor, A. (2020). An evaluation of the effectiveness of the Zones of Regulation cognitive behavioural intervention on emotional regulation outcomes for school aged children with Autism Spectrum Disorders in Ireland. [Unpublished Manuscript] Mary Immaculate College.

Lanas, M., & Huuki, T. (2017). Thinking beyond student resistance: A difficult assemblage in teacher education. *European Journal of Teacher Education*, *40*(4), 436-446.

Lendrum, A. & Humphrey, N. (2012). 'The importance of studying the implementation of interventions in school settings.' Oxford Review of Education, 38 (5), 635–652. https://doi.org/10.1080/03054985.2012.734800.

Lenz, A. S., Del Conte, G., Hollenbaugh, K. M., & Callendar, K. (2016). Emotional regulation and interpersonal effectiveness as mechanisms of change for treatment outcomes within a DBT program for adolescents. *Counseling Outcome Research and Evaluation*, *7*(2), 73-85.

Mansfield, C. F., Beltman, S., Broadley, T., & Weatherby-Fell, N. (2016). Building resilience in teacher education: An evidenced informed framework. *Teaching and teacher education*, *54*, 77-87.

McGinnity, Á., Meltzer, H., Ford, T., & Goodman, R. (2005). *Mental health of children and young people in Great Britain, 2004* H. Green (Ed.). Basingstoke: Palgrave Macmillan.

Miller, S. M., & Green, M. L. (1985). Coping with stress, fear, and frustration: Origins, nature, and development. *Laboratory Medicine*, *33*(2), 101–105. https://doi.org/10.1309/QK47-YX7T-P7UM-D5FM

OECD (2015). *Skills for Social Progress: The Power of Social and Emotional Skills*, OECD Skills Studies, OECD Publishing, Paris, https://doi.org/10/1787/9789264226159-en.

Perry, L., Lennie, C., & Humphrey, N. (2008). Emotional literacy in the primary classroom: teacher perceptions and practices. *Education 3–13*, *36*(1), 27-37.

Phillip, L. (2021). Supporting Emotional Regulation in Children with Autism- The role of the Parents: A Systematic Literature Review [Unpublished manuscript]. University of Manchester.

Pirskanen, H., Jokinen, K., Karhinen-Soppi, A., Notko, M., Lämsä, T., Otani, M., ... & Rogero-García, J. (2019). Children's emotions in educational settings: Teacher perceptions from Australia, China, Finland, Japan and Spain. *Early Childhood Education Journal*, *47*(4), 417-426.

Prizant, B.M., Wetherby, A.M., Rubin, E. & Laurent, A.C. (2003) *'The SCERTS Model: a transactional, family-centred approach to enhancing communication and socioemotional abilities of children with autism spectrum disorders'*, Infants and Young Children, 16 (4), 296-316.

Ratcliffe, B., Wong, M., Dossetor, D., & Hayes, S. (2014). Teaching social–emotional skills to school-aged children with Autism Spectrum Disorder: A treatment versus control trial in 41 mainstream schools. *Research in Autism Spectrum Disorders*, *8*(12), 1722-1733.

Rose, J., McGuire-Snieckus, R., McInnes, K. and Gilbert, L. (2019). 'Attachment Aware Schools: the impact of a targeted and collaborative intervention', *Pastoral Care in Education*, *37(2*), 162-184.

Sabol, T. J., & Pianta, R. C. (2012). Recent trends in research on teacher–child relationships. *Attachment & human development*, *14*(3), 213-231.

Schlesier, J., Roden, I., & Moschner, B. (2019). Emotion regulation in primary school children: A systematic review. *Children and Youth Services Review*, *100*, 239-257.

Sebastian, J., Herman, K. C., & Reinke, W. M. (2019). Do organizational conditions influence teacher implementation of effective classroom management practices: Findings from a randomized trial. *Journal of school psychology*, *72*, 134-149.

Steinbrenner, J. R., Hume, K., Odom, S. L., Morin, K. L., Nowell, S. W., Tomaszewski, B., Szendrey, S., McIntyre, N. S., Yucesoy-Ozkan, S., & Savage, M. N. (2020). *Evidence-based practices for children, youth, and young adults with Autism.* The University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Institute, National Clearinghouse on Autism Evidence and Practice Review Team.

Sutton, R. E. (2004). Emotional regulation goals and strategies of teachers. *Social psychology of education*, *7*(4), 379-398.

Sutton, R. E., & Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and directions for future research. *Educational psychology review*, *15*(4), 327-358.

Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the society for research in child development*, *59*(2-3), 25-52.

Thorley. C. (2016). Education, education, mental health: Supporting secondary schools to play a central role in early intervention mental health services, IPPR [Online]. Available at: http://www.ippr.org/publications/education-education-mental-health (Accessed 19 May 2016)

Trembath, D., Sulek, R., Paynter, J., Simpson, K., & Keen, D. (2019). Staff views on supporting evidence based practice for children with ASD. *Disability and rehabilitation*, *41*(4), 436-444.

Webster-Stratton, C., Jamila Reid, M., & Stoolmiller, M. (2008). Preventing conduct problems and improving school readiness: evaluation of the incredible years teacher and child training programs in high-risk schools. *Journal of child psychology and psychiatry*, *49*(5), 471-488.

Webster-Stratton, C., & Hammond, M. (1997). Treating children with early-onset conduct problems: a comparison of child and parent training interventions. *Journal of consulting and clinical psychology*, *65(1)*, 93.

Wong, C., Odom, S. L., Hume, K. A., Cox, A. W., Fettig, A., Kucharczyk, S., ... & Schultz, T. R. (2015). Evidence-based practices for children, youth, and young adults with autism spectrum disorder: A comprehensive review. *Journal of autism and developmental disorders*, *45*(7), 1951-1966.

Zablotsky, B., Boswell, K., & Smith, C. (2012). An evaluation of school involvement and satisfaction of parents of children with autism spectrum disorders. *American Journal on Intellectual and Developmental Disabilities*, *117*(4), 316-330.

Zeidner, M., Roberts, R. D., & Matthews, G. (2002). Can emotional intelligence be schooled? A critical review. *Educational psychologist*, *37*(4), 215-231.

Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in children and adolescents. *Journal of Developmental & Behavioral Pediatrics*, 27(2), 155-168.

Zeman, J., & Shipman, K. (1996). Children's expression of negative affect: Reasons and methods. *Developmental psychology*, *32*(5), 842.

Zeman, J., Shipman, K., & Suveg, C. (2002). Anger and sadness regulation: Predictions to internalizing and externalizing symptoms in children. *Journal of clinical child and adolescent psychology*, *31*(3), 393-398.

Zhou, Q., Hofer, C., Eisenberg, N., Reiser, M., Spinrad, T. L., & Fabes, R. A. (2007). The developmental trajectories of attention focusing, attentional and behavioral persistence, and externalizing problems during school-age years. *Developmental psychology*, *43*(2), 369.

Paper 3: The Dissemination of Evidence to Professional Practice

Overview of Evidence-Based Practice and Practice-Based Evidence

Evidence-based practice (EBP) in psychology is defined by The American Psychological Association (APA) as:

"… the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences." (APA Presidential Task Force on Evidence-Based Practice, 2005, p.273)

The Health Care and Professionals Council (HCPC, 2015), the UK body of registration for Educational Psychologists (EP), stresses the importance of using EBP in EP practice. EBP encourages practitioners to make decisions on the approaches and methods they use, based on systematic knowledge of outcomes, as opposed to personal judgement (Cottrell, 2002). This knowledge of evidence also needs to be combined with knowledge of the context and client. The use of such methods is believed to improve the health of the public through the use of empirically supported theories and interventions (APA, 2005).

