Doctorate in Professional Educational, Child and Adolescent

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Doctoral Thesis

The Emotion, Regulation and Mental Health Pathway. The Relationship Between Emotion Control Beliefs, Mental Health and Regulation for Learners in Alternative and Mainstream Provision

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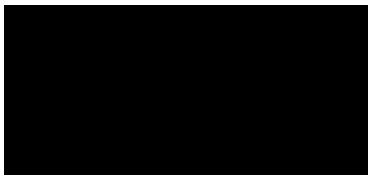
Declaration

I, Jack Spawton-Rice, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

In line with guidance, the word count includes any diagrams, and tables, but excludes the appendices and list of references, as well as the title page, declaration, abstract, impact statement, acknowledgements and the contents page.



Word Count: 38,049

Abstract

Background and Aims

Emotion beliefs refer to the perceived controllability and usefulness of emotions, and research indicates that these beliefs impact mental health by influencing emotional regulation behaviors. Adolescents with Attention Deficit Hyperactivity Disorder (ADHD) and Autistic Spectrum Condition (ASC) are at greater risk of poor mental health, partly due to differences in their emotion regulation behaviors. Adolescence is a critical period characterised by its increase in vulnerability for mental illness and its enhanced opportunity for positive, lasting change, making it an essential focus for interventions aimed at improving mental health outcomes. This research aims to explore the relationship between emotion beliefs and mental health in adolescents with ADHD and ASC, mediated by emotional regulation. By understanding this relationship, the research seeks to identify potential targets for preventative mental health support within educational settings.

The present study aims to identify whether the relationship between emotion beliefs and mental health observed in neurotypical populations also exists in neurodiverse populations, specifically those with ADHD and ASC. A mixed methods approach was adopted for this research, combining quantitative analysis to examine the relationship between emotion beliefs and mental health outcomes, with qualitative exploration of regulation approaches and experiences. This research aims to explore how young people regulate their emotions, the barriers and supports that impact this and their perspectives on these processes. Additionally, it investigates whether the relationship between emotion beliefs and mental health, mediated by emotional regulation, exists in adolescent neurodiverse populations. Aligned with neurodiversity affirming principles, the research explores both positive and negative measures of mental health to explore protective factors and move beyond a deficit focused framework.

Research Design

A mixed-methods convergent research design was used for this study, combining quantitative questionnaire data with qualitative interview data. Students with diagnoses of ADHD or ASC in key stages 3 and 4 (ages 12-16) were recruited from two English secondary

schools: a mainstream secondary school (n = 9) and a specialist provision for students with social, emotional, and mental health (SEMH) needs (n = 7). In total, 16 students completed a questionnaire consisting of three scales: the Revised Child Anxiety and Depression Scale (RCADS-25), the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS), and the Emotion Beliefs Questionnaire (EBQ). These were followed by semi-structured interviews exploring emotion beliefs, perceived barriers to regulation, and views on the relationship between emotion beliefs and mental health.

Findings

Quantitative data revealed non-significant, positive correlations between maladaptive emotion beliefs and measures of psychopathology in the same direction as correlations found by previous research findings in neurotypical populations, supporting their relevance in neurodiverse populations and indicating a need for further research. No significant differences were found between the ASC and ADHD groups regarding emotion beliefs, mental health measures, or the use of reappraisal and expressive suppression, although levels were higher than those identified in previous research with neurotypical samples. A significant negative correlation was found between the belief in the positive usefulness of emotions and the use of expressive suppression suggesting positive usefulness can increase suppression of emotions. Thematic analysis identified four themes: "Control and Utility are Conditional," "How We Control Emotions," "What Affects us," and "How Emotions Impact Our Mental Health." Qualitative data highlighted differences in the use of emotion regulation strategies between groups, with control viewed as a skill that can be improved but also as being limited by the severity and valence of emotions.

Implications

Theoretically, although tentative, findings suggest that emotion beliefs are related to mental health in neurodiverse populations and that emotion type and valence impact this relationship. This supports application of the extended process model by recognising that young people monitor emotional intensity and valence and that this guides regulation behaviour. For Educational Psychologist practice, these findings tentatively suggest that conclusions related to the emotion beliefs and regulation are applicable to neurodiverse populations. At this stage, they suggest further research would be warranted in order to support this conclusion with more

certainty but suggest that previous research identifying emotion beliefs as risk factors for development of poor mental health may be relevant to this population.

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Impact Statement

This research contributes to the understanding of the relationship between emotion beliefs and mental health, focusing on the mediating role of emotion regulation. It provides insights into this relationship in adolescent neurodiverse populations with diagnoses of autistic spectrum condition (ASC) and attention deficit hyperactivity disorder (ADHD) for the first time. The study generated novel qualitative data on young people's perceptions of emotion control, their regulation strategies, and their understanding of how emotions relate to mental health. It is also the second piece of research to utilise the Emotion Beliefs Questionnaire (EBQ) to explore control and usefulness beliefs in adolescent populations, shedding light on beliefs across both positive and negative valences and expanding a limited body of research. The findings contribute to academic literature and offer tentative insights for further research and professional practice among educational psychologists (EPs) and other professionals involved in supporting regulation and mental health in an at-risk adolescent group. Implications are outlined below:

Theoretical Implications

Application to a Novel Population

Findings tentatively suggest that the previously identified relationship between beliefs and regulation applies to the current neurodiverse research sample. Therefore, this suggests that further research is warranted in order to apply conclusions from previous research on the role of regulation and the impact of beliefs to this population.

Extending Previous Understanding of Emotion Beliefs

The study employed in-depth qualitative methods to explore young people's emotion beliefs in detail. This provided new insights into the perceived nature of control, including its limits, which informs understanding of the 'how and why' in relation to the impact of emotion beliefs on regulation. Recognising times and experiences when young people perceive emotions as beyond control can guide discussions as part of psychoeducation and allow for preemptive support planning.

Extending Previous Understanding of the Relationship between Beliefs and Regulation

Qualitative data offered a detailed insight into how neurodiverse young people regulate their emotions. Allowing young people to freely describe their approaches enhances the validity of findings and identifies roles of attentional deployment not previously explored.

Practice Implications.

Early identification of risk of mental illness

Identifying the relevance of emotion beliefs to this population highlights a need for further research with this sample. Further research could explore the use of the EBQ for early identification of those at risk of developing a mental illness. With a stronger evidence base, EPs and schools under their guidance could confidently identify maladaptive beliefs early to provide preventative mental health support. Moreover, as the research suggests that emotion valence impacts the relationship between belief and regulation, this suggests that more detailed understanding of beliefs in would allow for more targeted intervention.