 Although EBP is a professional skill requiring clinical expertise in applying knowledge of research in context there is much debate about how research based on the traditional research hierarchy informs this process. Commonly best evidence is regarded as evidence based on the use of randomised control trials (RCTs) and seeks to prove the efficacy of a theory or intervention (Barkham & Mellor-Clark, 2003). In America where, EBP is compulsory, RCTs are regarded as the 'gold standard' approach (Slavin, 2002). Some EPs feel that the hierarchical approach used to define quality of research is not relevant for educational psychology (Fox, 2003). Whilst RCTs allow for high levels of control and therefore in turn increase internal validity, which can provide strong causal explanations, case study designs provide psychologists with greater depth and knowledge of a subject, which often can be more beneficial to EPs in practice (van Daal, 2015). The replication of RCTs in educational settings is difficult, which may be part of the reason they are not always implemented as intended. This leaves EPs questioning whether their practice should be

solely based on RCTs or in fact include various research methodologies such as qualitative designs (Fox, 2003).

Practice Based Evidence (PBE) on the other hand, focuses on effectiveness and research developed from practice as opposed to research efficacy, and tends to have a higher degree of external validity due to the real-world settings in which interventions take place (Barkham & Mellor-Clark, 2003). Within education, there is a preference towards a bottom-up approach to interventions (Lendrum & Humphrey 2012) and the most current SEND (Special Educational Needs and Disability) Code of Practice (DfE, 2014) places great value on co-construction with stakeholders. This is in line with PBE, as it emphasises that there should be shared responsibility between researchers, trainers, and practitioners from the beginning (Kratochwill & Shernoff, 2004). An alternative approach to creating evidence has been argued to be better suited to the real-world context (Campbell et al., 2000). Campbell et al., (2000) argue that controlled trials should be supplemented with qualitative methods as a way to address implementation and the utility of interventions.

There are growing concerns that EBP is not being introduced in schools (Odom et al., 2005), for mainstream or special educational needs (Gersten & Smith Jones, 2001). When school staff make decisions on interventions, they tend to use more informal information rather than research (Landrum et al., 2002), such as recommendations from other colleagues or personal experience (Tremblath et al., 2019). It appears that the reality of day-to-day practice and the challenges that come with that, means that many practitioners often do not follow the elaborate recommendations derived from research, when implementing treatments in real life (Barkham &Mellor-Clark, 2003). This is a particular issue within autism research, as Simpson et al., (2011) found that many service providers are not able to understand EBP and therefore use an amalgamation of interventions assuming that a combination of interventions will yield positive outcomes.

Evidence -based practice and autism

EBP in autism has been a contentious area. Although there has been a push towards schools using evidence-based interventions these have not been as successful as anticipated, in education contexts (Simpson et al., 2011). Children with autism present with a wide range of varying needs (Happe & Frith, 2020), which often requires individualised planning, this in

itself poses great challenges for schools (Magyar & Pandolfi, 2012). Dingfelder & Mandell (2011) believe that the 'diffusion of innovation theory' should be adopted for the use of autism research. This would place emphasis on the contextual factors which are key indicators for whether schools will adopt a theory or intervention. In addition, the model also advocates for collaboration between all stakeholders, including parents/carers in the development of research agendas and this should be done at all levels for successful implementation. Such practice will not only ensure that EBP is better implemented in schools for children with autism (Dingfelder & Mandell, 2011), but it also focuses on the need for tailored EBP within real life contexts and for individual needs (Maygar & Pandolfi, 2012). As the needs of children with autism are complex and often varied (Magyar & Pandolfi, 2012) the development of PBE may be beneficial to schools as they will be able to create and evaluate feasible interventions suited to their pupils and the school context. However, for this to be successful, school staff need to be trained to effectively evaluate research (Simpson et., 2011), to ensure that they are developing a high standard practice.

The more informal environment of the classroom means that teachers often have to adapt and improvise in order to effectively implement interventions in the classroom (Tremblath et al., 2019), which in turn impacts the fidelity. This poses another issue around implementation, which Lendrum and Humphrey (2012) argue is an important factor that needs to be explored. It is necessary for implementation to be studied so that barriers and facilitators can be identified for a greater understanding as how EBP can be implemented into the real world (Ledrum & Humphrey, 2012). For instance, if teachers do not believe the interventions are useful to their needs, they are not likely to continue with intervention or implement them at all (Lendrum & Humphrey, 2012). This is a growing concern within the field of autism, where the gap between EBP and real-world implementation is increasing (Guldberg, 2017). EPs may be well placed to support with the implementation of interventions for children with autism, due to their knowledge of EBP, PBE and implementation (Evans & Bond, 2021). Kasari and Smith (2013) also advocate for greater use of PBE in the field of autism as a way of addressing these limitations.

As scientist-practitioners, EPs are well positioned to support the translation of research into daily practice. However, past research by Burnham (2013) found that many EPs admitted to not using scientific informed practices themselves, and that much of their practice was in

fact based on situational factors and prior experience. Many EPs highlight the weaknesses of EBP, such as the lack of generalisation due to the artificial environments they are conducted in (Kratcochwill & Stoiber, 2002), which may be the reason for their hesitation to use them. As such there is a call for psychologists to embrace more scientific tools so to safeguard against errors in personal judgement (Lilienfield, 2010). However, the changes in training for EPs has led to more positive views towards EBP in the field (Reddy et al., 2017).

Dissemination and Research Impact

Dissemination can be defined as:

"…a planned process that involves consideration of target audiences and the settings in which research findings are to be received and, where appropriate, communicating and interacting with wider policy and health service audiences in ways that will facilitate research uptake in decision-making processes and practice." (Wilson et al., 2010).

Researchers need to effectively disseminate their work to allow for the continuation of EBP. However, dissemination alone is not enough. In addition to dissemination, there needs to be effective implementation. Where implementation is seen as, the process of putting to use or integrating evidence-based interventions within a setting (Tabak, 2012). Research has continued to demonstrate that the use of dissemination and implementation models are necessary to enhance interpretability of findings and to guide researchers with a clear strategy (Tabak, 2012).

As briefly discussed in the previous section, dissemination and implementation in the field of autism is complex. Though there is a growing body of research around autism (Matson & LoVullo, 2009), there is still limited research specifically around dissemination within the field (Yudell et al., 2013). There seems to be some concern about what information is communicated from research to the wider world, as in the medical world this has had dire consequences, such as the claims around links to the MMR (measles, mumps and rubella) vaccinations (Baker, 2008). Such concerns are still prevalent in the area of autism and education. Lovaas (1987), presented information based on the effectiveness of Applied

Behavioural Analysis (ABA), which has grown in popularity within different localities. However, the findings were in fact based on studies with weak methodologies (Ospina et al., 2008). As such, people were choosing to implement or enrol their children on ABA based on expectations that were poorly evidenced, which has ethical implications. Rhoades et al., (2007), found that parents often look to the internet for information about autism. Often due to the lack of dissemination around autism, parents/carers are often desperate for information and therefore are more likely to 'latch' onto information that they come across (Yudell et al., 2013), therefore it is crucial that due care is taken when presenting findings regarding autism.

Yudell et al., (2013), conducted some research with various stakeholder within the field of autism, to gain a better understanding of issues regarding dissemination. This brought about some recommendations such as improving access of information for families through a vetted centralised resource, training scientist to communicate with the media effectively and training graduates for to communicate all risks effectively. Yudell et al., 2013) recognise the complexities around incorporating the recommendations, they state that the benefits will outweigh the costs and reduce the risk communication within the field that is currently a problem.

Harmsworth & Turpin (2000) propose that dissemination takes place at three levels:

1. *Awareness:* Whereby knowledge is shared with those who may be interested but do not require an in-depth understanding of the research and findings, but rather an overview of the key findings.
2. *Understanding:* Information is targeted at key stakeholders who will directly benefit from the findings of the research, and therefore need a more detailed understanding of the research methodology and the findings.
3. *Action:* Dissemination at this level is for those that will be able to create change based on the new information. These stakeholders are in positions of power and therefore need a full and detailed account of the research in order to use the information to create change at systemic levels.

The use of such a clear model of dissemination is supported by research that demonstrates the use of models and/frameworks for dissemination, enhances iterability of findings and ensures essential implementation strategies are in place (Van Achterberg et al., 2008).

Research Implications

Research Site

It was clear from the data that the SENCOs had begun to think about ER and as a result were able to define it at a basic level. However, this did not always translate well into practice. Once further discussion took place, it was evident that an in depth understanding of Emotional Regulation (ER) and how this differs from other similar concepts was not always clear. This is also apparent in the wider literature (Schlesier et al., 2019), which highlights that ER is often used interchangeably with other terms. As a result, interventions are often not specific to ER itself. This was mimicked in the research data, where schools would position ER either as part of a broader SEMH offer or conceptualise it as a behavioural need.

Where schools employed whole school ER strategies, they were often not based in evidence and were an amalgamation of knowledge acquired from various sources. As such they were not tracking impact or evaluating the interventions in a systematic way. Therefore, there was no objective way to ensure that interventions were effective. Schools were happy however to engage with training and support from other services such as SaLT and EP, however once these services were no longer involved, the fidelity of such strategies was not maintained. Further to this, implementation often varied from classroom to classroom, dependent on personal experience or previous training of the teacher and in some circumstances because it was deemed that that specific cohort needed additional support for their needs. Whilst it may be necessary for more individualised support for certain children, the evidence states that whole school approaches are the most effective way of intervening (Kelly et al., 2004). Such an approach ensures that learning is part of the whole school ethos and adhered to by all members of the school community. As such schools are able to support the

development of ER for all pupils, rather than only acknowledge the need when it becomes a barrier to learning.

Organisational Level

ER has been highlighted as an indicator for school readiness (Einsenberg et al., 2010) and academic success (Zhou et al., 2007). In addition, those who are not able to regulate their emotions effectively are at greater risk of peer rejection (Kim & Cicchetti, 2010) and mental health difficulties such as depression and anxiety (Braet et al., 2014). Therefore, the current research was necessary to explore how schools are facilitating ER and what interventions best support their pupils. The current research demonstrates that school based universal and targeted ER interventions are in their infancy and vary in the extent to which ER is a primary focus; further research is needed to develop an educational evidence base. However, paper 1 highlights the effectiveness of CBT (cognitive behavioural therapy) based interventions where parents are key participants, for developing ER in children with autism.

Though a great deal of the research for ER in autism is clinic based, the results from paper 1 and paper 2 highlight the key role of parents/carers, for the development of ER. Schools who actively involved parents in the decision making around ER provision for their children, felt it was a positive experience for all involved. Some schools chose to also collaborate with the children themselves where this was appropriate. The importance of collaboration was one of the biggest changes to the 2014 SEND Code of Practice (DfE, 2014). Whilst EBP is important to the wider literature, the results from the current body of research show that there needs to be a balance between practice-based evidence and EBP, as individual needs and context play an important role to the success of provisions.

Whilst ER is important for students and pupils, it is also important for teachers. Many teachers experience burnout within the profession which is one the highest causes of drop out from the profession (Friedman, 2006; DfE, 2016). Whilst interviewing the SENCOs for the paper 2, it became apparent that the wellbeing and support of ER for

staff was often an after thought or not a priority at all. Further research around the wellbeing of teaching staff and the best ways to enhance and support their emotional wellbeing is needed. One can only give what they have. If teachers themselves are struggling to regulate their emotions, this will impact their students (Sutton & Wheatley, 2003) therefore underdoing any work that has been put in place to support pupils previously.

The results show that schools are becoming more aware of ER, yet the interventions and programmes they implement are still in their infancy. School staff may not be in the position to access evidence-based research, which means they often turn to other means such as popular text or word of mouth for information on how to support their pupils. As such the results, show that an intermediary between research and academia needs to be in place to support schools to access evidence and select appropriate interventions. Though there are resources such as the Education Endowment Foundation (EEF,2015), it seems as though not all schools are aware of this and therefore are still not accessing the evidence base. An alternative option is to use professionals that work closely with schools to present and train schools in the best evidence-based practices, such as EPs.

Professional Level
The current study indicates that often schools will gain knowledge of more formal interventions through advice from professionals such as EPs. Therefore, it could be argued that EPs should be doing more to highlight resources such the EEF to schools and providing them with a condensed overview of the most robust and up-to-date evidence to inform decision making.

Furthermore, EPs are described as scientist-practitioners (Fallon et al., 2010), and they are directed by the British Psychology Society (BPS) to use their psychological knowledge derived from sound theory to deliver high quality work (BPS, 2005). With such knowledge, EPs could support schools to evaluate the effectiveness of their own ER practices in a systematic and rigorous manner, so that schools are able to develop their own PBE. The data from the current research demonstrated that schools are often

creating their own practice based on various knowledge bases however, means of tracking and evaluating such practices is still limited.

In addition, EPs are positioned well to facilitate systemic changes within schools, to facilitate the adoption of effective whole school structures that can support not only pupils but staff and families. EPs are trained to critically assess literature and apply it in a way that works best for their service users. Therefore, it would be good practice for EPs to use their position and influence to supports schools make better decisions on interventions and policy. There is increasing literature outlining the difficulties school staff themselves face (Friedman, 2006) daily within schools, this is a particular area EPs could support schools with and work closer with senior leaders to ensure that wellbeing of staff is a priority.

EPs often work with an ecological structure in mind (Bronfenbrenner, 1977), which emphasises how the child is the centre of wider and more complex systems, including family, school and the wider political structures. With such theories underpinning the work of EPs, they can encourage schools to think more about collaboration with wider systems, such as support staff, parents, and wider community groups. Paper 1 highlights the importance of working with social partners to support ER in children, furthermore it also highlights the importance of increased confidence and support of your ER will in turn help you to work with other who are struggling with ER.

Strategy for Dissemination

Guidance from Harmsworth & Turpin's (2000) model of dissemination, as described earlier in a previous section, will be used to share the findings from the current paper.

Table 5 details the plan for dissemination based on Harmsworth & Turpin's (2000) three levels of dissemination.

Table 5 Plan of dissemination against Harmsworth & Turpin's framework (2000)

Level of Dissemination	Actions	Audience
Awareness	• Writing for MIE school's blog • Journal publications of both papers • Autism@Manchester blog post • EP conferences e.g., Association of Educational Psychologists, Northwest Continuing Professional Development etc.	• School staff • Researchers at universities e.g., Manchester University • Academics and researchers interested in special educational needs and autism. • Members of the autism community and their friends and families. • EPs
Understanding	• Deliver a Facebook live to parents and carers of young children • Feedback to those who took part in T2	• Parents/carers of children with ER difficulties and/or autism • Primary school staff and SENCOs
Action	• Share details with my service to promote practice around ER • Present at SENCO forums	• EPs and TEPs • SENCOs • Educationalists working with or for schools

	• Present at the National Association for Special Educational Needs teacher's conference.	

The TEP's (Trainee Educational Psychologist) main objective for dissemination is to increase awareness and understanding around emotional regulation and encourage more collaborative practice between parent/carers and school staff, especially for children with autism who tend to require greater support to develop their emotional regulation skills. Rather than an exclusive focus on EBP, the TEP aims to encourage a mixed approach between EBP and practice-based evidence. Therefore, dissemination focuses on sharing information with parent/carers and practitioners, as opposed to researchers and academics.

The first stages of dissemination are for both papers to be published. The TEP hopes for the Systematic Literature Review to be published in the Journal of Research in Special Educational Needs (JORSEN) and the empirical research to Pastoral Care in Education. These two journals were chosen as they target a broad and international audience interested in the work of special educational needs. Pastoral Care in Education is particularly targeted to those working closely with schools and possibly some teachers who want to further their knowledge around SEN. In addition to journal submissions, the TEP hopes to summarise her findings for blogs that are directed at teachers, parents, and the autistic community. These publications will bring about awareness of the subject matter to those interested in ER.