Understanding of specific facilitators and barriers to regulation for this research population

In-depth qualitative data gives insights into young people's experience of school to guide professional practice. The findings suggest that young people would benefit from access to quiet spaces and time-outs to better regulate their emotions. Additionally, they highlighted that social contexts influence emotional regulation, with young people more likely to adopt maladaptive strategies when with peers. This underscores the importance of providing private or adult-facilitated spaces for regulation.

Contents

1. Introduction

1.1 Research Context

What we believe impacts the way in which we behave. Well established research in the field of educational psychology has linked mind-set or implicit theories with behaviour and outcomes in the area in which the beliefs are held (Hughes, 2015). A large body of research in the domain of intelligence has identified a relation between the belief that emotion is fixed and cannot be change and behaviour that avoid challenge. This behaviour subsequently impacts educational outcomes (Blackwell et al., 2007). Developing from mind-set research there is an established and growing body of research that demonstrates a link between emotion beliefs, emotion regulation behaviours and subsequently, mental health (Ford et al., 2018; Tamir et al., 2007; Kappes & Schikowski, 2013, & Somerville et al., 2024). Research suggests emotion regulation mediates this relationship, with beliefs influencing type and frequency of strategy use, which in turn determines the effectiveness of regulation, impacting mental health (De France & Hollenstein, 2019; Tamir et al., 2007).

Existing research has focused on the link between beliefs about the controllability of emotions to measures of mental health, including psychological wellbeing and symptoms of anxiety and depression ((Ford et al., 2018; Kappes & Schikowski, 2013; Tamir et al., 2007; De France & Hollenstein, 2019). This research has principally focused on adult populations; however, a growing body of research suggests that the same relationship is identified in adolescent populations, despite developmental changes (for a review, see Somerville et al., 2024). Later theorising by Ford and Gross (2019) has presented a framework for emotion beliefs that includes both controllability and usefulness beliefs. This framework proposes that these beliefs have separated but related impacts on emotion regulation. For example, if feeling anxiety about delivering a presentation at work, one person may believe that they are unable to control their feelings of anxiety whereas somebody else may believe that if they try to change reduce their anxiety, they will be able to. This person may be more motivated to engage in emotion regulation and thus be more successful in reducing their anxiety. In this example, the belief that anxiety can be controlled drives emotion regulation strategies. Similarly, in this situation one

person may believe that this anxiety is useful in motivating them to prepare for the presentation. Whereas another person may believe that this anxiety is not a useful emotion and should be avoided. The former is likely to view anxiety as part of the process of completing the task and as a result change the way they feel about the anxiety and as a result, feel less anxious. Whereas the latter is more likely to avoid experiencing anxiety through avoidance of preparation and other activities related to the presentation. This may reduce anxiety in the short-term but will not in the long-term.

This framework links the belief that emotions are useless and uncontrollable to less successful regulation and consequently poorer mental health. The more recent focus on usefulness beliefs means that there is a growing but lesser established body of evidence supporting the link between usefulness beliefs and mental health (Becerra, 2020; Berglund et al., 2023; Tamir et al., 2015). This framework was applied to the development of the emotion beliefs questionnaire (EBQ) by Beccerra and colleagues (2020). With validation of this tool, research exploring utility and control beliefs is growing, including, a small sample of research in adolescent populations (Ranjbar et al., 2023).

A limitation identified by emotion beliefs researchers is the need for further research in a diverse range of populations, including adolescent and clinical samples (Ford et al., 2018) due to differences in both organisation of beliefs (Hollenstein & Lougheed, 2013) and emotion regulation (Zimmerman & Iwanski, 2014) that may impact this relationship. Existing adolescent research provides some contradicting evidence regarding the link between beliefs and regulation strategies, particularly around the links between expressive suppression and beliefs (De France & Hollenstein, 2019). There is limited research including clinical populations, which identifies similar relationships (Berglund et al., 2023). However, at present, there is no emotion belief research in neurodiverse populations, primarily those with attention deficit hyperactivity disorder (ADHD) and autism spectrum condition (ASC). This research aims to add to this field of research by exploring both control and utility beliefs in adolescents with ASC and ADHD to identify whether this relationship exists in adolescents with ASC and ADHD and if there are differences or similarities in terms of the strength of these relationships.

This project aims to extend understanding of emotion beliefs to include adolescent populations with ASC and ADHD. This knowledge will guide support of this group, both

through early identification of risk of mental illness and by providing a possible target for preventative early intervention to address beliefs. This study will use a two-phase, mixed-methods research design to achieve this. Firstly, a cross-sectional survey will investigate the relationship between emotion beliefs (EB), emotion regulation strategies, and mental health symptoms (anxiety, depression, psychological well-being) in a group of young people with ASC and a group with ADHD. Secondly, semi-structured interviews will explore these associations, and the regulation strategies used in both groups.

1.2 Researcher Perspective and Rationale

This research was completed as part of a doctorate in Professional Educational, Child and Adolescent Psychology. Prior to this course, the researcher worked as a teacher, assistant psychologist, and adolescent support worker. In these roles, the researcher worked with neurodiverse young people and adults, finding ways to promote positive mental health and remove barriers to learning. During this period, the relationship between mindset and outcomes became apparent in relation to both learning and wellbeing, where a 'growth-mindset' for learning and emotion regulation was a powerful influence. This interest in mindset was the driving force in the researcher's interest in emotion mindsets or emotion beliefs. Alongside this interest was the realisation that concern for adolescent mental health was growing, while access to services was in decline.

As a result, schools and educational psychologists have a growing responsibility to meet these needs. This is particularly true for the neurodiverse young people whose emotional regulation and learning needs can be different to those of their peers. While working as a trainee educational psychologist, the researcher has worked to provide preventative early intervention for neurodiverse young people's mental health. Together, this has led the researcher's interest in drawing on understanding of emotion beliefs as a possible focus for supporting early identification of vulnerability, and as a way to promote mental health.

The research was conducted in two inner London local authorities that the researcher had worked in as a trainee psychologist during their three-year doctorate course. The research aimed to contribute to the field of educational psychology in two ways. Firstly, to contribute to the

growing field of emotion belief research by conducting research in adolescent and clinical populations. Secondly, it aimed to apply this understanding to practice that promotes the mental health of adolescents, particularly those with ADHD and ASC, such as the development of preventative, school-based interventions.

1.3: Why this Research Population?