Further to this, the TEP will use her service's Facebook to present her findings to a more local community of parents and teachers, that follow the page. The Facebook live events have been received well by prospective trainees, parents, and school staff in the past. Therefore, the TEP hopes to utilise the platform to engage directly with the audience. She will be able to make direct assessment as to how well the process works as she will

be able to answer questions in real time and track how many people view and engage with the live event. Furthermore, the video can be saved on the page for future reference, so the TEP can continue to track interest. Another form of direct engagement will be to present findings to the participants who took part in the empirical research. This will give the TEP the opportunity to allow the participants to see where their practices differ from others. It will also provide an opportunity to find out whether participation in the study has had any immediate effects. One SENCO in particular had a change of thought during the interview as to how she viewed ER and the pastoral lead that was part of the interviews expressed her desire to implement a whole school approach.

The final step for action, will be to take the findings and present them in a tangible action plan for EPs and SENCOs. This will be done through presentations to the TEP's current service and the service she will work in once qualified and at SENCO forums. The findings and previous literature highlight the role of the EP as the bridge between research evidence and schools. Therefore, the TEP can use these opportunities to help SENCOs think about how they utilise their EP time. Commissioning EPs to help them in a systemic way, with the training and implementation of EBP or where necessary the development of PBE. It will also emphasise to SENCOs the need for a whole school approach that involves all members of the community from Senior leaders to support staff and parent/carers. Presenting to EPs will highlight their key role in sharing and training schools in EBP to encourage improved outcomes. The findings from the research are key for the enhancement of ER, which is a pertinent topic in the current climate of the global pandemic. EP services could use this information to commission further research, in conjunction with training providers, to develop a framework that supports schools to develop their ER practice through staff training, supporting staff wellbeing and helping staff to employ a consistent ER approach that they can evaluate effectively for future use.

With the high numbers of deaths and significant changes to people's lives following the impact of COVID-19, emotional wellbeing and the capacity to regulate emotions effectively, will be an important factor as children return to school. Therefore, effective dissemination of the current research findings and further development and research of

adequate interventions is essential currently. The TEP hopes that the current research helps to spark greater conversation of ER specifically, highlighting its potential to impact learning more broadly (Schlesier et al., 2019) rather than just being perceived as a small element of SEMH.

References

American Psychological Association, & American Psychological Association. (2005). *Policy statement on evidence-based practice in psychology*. Published as appendix of APA

Baker, J. (2008). Mercury, vaccines and autism: one controversy, three histories. *American Journal of Public Health, 98 (2),* 244-253.

Barkham, M., & Mellor-Clark, J. (2003). Bridging evidence-based practice and practice-based evidence: Developing a rigorous and relevant knowledge for the psychological therapies. *Clinical Psychology & Psychotherapy: An International Journal of Theory & Practice*, *10*(6), 319-327.

Braet, C., Theuwis, L., Van Durme, K., Vandewalle, J., Vandevivere, E., Wante, L., Moens, E., Verbeken, S., & Goossens, L. (2014) Emotion regulation in children with emotional problems. *Cognitive Therapy and Research*, *38*(5), 493-504.

British Psychological Society. (2005). *Subject Benchmarks for Applied Psychology*, Leicester, UK: British Psychological Society.

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American psychologist*, *32*(7), 513-531.

Burnham, S. (2013). Realists or pragmatists? "Reliable evidence" and the role of the educational psychologist. *Educational Psychology in Practice, 29*(1), 19-35. doi: 10.1080/02667363.2012.734277

Campbell, M., Fitzpatrick, R., Haines, A., Kinmouth, A.L., Sandercock, P., Spiegelhalter, D., & Tyrer, P. (2000). Framework for design and evaluation of complex interventions to improve health. *British Medical Journal, 321,* 694-696.

Cottrell, D. (2002). Body of evidence: Towards evidence based practice. *Young Minds, 58,* 34-37.

Department for Education (DfE). (2014). *SEND Code of Practice: 0-25 years.* Available from https://www.gov.uk/government/publications/send-code-of-practice-0-to-25

Department of Education (DfE). (2016). School workforce in England: November 2015. (SFR 21/2016, 30 June 2016). London: DfE.

Dingfelder, H.E., & Mandell, D.S. (2011). Bridging the Research-to-Practice Gap in Autism Intervention: An Application of Diffusion of Innovation Theory. *Journal of Autism and Developmental Disorders, 41*, 597-609.

Education Endowment Foundation, 2015. *Making Best Use of Teaching Assistants Guidance Report*. [online] London. Available at: <https://v1.educationendowmentfoundation.org.uk/uploads/pdf/TA_Guidance_Report_Int eractive.pdf>

Eisenberg, N., Valiente, C., & Eggum, N. D. (2010). Self-regulation and school readiness. *Early education and development*, *21*(5), 681-698.

Evans, V., & Bond, C. (2021). The implementation of Lego®-Based Therapy in two English mainstream primary schools. *Journal of Research in Special Educational Needs*.

Fallon, K., Woods, K. & Rooney, S. (2010). *A discussion of the developing role of EP within Children's Services, 26*(1) 1-23.

Force, A. T. (2006). APA presidential task force on evidence based practice. *American Psychologist*, *61*, 271-285.

Fox, M. (2003). Opening Pandora's box: Evidence-based practice for educational psychologists. *Educational Psychology in Practice, 19*(2), 91-102. doi: 10.1080/02667360303233

Friedman, I. A. (2006). *Classroom Management and Teacher Stress and Burnout.* In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (p. 925–944). Lawrence Erlbaum Associates Publishers.

Gersten, R., & Smith-Jones, J. (2001). Reflections on the research to practice gap. *Teacher Education and Special Education, 24*, 356-361.

Guldberg, K. (2017). Evidence-based practice in autism educational research: can we bridge the research and practice gap?. *Oxford Review of Education*, *43*(2), 149-161.

Happé, F., & Frith, U. (2020). Annual Research Review: Looking back to look forward– changes in the concept of autism and implications for future research. *Journal of Child Psychology and Psychiatry*, *61*(3), 218-232.

Harmsworth, S., & Turpin, S. (2000). Creating and effective dissemination strategy. An expanded interactive workbook for educational development projects. TQEF National Coordination team, 1-33.

Health Care and Professions Council (2015). *Standards of Proficiency: Practitioner psychologists.* London: Health Care and Professions Council.

Kasari, C., & Smith, T. (2013). Interventions in schools for children with autism spectrum disorder: Methods and recommendations. *Autism, 17 (3)* 254-267.

Kelly, B., Longbottom, J., Potts, F., & Williamson, J. (2004). Applying emotional intelligence: Exploring the promoting alternative thinking strategies curriculum. *Educational Psychology in Practice*, *20*(3), 221-240.

Kim, J., & Cicchetti, D. (2010). Longitudinal pathways linking child maltreatment, emotion regulation, peer relations, and psychopathology. *Journal of child psychology and psychiatry*, *51*(6), 706-716.

Kratochwill, T.R., & Shernoff, E.S. (2004). Evidence-Based Practice: Promoting Evidence-Based Interventions in School Psychology. *School Psychology Review, 33 (1),* 34-48.

Kratochwill, T.R., & Stoiber, K.C. (2002). Evidence-based Interventions in School Psychology: Conceptual Foundations of The Procedural and Coding Manual of Division 16 and The Society for The Study of School Psychology Task Force. *School Psychology Quarterly, 17 (4),* 341-389.

Landrum, T.J., Cook, B.G., Tankersley, M.T., & Fitzgerald, S. (2002). Teachers' perceptions of the trustworthiness, usability, and accessibility of information from different sources. *Remedial and Special Education, 23(1),* 42-48*.*

Lendrum, A., & Humphrey, N. (2012). The Importance of Studying the Implementation of Interventions in School Settings. *Oxford Review of Education, 1,* 1-18.

Lilienfeld, S.O. (2010). Can psychology become a science? *Personality and Individual Differences, 49,* 281-288.

Lovaas, O.I. (1987). Behavioural Treatment and Normal Educational and Intellectual In Young Autistic Children. *Journal of Consulting and Clinical Psychology, 55 (1),* 3-9.

Magyar, C.I., & Pandolfi, V. (2012). Considerations for Establishing a Multi-Tiered Problem Solving Model for Students with Autism Spectrum Disorders and Comorbid Emotional-Behavioural Disorders. *Psychology in the Schools, 49 (10),* 975-987.

Matson, J.L., & LoVullo, S.V. (2009). Trends and Topics in Autism Spectrum Disorders Research. *Research in Autism Spectrum Disorders, 3 (1),* 252-257.

Odom, S.L., Brantlinger, E., Gersten, R., Horner, R.H., Thompson, B., & Harris, K.R. (2005). Research in Special Education: Scientific Methods and Evidence-Based Practices. *Exceptional Children, 71 (2),* 137-148.

Ospina, M.B., Krebs Seida, J., Clark, B., Karkhaneh, M., Hartling, L., Tjosvold, L., Vandermeer, B., & Smith, V. (2008). Behavioural and Developmental Interventions for Autism Spectrum Disorder: A Clinical Systematic Review. *PLoS One, 3 (11),* 1-32.

Reddy, L. A., Forman, S. G., Stoiber, K. C., & Gonzalez, J. E. (2017). A National Investigation of School Psychology Trainers' attitudes And Beliefs About Evidence-Based Practices. *Psychology in the Schools*, *54*(3), 261-278.

Rhoades, R., Scarpa, A., & Salley, B. (2007). The Importance of Physician Knowledge of Autism Spectrum Disorder: Results of a Parent Survey. *BMC Pediatrics, 7 (37),* 1-10.

Schlesier, J., Roden, I., & Moschner, B. (2019). Emotion regulation in primary school children: A systematic review. *Children and Youth Services Review*, *100*, 239-257.

Simpson, R. L., Mundschenk, N. A., & Heflin, L. J. (2011). Issues, policies, and recommendations for improving the education of learners with autism spectrum disorders. *Journal of Disability Policy Studies*, *22*(1), 3-17.

Slavin, R.E. (2002). Evidence-Based Education Policies: Transforming Educational Practice and Research. *Educational Researcher, 21 (7),* 15-21.

Sutton, R. E., & Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and directions for future research. *Educational psychology review*, *15*(4), 327-358.

Tabak, R. G., Khoong, E. C., Chambers, D. A., & Brownson, R. C. (2012). Bridging research and practice: models for dissemination and implementation research. *American journal of preventive medicine*, *43*(3), 337-350.

Trembath, D., Sulek, R., Paynter, J., Simpson, K., & Keen, D. (2019). Staff views on supporting evidence based practice for children with ASD. *Disability and rehabilitation*, *41*(4), 436-444.

Van Achterberg, T., Schoonhoven, L., & Grol, R. (2008). Nursing implementation science: how evidence-based nursing requires evidence-based implementation. *Journal of nursing scholarship*, *40*(4), 302-310.

van Daal, V. (2015). Can educational practice be based on single-subject designs? British Journal of Special Education, 42(1), 6-10. doi: 10.1111/1467-8578.12095

Wilson, P. M., Petticrew, M., Calnan, M. W., & Nazareth, I. (2010). Disseminating research findings: what should researchers do? A systematic scoping review of conceptual frameworks. *Implementation Science*, *5*(1), 1-16.

Yudell, M., Tabor, H.K., Dawson, G., Rossi, J., Newschaffer, C., Working Group in Autism Risk Communication and Ethics 1. (2013). Priorities for autism spectrum disorder risk communication and ethics. *Autism, 17 (6),* 701-722.

Zhou, Q., Hofer, C., Eisenberg, N., Reiser, M., Spinrad, T. L., & Fabes, R. A. (2007). The developmental trajectories of attention focusing, attentional and behavioral persistence, and externalizing problems during school-age years. *Developmental psychology*, *43*(2), 369-385

Appendix A.1 Author Guidelines- JORSEN

The *Journal of Research in Special Educational Needs* publishes scholarly papers based on original research as well as critical reviews and theoretical essays. This includes submissions from a range of colleagues within the SEN field and across the disability community. Authors are asked to be sensitive to the diverse international audience of the *Journal* and explain the use of terms that might be meaningful or have a specific meaning in a particular national context. The use of jargon should be avoided and technical terms defined. Standard stylistic conventions based on British spelling and form should be followed.

References should be listed in full at the end of the paper in alphabetical order of authors' names, set out as below:

Book:
Kornblum, W. & Smith, C. K. (eds) (2004) Social Problems in Schools. (5th edn). Milton Keynes: Open University Press.

Chapter in book:
Roof, C. (ed.) (2000) 'Behavioural difficulties in children.' In R. Davies & D. Galway (eds), Listening to Children, pp. 108–20. London: Fulton.

Journal:
Hadaway, C. (1981) 'The English school environment: proposed changes.' Cambridge Journal of Education, 20 (1), pp. 77–89.

Electronic resources:
Belson, K. C. (2005) 'Auditory training for autistic children.' Paediatrics, 102, pp. 41–3. <<a href='http://www.aap.org/policy.html'>http://www.aap.org/policy.html> (accessed 18 January 2005).

Others:
Firth, G. (2004) Developmental Process in Mental Handicap: A Generative Structure Approach. Unpublished PhD dissertation, Department of Education, Brunel University.

Clark, G. N. (1983) Intensive Interaction: Changing Views and Relationships (draft final report). Leeds Mental health NHS Trust: Learning Disability Psychology Services.

Illustrations, tables and figures should be numbered consecutively (e.g. Figure 1, Table 1, Table 2, etc.) and submitted on separate sheets. The approximate position of tables and figures should be indicated in the manuscript.

An electronic copy of manuscripts (Word files preferred) of 6,000-8,000 words including references and appendices should be sent to the Editor at the address provided at the end of these Guidelines. If electronic submission is not possible, three hard copies should be sent by regular mail. Each article should be accompanied by a 150-250 word abstract and a list of keywords on a separate sheet.

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Endfield, G.H., Veale, L., Royer, M., Bowen, J.P., Davies, S., Macdonald, N., Naylor, S., Jones, C., & Tyler-Jones, R. (2017) Extreme weather in the UK: past, present and future - event details from the TEMPEST database. Centre for Environmental Data Analysis doi:10.5285/d2cfd2af036b4d788d8eddf8ddf86707.

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Appendix A.2 Author Guidelines- Pastoral Care in Education

Instructions for authors

COVID-19 impact on peer review

As a result of the significant disruption that is being caused by the COVID-19 pandemic we understand that many authors and peer reviewers will be making adjustments to their professional and personal lives. As a result they may have difficulty in meeting the timelines associated with our peer review process. Please let the journal editorial office know if you need additional time. Our systems will continue to remind you of the original timelines but we intend to be flexible.

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Updated 29-04-2020

Appendix B.1 Ethical Approval

Ref: 2020-9560-15298

14/05/2020

Dear Miss Lydia Phillip, , Prof Caroline Bond

Study Title: Emotional regulation for children with Autism in mainstream schools

Environment, Education and Development School Panel PGR

I write to thank you for submitting the final version of your documents for your project to the Committee on 04/05/2020 07:53 . I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form and supporting documentation as submitted and approved by the Committee.

COVID-19 Important Note

If you are conducting research with a data collection methodology that involves face-to-face contact (i.e. interviews, focus groups, psychological experiments, tissue sampling, and any other research procedure requiring face-to-face contact) you must switch to data collection via Skype, telephone or an alternative digital platform.

Please note, you do not need to seek a formal amendment to your existing ethical approval to make these changes provided your consent procedures remain the same (i.e. if you are still obtaining written consent but the form is returned by post or email). If you are choosing an alternative consenting procedure, please submit a formal amendment to your ethical approval via the usual process.

If switching your data collection to digital or electronic means is not possible (i.e. human tissue studies) then you must suspend all research activity until further notice unless doing so will have critical impacts on research participants (i.e. affect their wellbeing or care).