The research population for the study was neurodiverse adolescents. The sample selected all had diagnoses of ASC or ADHD. ASC is characterised by differences in social communication, type and variety of interests and behaviours (American Psychiatric Association, 2013). ADHD is characterised by differences in attentiveness, impulsivity and at times, hyperactivity (American Psychiatric Association, 2013). These groups were selected due to the relevance of their identified differences in executive function, including cognitive flexibility and emotion regulation (Faustino, 2021), to the previously identified relationship between beliefs, regulation, and mental health identified in neurotypical populations. Emotion regulation difficulties have been identified as a trans-diagnostic factor for psychopathology in the general population (Aldao, Gee, De Los Reyes & Seager, 2016), and participants have been responsive to interventions that develop regulation (Blackledge & Hayes, 2001; Faustino, 2021). This identifies a need for research that explores the relationships between beliefs, regulation, and mental health in these populations.

It was deemed valid to group these samples as a growing body of research recognises overlap in the executive function profiles across these conditions, including development of emotion regulation (Antshel et al., 2016; Steinberg & Drabick, 2015) and cognitive flexibility, which may impact development and adjustment of beliefs (Uddin, 2021). Additionally, there is suspected overlap in causation and co-morbid psychiatric disorders (Jensen & Steinhausen, 2015; Wigham, Rodgers, South, McConachie, & Freeston, 2015), with anxiety and depression being most prevalent (Cai, Richdale, Uljarević, Dissanayake & Samson, 2018; Van Steensel, & Heeman, 2017) further supporting the need for mental health research with this populations. However, it should be acknowledged that there are also identified differences in the prevalence of internalising and externalising psychopathology between these groups that may impact this relationship (Dellapiazza, Audras-Torrent, Michelon, & Baghdadli, 2021). Therefore, the

research will explore the groups collectively to contrast these with neurotypical populations. Secondly, the research will compare these two populations to explore differences in this relationship. This ensures that the mental health needs of these populations are understood, and that targeted and tailored support is provided to address these (Gotham et al., 2020).

1.4: What is Meant By 'Mental Health?'

Mental Health has been defined by the World Health Organisation as "a state of mental well-being that enables people to cope with the stresses of life, to realise their abilities, to learn well and work well, and to contribute to their communities" (2022). This definition recognises mental health as both the absence of symptoms of mental illness and psychological wellbeing (Galderisi, 2024; Keyes Martin, Slade & Martin, 2017). Psychological wellbeing encompasses emotional wellbeing (happiness and satisfaction), psychological wellbeing (positive individual functioning), and social wellbeing (positive social integration and interaction). Two main philosophical stances inform this concept. Hedonism, which emphasises happiness and positive life perception and eudemonism, which focuses on fulfilment and thriving through meaningful pursuits (Henderson & Knight, 2012). Broadly, well-being refers to optimal functioning and positive perception.

As research on emotion beliefs has linked beliefs to aspects of wellbeing, such as social integration, and symptoms of anxiety and depression, symptoms of mental illness, a model of mental health that accounts for both the positive and negative aspects of mental health is required. The complete state model of mental health accounts for this and as a result, has been (Keyes, Michalec, 2010; Lasiello & Van Agteren, 2020) adopted for this research. This approach aligns with salutogenic approaches and positive psychology (Antonovsky, 1987; Bauer, Hammig & Keyes, 2014) that explores how individuals maintain health and wellbeing in the face of challenge by utilising approaches, such as emotional regulation. This approach allows for acknowledgement of both the strengths and challenges in relation to mental health and emotional regulation in neurodiverse learners to adopt a strength based, neurodiversity affirming approach (Fung, 2023) and this dual-factor model perceives wellbeing and illness as distinct but interrelated constructs existing on two continua (see Figure 1 below).

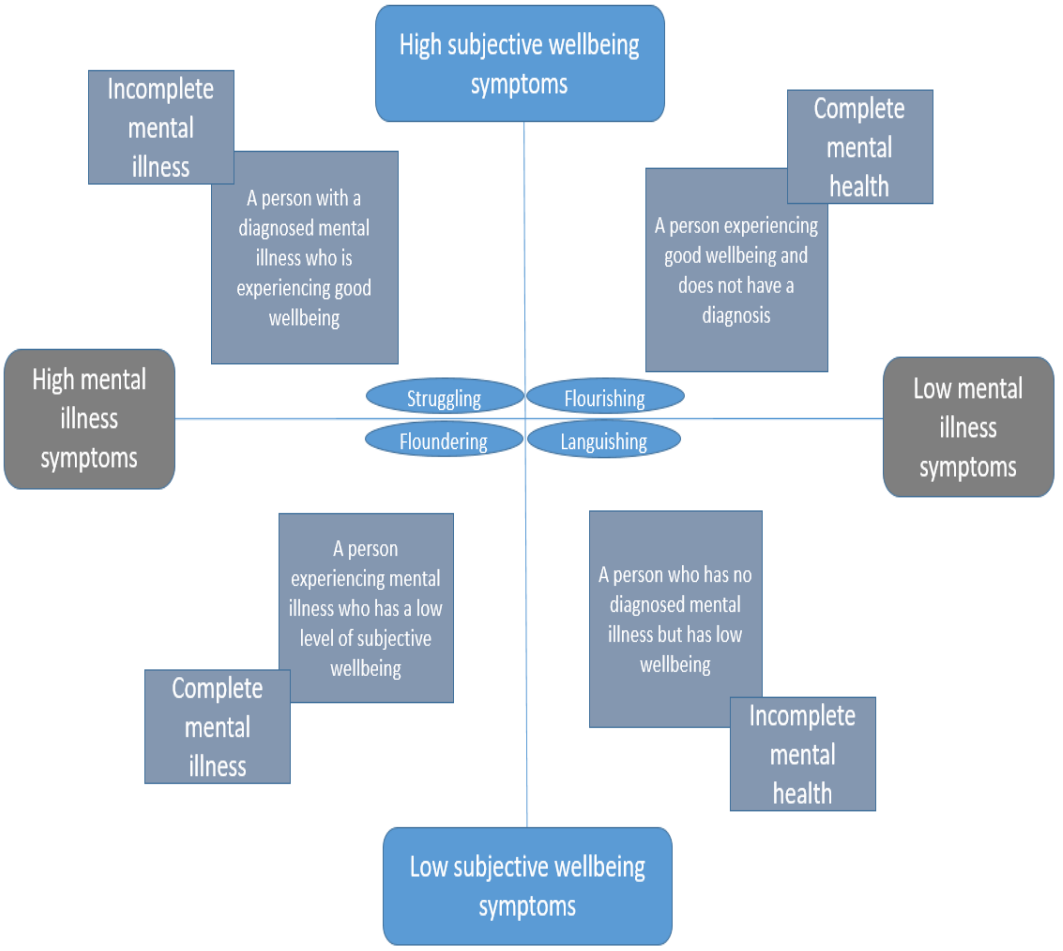


Figure 1, The Complete State Model of Mental Health based on a model seen in: Westerhof, G. J., & Keyes, C. L. (2010). Mental Illness and Mental Health: The Two Continua Model across the Lifespan. Journal of adult development, 17(2), 110–119. https://doi.org/10.1007/s10804-009-9082-y

Application of this model allows for detrimental and beneficial consequences of emotion beliefs to be identified, through assessment of both symptoms of anxiety and depression and psychological well-being. This supports the identification of both risk and protective factors for mental health through a comprehensive assessment of complete mental health.