Please also consider whether you need to submit an amendment to extend your dates of data collection, due to postponed fieldwork or other research activities. If you need to seek an extension, you must do so before the end date as listed on your approved ethics application/last approved amendment or within 3 months of this date.

Researchers who wish to continue with face-to-face data collection during this period will require specific approval from the Research Governance, Ethics and Integrity Team. Such approval will only be given if 1) the researcher is a member of staff or PGR, 2) the research is specifically related to the Covid-19 situation and data collection has to take place at the present time, or 2) there are exceptional reasons for the continuation of face-to-face data collection (i.e. critical impacts on the wellbeing or care of research participants).

Please see https://www.staffnet.manchester.ac.uk/rbe/ethics-integrity/ethics/ for further details

Please see below for a table of the titles, version numbers and dates of all the final approved documents for your project:

Document Type	File Name	Date	Version
Consent Form	Consent form	25/04/2020	1
Participant Information Sheet	Participant information sheet	25/04/2020	1
Data Management Plan	Data Management Plan	01/05/2020	1
Additional docs	Interview Schedule (ethics)	01/05/2020	1
Letters of Permission	Invitation email	01/05/2020	1

This approval is effective for a period of five years and is on delegated authority of the University Research Ethics Committee (UREC) however please note that it is only valid for the specifications of the research project as outlined in the approved documentation set. If the project continues beyond the 5 year period or if you wish to propose any changes to the methodology or any other specifics within the project an application to seek an amendment must be submitted for review. Failure to do so could invalidate the insurance and constitute research misconduct.

You are reminded that, in accordance with University policy, any data carrying personal identifiers must be encrypted when not held on a secure university computer or kept securely as a hard copy in a location which is accessible only to those involved with the research.

For those undertaking research requiring a DBS Certificate: As you have now completed your ethical application if required a colleague at the University of Manchester will be in touch for you to undertake a DBS check. Please note that you do not have DBS approval until you have received a DBS Certificate completed by the University of Manchester, or you are an MA Teach First student who holds a DBS certificate for your current teaching role.
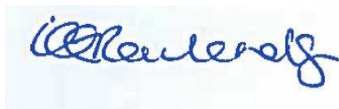
Reporting Requirements:

You are required to report to us the following:

1. Amendments: Guidance on what constitutes an amendment
2. Amendments: How to submit an amendment in the ERM system
3. Ethics Breaches and adverse events
4. Data breaches

We wish you every success with the research.

Yours sincerely,

Dr Kate Rowlands

Environment, Education and Development School Panel PGR

Appendix B.2 Consent Form

The University of Manchester

UoM Template for Participant Consent Forms

Emotional Regulation

Consent Form

If you are happy to participate please complete and sign the consent form below

	Activities	Initials
1	I confirm that I have read the attached information sheet (**Version 1, Date 25/04/2020**) for the above study and have had the opportunity to consider the information and ask questions and had these answered satisfactorily.	
2	I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason and without detriment to myself. I understand that it will not be possible to remove my data from the project once it has been anonymised and forms part of the data set. I agree to take part on this basis.	
3	I agree to the **interviews** being **audio recorded**.	
5	I agree that any data collected may be published in anonymous form in **academic books, reports or journals.**	
6	I understand that data collected during the study may be looked at by individuals from The University of Manchester or regulatory authorities, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my data.	
7	I agree that any **personal/anonymised** data collected may be shared with **researchers**.	
8	I agree that the **researchers** may contact me in future about other research projects.	

9	I agree that the researchers may retain my contact details in order to provide me with a summary of the findings for this study.	
10	I understand that there may be instances where during the course of the **interview** information is revealed which means that the researchers will be obliged to break confidentiality, and this has been explained in more detail in the information sheet.	
11	I agree to take part in this study.	

Before giving your consent, please read the following statement:

Your participation in this research will be recorded in Zoom (audio only) and your personal data will be processed by Zoom. This may mean that your personal data is transferred to a country outside of the European Economic Area, some of which have not yet been determined by the European Commission to have an adequate level of data protection. Appropriate legal mechanisms to ensure these transfers are compliant with the UK General Data Protection Regulation are in place. The recordings will be removed from the above third party platform and stored on University of Manchester managed file storage as soon as possible following the completion of data collection.
Data Protection

The personal information we collect and use to conduct this research will be processed in accordance with data protection law as explained in the Participant Information Sheet and the Privacy Notice for Research Participants.

_____   _____   _____
Name of Participant   Signature   Date

_____   _____   _____
Name of the person taking consent   Signature   Date

[Please retain a copy of your consent for your own files. A further copy will be kept with the research team.]

Appendix B.3 Invitation Letter

Hi…….

I am inviting you take part in my research as part of my Doctoral thesis in Educational Psychology.

The research aims to gain a better understanding of how emotional regulation is perceived in primary schools. Interviews will explore how teachers define emotional regulation, how they support their pupil's emotional regulation and whether this differs for children with autism.

Your participation will require an online interview via zoom that will be audio recorded. Interviews will last approx. 45 minutes.

Attached to this email is a participant information sheet, outlining full details of the research and what will be required from your participation. If you wish to participate you will be required to complete a consent form before interviews commence.

If you have further questions, please don't hesitate to get in contact.

Thank you

Lydia Phillip

Appendix B.4 Participant Information Sheet

Research Participant Information Sheet

Emotional Regulation Strategies for Children with Autism in Mainstream Primary Schools

Participant Information Sheet (PIS)

You are being invited to take part in a research study which aims to explore school staffs' perception and understanding of emotional regulation and how this may differ for children with autism, specifically in mainstreams schools. The research is part of a doctoral thesis by a Trainee Educational Psychologist. Before you decide whether to take part, it is important for you to understand why the research is being conducted and what it will involve. Please take time to read the following information carefully before deciding whether to take part and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Thank you for taking the time to read this.

About the research

➢ **Who will conduct the research?**

Lydia Phillip (Trainee Educational Psychologist), School of Environment and Educational Development, The University of Manchester.

➢ **What is the purpose of the research?**

The researcher aims to gain a greater understanding of how mainstream schools perceive and understand emotional regulation, how they support their pupil's emotional regulation and whether this differs for children with autism.

➢ **Why have I been chosen for this research?**

You have been chosen for this research as you are known to the researcher. As a member of staff with a SEN/pastoral role it is felt that you would be best positioned to answer the questions as you have an overall understanding of how SEN is dealt within your school.

➢ **Will the outcomes of the research be published?**

Outcomes of the research will be submitted part of a doctoral thesis and published externally in public papers.

➢ **Disclosure and Barring Service (DBS) Check**

Although the research doesn't require the researcher to make direct contact with any children, it is important to note that they have had a full DBS check, which can be provided if necessary.

➤ **Who has reviewed the research project?**

The current research has been reviewed by the Environment, Education and Development School Panel PGR.

➤ **Who is funding the research project?**

The research is funded by the Department for Education (DfE) part of the Initial Trainee Educational Psychology (ITEP) training scheme.

What would my involvement be?

➤ **What would I be asked to do if I took part?**

The research will require you to take part in an online interview via Zoom. The interview will take place with yourself and the researcher, Lydia Phillip. You will be asked questions about the school's overall policy relating to emotional regulation, what strategies are in place and how this may differ for children with autism. You may also be asked about your professional opinion on the subject matter. You will not be expected to name any members of staff or children or talk about anyone on a personal level.

The interview will be audio recorded and later transcribed for analysis. Any personal data will be anonymised and remain confidential throughout the write up of the research. Interviews are expected to last around 30-45 minutes. A copy of the interview schedule will be sent to you beforehand, so that you have time to prepare.