1.5: What is meant by emotion regulation?

Emotions are valuable tools that serve various purposes, such as expressing anger to defend a viewpoint or experiencing happiness to reinforce social bonds. However, when

emotions become excessively intense, prolonged, or frequent, they can be detrimental to social integration and mental health (Aldao & Dixon-Gordon, 2014). Therefore, it is necessary to control and modulate the duration, quality, or expression of emotional responses (Gross, 1998; 2015). Emotion regulation is the process used to influence the emotions we experience when we experience them, and how we express them (Gross, 2014).

For this research, Gross's Extended Process Model of Regulation (2015) was adopted, which extends his earlier modal and process models (1998) to recognise regulation as a dynamic process occurring across three stages: identification of emotion, selection of an appropriate strategy, and its implementation. These stages are mediated by interacting value systems that generate, react to, and modulate emotional responses. This model distinguishes between regulation strategies based on when they influence the emotion generation process (English, Lee, John & Gross, 2017) and recognises the role of cognition in the appraisal of emotions. This research utilises Gross's extended process model for two reasons. Firstly, its relevance to emotion beliefs research through its acknowledgement of the role of appraisal of emotions throughout the regulation process in both emotion generation and regulation. Secondly, this model aligns with the conclusions of prior research that the belief that emotions can be controlled leads to more successful attempts at regulation and better mental health.

1.6: The Role of the Educational Psychologist: Integrating Education and Mental Health Services.

Child and adolescent mental health services (CAMHS) have been described as ‘in crisis’ due to the growing demand for services and a lack of funding to meet need (Benton, Boyd & Njoroge, 2021; Gunnell, Kidger & Elvidge, 2018). As a result, thresholds for specialist mental health support have increased (Thorley, 2016), decreasing access to services and meaning that CAMHS see only 25% of those referred (England & Mughal., 2019). Alongside the decline in access to specialist support, there has been movement towards school-based delivery of mental health support in legislation over the last twenty years (Mackenzie & Williams., 2018). Starting with the National Service Framework for Children, Young people, and Maternity Services (Department of Health, 2004) and more recently, the Targeted Mental Health in Schools (TaMHS) initiative these both aimed to enhance strategic cooperation across services and

develop the capacity of schools to meet young people's mental health needs flexibly through preventative. This shows a recognition of the role of education in meeting mental health needs as part of a larger multi-agency team (Wolpert, Humphrey, Belsky & Deighton, 2013).

More recently, the government published the green paper 'Transforming Children and Young People's Mental Health in Schools' (Department for Education and Department for Health, 2017) which aims to develop early intervention, integrated health services with education and remove access to mental health services. A significant proposal was the development of mental health support teams (MHST) in schools, where school staff were designated as mental health leads. This proposal was implemented in July 2018 and demonstrates a clear shift from holding a role in part of a multi-agency team to holding specific responsibilities for school staff to monitor and manage mental health needs in schools (Department for Health & Department for Education, 2018). This demonstrates a growing responsibility for schools, including both multi-agency working and planning, delivery and review of preventative, school-based intervention. The educational psychologist is uniquely positioned to facilitate this integration as they work in a systemic way across health and education to provide support to educational settings and directly work with young people (Sedgwick, 2019). In this role they can promote mental health, development of peer relationships and access to the curriculum through development of emotion regulation. Their role within and outside of schools means that their comprehensive knowledge of the school context is a strength, while they are less influenced by system specific constraints around ensuring access to the curriculum (Ford & Finning, 2020).

1.7. Overview of Thesis Structure

This thesis explores the relationship between emotion beliefs and mental health in two groups, adolescents with ASC and ADHD. The research combines these groups, comparing them with neurotypical populations and then comparison between the groups. Chapter one outlines the research context, researcher perspectives and research rationale as well as research design choices and key definitions. Chapter two, the literature review outlines existing research on emotion beliefs, identifying a need for further research in adolescent populations and those who experience neurodiversity. It also outlines debates and controversies surrounding the concept of neurodiversity. Alongside this, the current state of adolescent mental health and support for neurodiverse young people is explored, identifying a need for research that supports

development of preventive, school-based interventions for this group. Chapter three, the methodology section outlines the mixed-methods convergent design. Chapter four outlines the results of the survey data, comparing these between the two diagnostic groups and with existing research in neurotypical populations. Following this, qualitative results are explored in terms of percentage coverage before themes are outlined in thematic analysis. Chapter four, the discussion explores these results in relation to research questions and existing literature before identifying strengths and limitations applying these as implications for the practice of an educational psychologist. Following these the thematic analysis results are outlined. Overall, indicating that emotion belief research is relevant in neurodiverse adolescent populations and further research is required.

2: Literature Review

2. 1: What Are Emotion Beliefs?

Emotions influence how we think, feel and interact with the world around us (Gross, 2014). Research suggests that emotion beliefs impact emotion regulation behaviour, much in the same way that beliefs about intelligence (Blackwell et al., 2007), morality (Chiu et al., 1997a) and personality (Chiu et al., 1997) influence behaviour in these domains (Hughes, 2015). Research suggests the belief that emotions are unhelpful or uncontrollable is associated with less effective regulation, which leads to a more negative emotional experience and subsequently impacts mental health (Berglund et al., 2023; Dweck & Yeager, 2019; Somerville et al., 2024; Tamir et al., 2007).

Research into the impact of beliefs began with the work of Dweck and Reppucci (1973). This work reflected on observation of learned helplessness in animals (Seligman & Maier, 1967) and attribution theory in humans (Weiner & Kukla, 1970). Attribution theory states that individuals attribute behaviour to internal factors (traits and abilities) or external (context or luck). This process influences how people perceive situations and their own behaviour. Together, these concepts recognise how making sense of situations leads to the development of beliefs, which influence later actions related to these specific phenomena (Dweck & Yeager, 2019). This work explored the influence of children's attribution for academic success on later actions, finding that they differently predicted a 'helpless' or 'mastery' response to academic failure even when academic abilities were matched. In addition, research revealed that the belief that attributes could change was more associated with positive changes in this attribute. Consequently, it has been theorised that those who believe that emotions can be controlled are more likely to take action to regulate them (Kneeland et al., 2016). Subsequent research suggests that beliefs influence the choice to regulate, the method of regulation and where in the emotion generation cycle regulation occurs (Deplanke, Somerville, Harrison, & Vuillier, 2023; Tamir et al., 2007).

Initial research on emotion beliefs focused on controllability beliefs, specifically the idea that emotions are controllable and that the ability to control emotions is malleable (Tamir et al.,

2007). Believing that control can be developed and that emotions are controllable has been linked to more effective emotion regulation and reduced symptoms of anxiety and depression.

Ford and Gross (2019) further develop thinking in this area by presenting a framework for emotion beliefs consisting of two superordinate beliefs 'controllability beliefs' (ranging from a belief that emotions 'come and go' to the belief that emotions are entirely within a person's control) and 'usefulness beliefs' (ranging from a belief that emotions are negative or unhelpful to a belief that emotions are positive and helpful). These beliefs are related, they influence regulation in different ways (Ford and Gross, 2019). This framework influenced the development of subsequent measures of emotion beliefs, with the Emotion Beliefs Questionnaire (Becerra, Preece & Gross, 2020) measuring controllability and usefulness beliefs for both positive and negative emotion valence to give a comprehensive measure of emotion beliefs (Becerra, Naragon-Gainey; Gross, Ohan, & Preece, 2024; Ranjbar et al., 2023).

A growing body of literature has linked controllability and usefulness beliefs to the use of adaptive emotion regulation strategies, such as cognitive reappraisal (Kneeland et al., 2016; Tamir et al., 2007; Deplanke et al., 2023; Somerville et al., 2024; Eldesouky & English, 2023) and maladaptive beliefs to strategies that avoid or suppress emotions (Kappes & Schikwoski, 2013). Those who believe that emotions can be controlled are likely to act earlier in the emotion generation process, making use of antecedent emotion regulation strategies, such as cognitive reappraisal (Yarwood, 2022). Research suggests that use of antecedent strategies leads to more successful regulation of emotions as it interrupts emotion generation early in the process and therefore reduces all aspects of the emotional experience (Gross & John, 2003; Kneeland et al., 2016). Because of this link, the belief that emotions are uncontrollable, or not useful will be described as maladaptive in this research.

There is a significant body of research that supports the previously identified relationship between emotion control beliefs and regulation. The research exploring usefulness beliefs is less established. This research applies measures that explore both usefulness and control beliefs, hoping to extend understanding in this area. The body of research applying this relationship to adolescent populations is less established, with no research at the time of writing exploring this relationship in neurodiverse populations. This research aims to offer a starting point for emotion belief research in neurodiverse, adolescent populations.

2.2 What is Emotion Regulation?

Emotion regulation broadly refers to the processes used to modify the intensity, duration and expression of emotions (Gross, 2008). A fundamental aspect of regulation is adjusting emotional responses to achieve specific goals or maintain emotional stability (Gross, 1998, 2015; Gross & Jazaieri, 2014). These processes influence numerous emotional channels, including behaviour, expression, and subjective experience and can be conscious or unconscious (Aldao & Dixon-Gordon, 2014; Koole, 2009; Mauss, Levenson, McCarter, Wilhelm & Gross, 2005). These goals range from experiencing more or less of a particular emotion to serving instrumental purposes, such as task completion or interpersonal conflict resolution (Tamir, 2009; English, Lee, John & Gross, 2017). Emotion regulation primarily focuses on reducing negative emotions (Gross, Richards & John, 2006), but it can also involve reducing positive emotions in situations where their expression might be inappropriate, or even amplifying negative emotions, such as anger, to drive motivation during sports or arguments. In this research, maladaptive regulation' refers to strategies that are ineffective in reducing negative emotions in the long-term and are linked to poor mental health outcomes (Waizman et al., 2023).

Several theoretical models for emotion regulation were considered during literature review. Firstly, Sheppes' Emotion Regulation Choice Framework (2014) was considered as it explored regulation strategy selection, with its focus on intensity of emotion and cognitive resources providing insight into decision making processes in emotional regulation and holding relevance to emotion belief research. However, Gross extended process model offered a more comprehensive theoretical framework for explaining the impact of beliefs at each stage of regulation through both the stages of regulation and the dynamic valuation systems. As the research aims to identify how beliefs impact regulation, Gross' model was felt to offer explanatory power. Lazarus and Folkman's stress and coping model (Lazarus and Folkman, 1985; Lazarus, 1993) was also considered as a model to describe the way in which beliefs impact regulation. This model describes how stress is an interaction between the person and their environment, where perceptions of challenge and ability to cope impact ability to manage challenge. As this model also has stages of appraisal, it was felt relevant to emotion beliefs research. Focusing on emotion-based coping offered insight into how beliefs may be impacting

regulation and mental health. The model includes three stages of appraisal: primary, a decision if action is required; secondary, where ability to manage the situation is assessed and finally coping, where strategies are chosen based on previous appraisal. Adaptive appraisal allows for effective coping, while maladaptive appraisal leads to ineffective strategy selection and poor coping. While this model helps to explain adaptive beliefs, it does not isolate appraisal from other aspects of the emotional response or clearly define its impact on emotion generation or regulation processes (Yih et al., 2019).As the extended process model offers a more comprehension insight, with clear stages of regulation and the impact of valuation systems that account for the role that beliefs play, this was felt to have more explanatory power.

This thinking was extended by Gross' modal model of regulation (1998) which recognised regulation as a sequence from situation to response. Interaction with situation is followed by attention, appraisal of event and finally response. This recognised the role of appraisal within a wider framework and helped to explain tendencies in regulation response and the impact of context beyond the capacity of previous models. However, as thinking developed, Gross developed this model to capture the nature of regulation as a process that unfolded over time. The process model (Gross, 1998) identified emotion regulation strategies as either antecedent, which influence emotions before they develop fully, or response modulating, which modify emotions after they have occurred. Specific strategies were named including situational modification, attentional deployment, and cognitive reappraisal as antecedent-focused strategies offering a comprehensive framework for understanding emotion regulation. This furthered understanding of the ways in which regulation can occur and how this can impact regulation success.