➤ **What happens if I do not want to take part or if I change my mind?**

Please read through the information sheet carefully before making your decision on whether to participate or not. Once you have done so, please contact the researcher via email, regarding your decision to participate. If you do decide to take part, you will be given this information sheet to keep and will be asked to sign a consent form. You will still have the right to withdraw from the research at any time without giving a reason and without detriment to yourself. However, it will not be possible to remove your data from the project once it has been anonymised, as your data will no longer be identifiable. This does not affect your data protection rights. If you decide not to take part, you do not need to do anything further.

The audio recording of interviews is an integral part of the research and so you should think carefully whether you are comfortable with this element of the research before consenting to participate. However, if you later change your mind and no longer want to participate in the audio recording of the interview, alternatives can be discussed with the researcher. If you do participate in the recording of the interviews, you have the right to cease participation at any point throughout the recording.

Data Protection and Confidentiality

➤ **What information will you collect about me?**

In order to participate in this research project we will need to collect information that could identify you, called "personal identifiable information". Specifically we will need to collect:

- Your name and signature- for consent purposes

- Audio recordings will be taken during the interview through Zoom. No names that identify organisations or individuals should be used during the interview. In the eventuality that they are, they will be anonymised at the point of transcription.

➢ **Under what legal basis are you collecting this information?**

We are collecting and storing this personal identifiable information in accordance with data protection law which protect your rights. These state that we must have a legal basis (specific reason) for collecting your data. For this study, the specific reason is that it is "a public interest task" and "a process necessary for research purposes".

Your participation in this research will be recorded in Zoom (audio only) and your personal data will be processed by Zoom. This may mean that your personal data is transferred to a country outside of the European Economic Area, some of which have not yet been determined by the European Commission to have an adequate level of data protection. Appropriate legal mechanisms to ensure these transfers are compliant with the UK General Data Protection Regulation are in place. The recordings will be removed from the above third- party platform and stored on University of Manchester managed file storage as soon as possible following the completion of data collection.

➢ **What are my rights in relation to the information you will collect about me?**

You have a number of rights under data protection law regarding your personal information. For example, you can request a copy of the information we hold about you, including audio recordings.

If you would like to know more about your different rights or the way we use your personal information to ensure we follow the law, please consult our [Privacy Notice for Research](#).

➢ **Will my participation in the study be confidential and my personal identifiable information be protected?**

In accordance with data protection law, The University of Manchester is the Data Controller for this project. This means that we are responsible for making sure your personal information is kept secure, confidential and used only in the way you have been told it will be used. All researchers are trained with this in mind, and your data will be looked after in the following way:

All identifiable information will be anonymised and replaced with pseudonyms to ensure confidentiality.

Only the study team at The University of Manchester will have access to your personal information, but they will anonymise it as soon as possible. Your name and any other identifying information will be removed and replaced with a random ID number. Only the research team will have access to the key that links this ID number to your personal information. Your consent form and contact details will be retained for 5 years, encrypted on the university's P drive.

Important note: UoM requires identifiable data to be anonymised as soon as the objectives of the project allow. The standard retention period for data once anonymised is 5 years unless funders or regulators have specified longer retention requirements.

For audio recordings:

- All audio recordings will be transcribed by a UoM approved supplier.

- All personal information will be removed or anonymised in the final transcript.

- All audio recordings will be deleted once the transcripts have been completed.

- Only the main researcher will have access to the recordings until shared with the approved supplier for transcription.

Please also note that individuals from The University of Manchester or regulatory authorities may need to look at the data collected for this study to make sure the project is being carried out as planned. This may involve looking at identifiable data. All individuals involved in auditing and monitoring the study will have a strict duty of confidentiality to you as a research participant.

What if I have a complaint?

➢ **Contact details for complaints**

If you have a complaint that you wish to direct to members of the research team, please contact:

Professor Caroline Bond, Manchester Institute of Education, School of Environment, Education and Development, Ellen Wilkinson Building, Oxford Road, Manchester, M13 9PL. Telephone: 0161 2753686 or email Caroline.Bond@manchester.ac.uk

If you wish to make a formal complaint to someone independent of the research team or if you are not satisfied with the response you have gained from the researchers in the first instance then please contact:

The Research Governance and Integrity Officer, Research Office, Christie Building, The University of Manchester, Oxford Road, Manchester, M13 9PL, by emailing: research.complaints@manchester.ac.uk or by telephoning 0161 275 2674.

If you wish to contact us about your data protection rights, please email dataprotection@manchester.ac.uk or write to The Information Governance Office, Christie Building, The University of Manchester, Oxford Road, M13 9PL at the University and we will guide you through the process of exercising your rights.

You also have a right to complain to the Information Commissioner's Office about complaints relating to your personal identifiable information Tel 0303 123 1113

Contact Details

If you have any queries about the study or if you are interested in taking part then please contact the researcher **Lydia Phillip by email: lydia.phillip@postgrad.manchester.ac.uk**

Interview Schedule

Definition

What do you understand about the term 'emotional regulation'?

Whole School

Is emotional regulation a school priority?

Does your school have a whole school scheme/approach for supporting emotional regulation for your pupils (staff)?

If so, how did you hear about it? How is this delivered? Monitored? Evaluated? Why did you decide to adopt this particular approach/ intervention?

Is emotional regulation seen as part of SEN?

Who has responsibility for overseeing this area?

Classroom

Are staff using emotional regulation approaches in their classrooms?

- Why?
- What resources are they using?
- What training have they had?

Individual General

How have you adapted your whole school emotional regulation approaches for individual children?

- Can you give me some examples?

Autistic Group

How does your school support children with autism generally? Are there 'typical' interventions you use?

How does you school support emotional regulation for children with autism?

- Do you have any specific/standard approaches you use?
- How are these delivered?
- How are these monitored/evaluated?

Autistic individual

How do you individualise emotional regulation interventions for autistic children?

- Can you give me some examples?
- Are these created in collaboration with the pupil/ families?
- How do you monitor these interventions?
- How do you know these interventions are successful?

→ Social partners.

sort of...ability, or their family involved where you...they can help suggest things that they can...you can do to support the child with their emotional regulation?

Respondent: I think play is quite important because they learn sharing and collaborating and managing their emotions alongside somebody else, so...part of the pastoral care, they will spend some of the afternoon playing or sharing Lego and there's only a certain amount of Lego and they've got to share it out and make sure it's fair and I think actually doing it...they're learning about it without realising and sitting down. Like we also do do sometimes, 'OK, what is this person feeling?' And having flashcards, if it's an actual way of doing it...as well through play. So with families, especially if the...child with autism is presenting with perhaps not making too many meaningful relationships or playing more alongside, we do kind of suggest, you know, trying to set up...play dates and things like that...to build their social skills.

→ supporting families.

TEP: And do you have anything coming in the other direction? So maybe families...saying, 'Actually, I know that this works really well for my child, could you maybe implement this in school?' Do you...have that sort of co-production of strategies with families or even the individual themselves?

→ collaborating with parents around the best provision

Respondent: Yeah. We've got a boy in Year 2 and...Lego soothes him and mum said if he's had a meltdown at home...she said, 'We put him in front of Lego...just for ten minutes and it completely diffuses him,' and that has helped the teacher so much because he's now got a little bag of Lego and...whereas at first there was a novelty to it...and the Lego was out...pretty much all day, it is becoming less and less, it's now just when he needs it. And...the same with iPad time – we've got a boy higher up in school...and now he says... 'The classroom's too noisy, can I go on my iPad?' And he'll go out, but he'll take...we've got different length of timers. We'll say, 'Will we need a five minute or a ten-minute timer?' And we kind of let him choose...so if he chooses a ten minute one...that's fine because that's what he's chosen and then...we're kind of being led by them a little bit more.