Finally, this was developed further by Gross to the extended process model of emotion regulation (2015). This model was adopted for this research as it integrates the role of appraisal and evaluation as part of a dynamic regulation process, which effectively accounts for the role of emotion beliefs in the generation and regulation of emotions. The extended process model distinguishes between regulation strategies based on where they influence the emotion generation process (English, Lee, John & Gross, 2017). This model states that regulation occurs in three stages: identification of emotion, selection of strategy, and implementation. Two value

systems interact throughout these stages: one generating emotion and the other modulating it. This process is outlined below in figure 2.

Figure 2

The Extended Process Model of Emotional Regulation

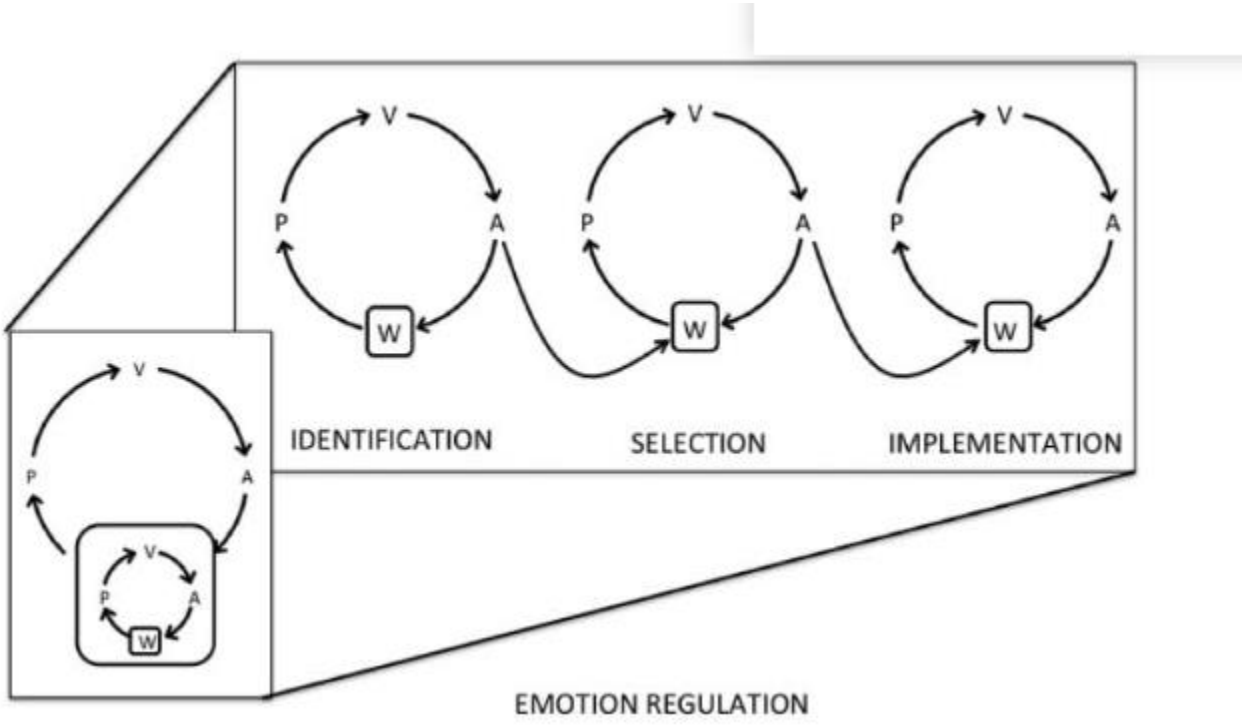


Figure 2. The extended process model of emotional regulation. Reprinted from "Gross, J. J. (2015). Emotion regulation: *Current status and future prospects.* Psychological inquiry, 26(1), 1-26.

Stage 1: interaction between the world (W), which represents internal or external situations, perception (P), focused on what the value system is tuned into, and valuation (V), the evaluation of perception as 'neutral,' 'as expected' (good), or 'not as expected' (bad). Action (A) is taken to bring the situation closer to the expected or desired state. When this state is achieved, the valuation system becomes inactive.

Stage 2: When the first system reaches an undesired state, a second emotional valuation system is activated by an occurrence in the world (W), typically the experience of an emotion.

The perception system recognises the emotion and identifies potential regulation strategies. The Valuation system determines which strategies are appropriate, and action (A) is taken to apply the selected strategy to modify the emotion and return to the desired state. This model helps to explain why young people respond differently to different emotions, affecting both their choice to regulate and their method of regulation. In addition, it recognises the different times at which strategies impact emotion, accounting for differences in the effectiveness of regulation strategies. This model suggests that antecedent strategies are more adaptive than response modulation strategies, which aligns with research linking regulation efficacy and mental health (Ford et al., 2018; Somerville et al., 2024; Tamir et al., 2007). A criticism of this perspective is its presumption of uniformity of effectiveness of antecedent and response modulation strategies, which Bonanno and Burton (2013) challenge. They suggest that individual differences impact regulation success. While there is substantial research support for the adaptive/maladaptive categorisation of strategies, it is important to explore young people's perception of their regulation strategies and how effective they consider these to be to help to account for individual differences. The use of interviews in this research supports this. In addition, the extended process model underpinned the creation of several measures of both emotion beliefs and emotion regulation, including the Emotion Regulation Questionnaire for Children and Adolescents (Gross & John, 2003) and the Emotion Beliefs Questionnaire (Becerra et al., 2024). Both of these measures are adopted in this research, ensuring that the constructs measured are aligned with the theoretical underpinning.

This model is well-established and supported by research suggesting it has validity and can be applied in research. The framework offers insight into how emotions are regulated (Koole, 2009) and was considered useful to apply to research exploring the way in which young people's beliefs influence regulation at each stage. There is a range of research applying the extended process model to adolescent research populations, including Riediger and Klipker (2014) who found that social context and emotional intensity impacted strategy choice at the selection stage. This research aims to apply this framework to adolescent populations to understand the impact of beliefs across the stages of regulation and to understand how young people perceive factors such as valence, intensity and social context as impacting. As these factors may be impacted by differences in emotional and social development, this makes research in neurodiverse populations important. Research by Mazefsky's (2013) suggests that

these differences may impact regulation, questioning the application of this model in neurodiverse populations. This suggests that there is a need for further research in these populations to understand these processes.

This research employs interviews to explore regulation behaviour to offer insight into the processes that impact regulation according to the extended process model of emotional regulation in adolescent, neurodiverse populations. It aims to explore the role of control and usefulness beliefs within this process and to apply findings to regulation in a group where differences in cognition and regulation have been identified for some young people. The study aims to explore emotional regulation using both trait measures to align with existing research, but whilst also using rich qualitative data from interviews to explore regulation choices and how these relate to beliefs in more detail.