Allowing children
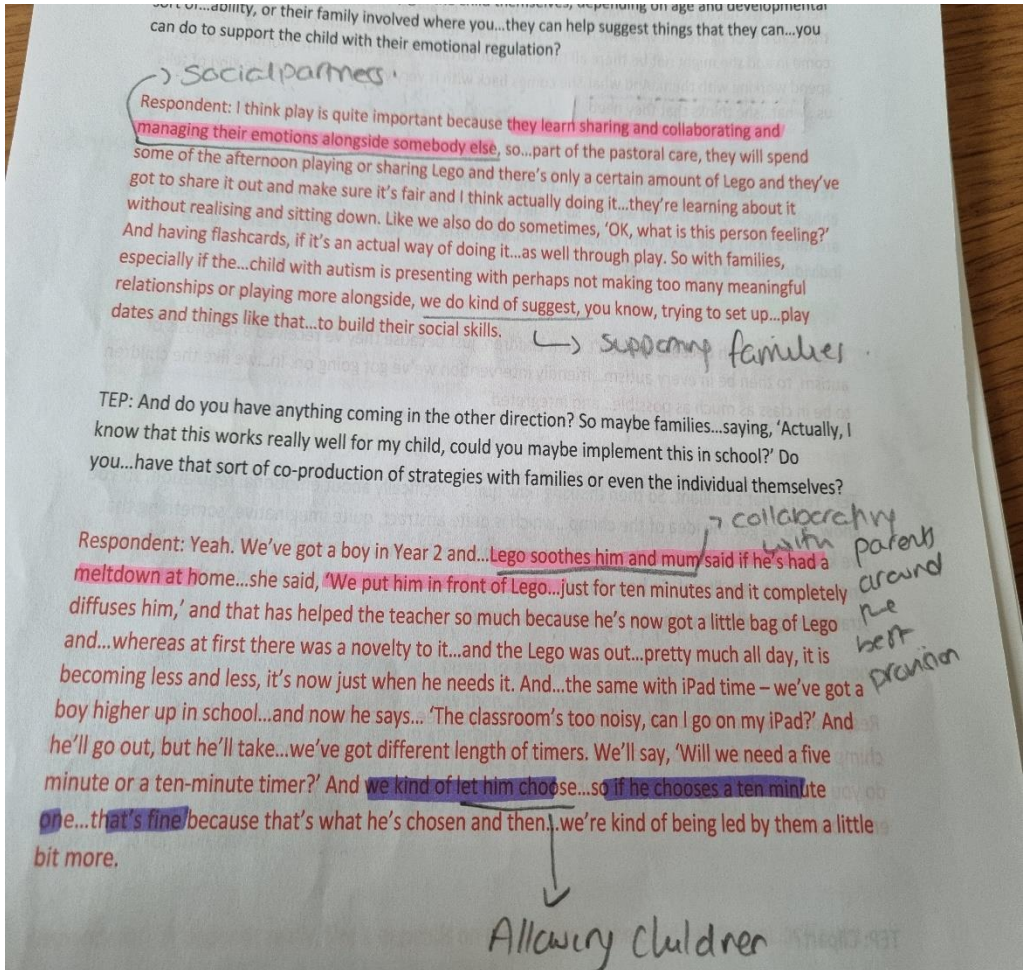
Table of analysis

Initial Themes	Initial subthemes
Emotional Intelligence	Control, Manage, understanding your own emotions and others, Identify, regulate emotions, problem solving, cause and effect (of emotions)
Externalising emotions	Strategies used: The chimp, visuals, colours, lanyards, balloons, externalising language, "my chimp, the red zone, my balloon".
Embedded Curriculum	Non- negotiables, across all classrooms, whole school offer, PSHE curriculum, rolled out across entire Key stage, Growth Mindset practice, Zones of Regulation, well-being parcels, individual interventions turn whole school/key stage, no whole school curriculum, wish to be a whole school strategy.
Collaboration / Social Partners	Parent support, scaffolding, parent reviews, peer support, learning alongside others, teacher led one page profiles
Pupil Voice/ Input	Kids personalising their own zones, skill building for the children themselves, pupil voice, he can choose, transition passport 'things that help me', not enforcing on the children but involving them
Tracking (formal/informal)	See if it is right for us, IPP, Provision maps, one page profile, tracking, termly reviews, pre and post questionnaires, noticing (informal), annual review, incident based, specific tracking tools (autism assessment, SCERTS), informal tracking, CPOMS, temporary immediate progress, positive behaviour tracking, half termly TA reports, notes for transition, attendance tracking, start

	middle and end, exit criteria, assessment evaluations, wellbeing monitoring
SEN or Behaviour	Perceived as SEN, Obviously SEN, mental health is SEN, realising it is SEN, can overlap with SEN, SEN and behaviour not always linked, not SEN it's Wellbeing, everyone has wellbeing but not SEN, thin line between the two, just behaviour, ER is SEMH, Staff perceive them as one, blurred line between the two, SENCO is also behaviour lead, battle between the two.
Development of emotions	Confident turns aggressive or tearful, things start to unravel, extreme high emotions, build on, natural to some, age appropriate
Staff Knowledge	Second hand training, specific teachers trained for specific child(ren), shared drive training materials, Books, self trained, professional training (SaLT), specialist consultant, signpost for help, ALL staff training, use previous training and experience, sharing good practice, professional input, upskilling staff, TA driven, sharing only when necessary, EP training, gathering various knowledge together, in house training,
Staff Wellbeing	Contact head for support, Wellbeing INSET day, end of every half term, making sure staff are happy, we're the most important resource in the class, recognising anxiety coming back from COVID, Mindfulness, deputy's remit to support staff wellbeing,
Tailored support (Pink Pen)	One- to-one basis, catering to everyone's different abilities, normally for the benefit of a few people, for somebody in their class, children dealt with in different ways, Key stage1 different to key stage 2, slightly different approaches, individual children get…, they are very very different, one child has a bottle…, tailored to the cohort, what they need.

Validation of emotions	Removing blame, not labelling themselves, normalising emotion, a lot of adults don't know this,
Miscellaneous	COVID, pastoral role, staff roles (SLT or not),no explicit tools used, time consuming, practice is changing, graduated support.

Appendix D.2 Review Framework for Quantitative Evaluation Research- WOE A

D.Ed.Ch.Psychol. 2018
Review framework for quantitative evaluation research

Author(s):

Title:

Journal Reference:

Criterion	Score	R1	R2	Agree %	R1	R2	Agree %	Comment
Use of a randomised group design	**1 0**							
Focus on a specific, well-defined disorder or problem	**1 0**							
Comparison with treatment-as-usual, placebo, or less preferably, standard control	**1 0**							
Use of manuals/ protocol/ training	**1 0**							
Fidelity checking procedure/ supervision of intervention	**1 0**							
Sample large enough to detect effect (from Cohen, 1992)	**1 0**							

| Use of outcome measure(s) that has demonstrably good reliability and validity

(2 points if more than one measure used). | **2 1 0** | | | | | | | |
| Total | *Max 8* | | | Mean % agree | | | Mean % agree | |

References

American Psychological Association (APA) (2006). Evidence Based Practice in Psychology, *American Psychologist*, May-June, 271-285.

Woods, K., Bond, C., Humphrey, N., Symes, W., & Green, L. (2011). *Systematic Review of Solution Focused Brief Therapy (SFBT) with children and families.* (DfE Research Report RR179). Retrieved on 18.9.14 from https://www.education.gov.uk/publications/standard/publicationDetail/Page1/DFE-RR179

Appendix D.3 Weight of Evidence Table

Paper	WoE A	WoE B	WoE C	WoE D
Enay et al (2019)	4- Medium	3- Medium	2- High	Medium
Factor et al (2019)	6.5- High	4- High	0- Low	Medium
Gulsrud, Jahromi and Kasari (2009)	5.5 – Medium	4- High	2 -High	High
Scarpa and Reyes (2011)	3.5- Medium	3.5 – High	2- High	Medium
Shaffer et al (2018)	4- Medium	3- Medium	1- Medium	Medium
Sofronoff, Silva and Beaumont (2017)	5.25- Medium	3- Medium	1.5 Medium	Medium
Thomson, Riosa and Weiss (2015)	4.75- Medium	3- Medium	1- Medium	Medium
Weiss et al. (2018)	5.5- Medium	3 Medium	0.5- Low	Medium