2.3 How do Emotion Beliefs Impact Mental Health?

Research suggests that response modulation strategies are less effective in managing emotions and are associated with poor mental health (De France et al., 2019; Somerville, 2024). Whereas, antecedent emotion regulation strategies, particularly cognitive reappraisal, are associated with both reduced symptoms of mental illness and increased wellbeing (Dryman & Heimberg, 2018; Hu et al., 2014). A growing body of evidence identifies an association between emotion beliefs and mental health, where those who believe emotions are controllable are more likely to engage in emotion regulation and subsequently experience better mental health (De France & Hollenstein, 2019; Ford et al., 2018; Gutentag, Halperin, Porat, Bigman, & Tamir, 2017; Somerville et al., 2024; Tamir et al., 2007; Somerville et al., 2024). This research presents regulation as the mediating factor in the relationship between beliefs and mental health.

The Complete State Model (Keyes, Martin, Slade & Martin, 2017) defines 'total mental health' as optimal wellbeing without mental illness symptoms. This model was selected for its applicability to adolescent populations and its comprehensive approach to exploring both positive and negative aspects of mental health. This allows research to identify both risk and protective factors associated with emotion beliefs and to explore positive and protective aspects of neurodiversity for mental health. However, the practical applicability of this model has been questioned due to difficulties in measuring constructs such as ‘flourishing’ due to both ceiling effects (Rose et al, 2017) and a lack of construct validity when measured by different tools (Rule,

Abbey, Wang, Rozzelle & Singh, 2024). This difficulty impacts validation of the model and could also be a barrier to identifying changes to wellbeing. This research aims to use the Warwick Edinburgh Mental Wellbeing Scale and the Revised Child and Adolescent Anxiety and depression scale to provide a comprehensive measure of mental health, both positive and negative and explore young people's qualitative descriptions of their mental health and the factors impacting this to give a complete picture of mental health.

The way in which regulation strategies impact mental health requires further research. Correlational research by Betts, Gullon and Allen (2009) identified a more significant relationship between maladaptive strategies and psychopathological symptoms than between adaptive approaches on positive mental health measures. Similar findings by Aldao (2010) found the association between cognitive reappraisal use and symptoms of depression to be weak, suggesting that the negative influence of maladaptive regulation on mental health is more influential than any protective influence of adaptive regulation. By contrast, Congard et al. (2022) found that all six dimensions of well-being, measured by the Ryff Scale of Psychological Wellbeing, had medium to large positive correlations with adaptive strategies and small to medium correlations with maladaptive ones suggesting adaptive regulation has a stronger influence on wellbeing. This contradictory picture suggests that further exploration of the link between regulation strategies and mental health must take account of both measures of well-being and of psychopathological symptoms to fully understand the relationship between regulation and mental health (Berglund, James, Raugh & Strauss, 2023; Karnaze & Levine, 2020).

Ford & Gross (2019) argue that those who believe emotions are controllable are more likely to adopt regulation strategies that target emotional experience, such as cognitive reappraisal (Tamir et al., 2007), whereas the belief that emotions are beyond control will more likely lead to strategies influencing the expression of emotion, such as expressive suppression (Ford & Gross, 2019; Somerville, 2024; Vuiller et al., 2021). The positive impact of adaptive emotion beliefs over time was supported by Tamir and colleagues (2007). This longitudinal correlational study indicates the impact of beliefs on regulation occurs over time rather than at single point, supporting the view of their lasting impact and a persistent pattern. This suggests that beliefs have a lasting and significant impact on regulation behaviour. The relationship with

reappraisal is also positive, as a large body of research supports the adaptive nature of cognitive reappraisal through its association with positive mental health outcomes. This suggests that holding emotion control beliefs is associated with adaptive regulation, and that the impact of this continues over time. Using a model of mental health that accounts for this positive impact was important when designing research. This finding has since been replicated by subsequent research (Ford et al., 2018) and De Castella et al. (2018) which suggests that regulation self-efficacy and adaptive regulation are negatively correlated with maladaptive control beliefs, in turn suggesting that beliefs impact both regulation behaviour and an individual's views of their regulation efficacy.

Research by Kappes and Chikowski (2013) identified a relationship between emotion beliefs and response modulation strategies, such as attentional deployment which aim to avoid and suppress emotions. However, the impact of this was not identified in all research exploring this relationship (De France et al., 2021; Ford et al., 2018). This suggests that maladaptive beliefs may promote the use of strategies that reduce negative affect by avoiding emotions in the short-term. This short-term effect may then reduce the application of more effective strategies in the long-term, negatively impacting mental health.

Evidence of the relationship between emotion beliefs and regulation in adolescent populations is less established. A recent systematic review by Sommerville (2024) suggests that the same belief-regulation associations identified in adult populations exist in adolescent populations. In addition, research by De France and colleagues (2021) found greater use of cognitive reappraisal in those with adaptive emotion control beliefs, which aligns with relationships found in adult populations (Tamir et al., 2007). However, they also identified significant associations between maladaptive control beliefs and expressive suppression, which is not consistently identified in previous research, including in adolescent populations. De France states that this finding is due to greater sensitivity of assessment of emotional regulation, using daily state measures, which utilise in-situ reporting of emotions rather than self-reported trait behaviour measures. This suggests a need for more adolescent research which measures regulation in more dynamic ways. This was also a guiding factor for the use of interviews to gain insights into regulation behaviour, with the belief that trait measures combined with interviews

help to triangulate findings and allows for discussion and exploration to take place to ensure accuracy in recording views.

Previously, emotion belief research has focused on emotion controllability beliefs and their relationship with adaptive regulation. However, a growing body of research exploring usefulness beliefs has linked regulation efficacy to mental health outcomes. Usefulness beliefs may influence regulation at different stages of emotion generation process. For example, if emotions are perceived as useless, this may result in excessive attempts to regulate emotions at the identification phase to avoid negative affective experiences. Alternatively, emotions such as anger or sadness may be deemed as useful, and therefore to not require a response. This will result in increased experience of negative affect. (Ford & Gross, 2019; Tamir, Bigman, Rhodes, Salerno, & Schreier, 2015; Willroth, Young, Tamir & Mauss, 2023). At the selection stage, maladaptive strategies that avoid emotional experience, such as attentional deployment and expressive suppression are more likely to be applied (Eldesouky & English, 2023) decreasing the effectiveness of regulation, impacting mental health (Ford, Lam, John & Mauss, 2018).

Previous measures of emotion beliefs, such as the Implicit Theories of Emotion Scale (ITES) (De Castella, 2013) did not assess usefulness beliefs. As a result, research using these measures does not explore their impact. However, development of the Emotion Beliefs Questionnaire (EBQ) by Berglund and colleagues (2023) did begin to include measures of usefulness and found associations between maladaptive usefulness beliefs about positive emotions (not seeing these as useful), reduced motivation and pleasure-seeking behaviour and use of expressive suppression. While validating the use of the EBQ in an Iranian adolescent sample, Ranjbar et al (2023) found a small but significant association between maladaptive negative usefulness beliefs and regulation difficulty, measured by a regulation-competency scale. This suggests that the belief that negative emotions are useless has an impact on regulation self-efficacy and success. However, the association between usefulness beliefs and measures of depression, anxiety and stress was non-significant which makes the relationship between usefulness beliefs and mental health less clear. It is important to explore this further, investigating both positive and negative emotion valence and usefulness and control beliefs in adolescent populations. In addition, there is not currently any research in neurodiverse research populations who are more likely to experience both emotional regulation difficulty and poor

mental health. Existing research suggests unhelpful emotion beliefs are linked to less effective regulation, as overall regulation attempts reduce and use of maladaptive response modulation strategies increase. Existing research focused on control beliefs and how these relate to emotion regulation in neurotypical adult and adolescent populations. The current study aims to explore both usefulness and control beliefs in neurodiverse adolescent populations to provide an initial starting point for belief research in this population. By using interview data, the study aims to gain a rich insight into the ways in which beliefs impact regulation and mental health, by exploring both types of strategy and beliefs underpinning selection choices.

2.4 Neurodiversity: Controversies and Diagnosis.

The neurodiversity movement is a scientific and social movement that views neurological differences, such as ADHD and ASC, as natural variations in neurology and cognition instead of pathologising these as deficits that require a cure (Dwyer, 2022). This movement emerged in response to a predominant medical model focused on diagnosis and treatment. This aligns with the social model of disability, which views environments and approaches rather than individual traits as disabling for neurodiverse individuals. Advocates of the neurodiversity movement emphasise that this recognises strengths, such as creativity and problem solving, and promotes accommodations to help neurodiverse people thrive, rather than interventions to support them to present as neurotypical. However, critics argue that sole focus on strengths downplays the real and significant challenges that some neurodiverse individuals face, especially when environmental accommodations are not made. Dwyer offers an accessible review of these debates and suggests adopting a balanced view where assessment of needs does occur, but in a way that is supportive and offers a holistic view of the individuals' strengths and needs (Dwyer, 2022).

This research aims to adopt a balanced perspective through adoption of both a neurodiversity affirming perspective and a critical realist lens, combining neurodiversity affirming principles with practical considerations. Firstly, this research adopts the complete state model of mental health which examines both protective and risk factors for neurodiverse young people. Through a critical realist lens, the research acknowledges the practical value that medical diagnosis can offer for young people, both in helping them to understand themselves and to offer

accommodations and support services. The research aims to explore perceived deficits of young people diagnosed according to a medical model using standardised assessment tools. However, it also aims to gain neurodiverse young people's views to support settings to recognise strength and make supportive accommodations. The researcher does so while acknowledging the limitations for resource and adjustment that schools face. This research aims to contribute to existing research that recognises the importance of diagnosis, acceptance and support for neurodiverse young people (Frondelius, Ranjbar & Danielsson, 2019) and demonstrate how both perspectives can contribute to the real-world support of neurodiverse young people.

The research population for this study comprises neurodiverse young people, specifically those diagnosed with ADHD and ASC. This selection was made due to the increased risk these groups face for difficulties with emotional regulation and mental health difficulties, which the research has based on both research (Friesen & Markowsky, 2021) and professional experience as a teacher and educational psychologist. The high prevalence of diagnoses of ADHD (6%) and ASC (1%) in the UK population, as well as those neurodiverse young people without diagnoses, makes this a potentially large and at-risk population. However, the researcher recognises that if adopting a neurodiversity affirming stance that challenges the way in which neurological differences are valued and understood, then debates surrounding diagnosis must be acknowledged.

Diagnostic systems, such as the DSM and ICD adopt deficit-focused diagnostic thresholds and, as a result, adhere to deficit-focused narratives, and adopt traditionally Western and male-centric assessment criteria. These systems fail to capture the complexity of presentation across developmental and cultural contexts (Coker, Elliot, Toomey, Schwebel, Cuccaro, Tortloero Emery & Shuster, 2016; Mandell, Wiggins, Carpenter, Daniels, DiGuiseppi, Durkin & Kirby, 2009). Another important consideration is the historical prohibition of dual diagnosis of ADHD and ASC prior to the DSM-5. Considering the previously discussed overlap between ADHD and ASC, this may have limited the accuracy of diagnosis and, as a result, the validity of research with these samples. This was reflected on during research design and the researcher considered the inclusion of participants who identified as neurodiverse without a formal diagnosis.

Adopting a critical realist perspective meant that practical and theoretical limitations of diagnostic systems were acknowledged and considered. Simultaneously, the researcher recognises that research shows diagnosis can have a significant impact on individuals both personally and in terms of access to support (Bradley, Shaw, Baron-Cohen & Cassidy, 2020; Huang, Arnold, Foley & Trollor, 2024). Including both diagnosed and undiagnosed participants in a small sample where this impact could not be controlled may impact the clarity of outcomes. Therefore, while acknowledging the controversies surrounding diagnosis, this study adopts formal diagnosis as inclusion criteria to support methodological rigor while accepting that this approach does not fully align with a neurodiversity affirming perspective. With this view of diagnosis in mind, global prevalence of diagnosis was considered as offering insight into size of the research population while recognising that this does not account for all neurodiverse individuals.

Meta-analytical research of ninety-six studies in the mental health conditions of autistic adolescents by Lai and colleagues found co-morbid anxiety at 20% and depression at 11% (2019). Estimates for comorbid mental illness in adolescent population with ADHD range from 13-20% (Brunsvold, Oopen, Federman, & Atkins, 2008), while prevalence of anxiety disorders is estimated to be at 41% (Friesen & Markowsky, 2021). Additionally, childhood diagnosis of ADHD is associated with adolescent depression, which suggests a long-term impact of diagnosis. (Powell, Riglin, Hammerton, Anney, Thapar, & Rice, 2020). The high prevalence of these conditions in young people diagnosed with ADHD and ASC highlights their importance for research, and evidence suggests that this changes across lifespan, making adolescent specific research particularly important (D'Agati, Curatolo & Mazzone, 2019).

However, reports of prevalence vary across the literature (Accardo, Pontes, & Pontes, 2024). A challenge with meta-analytical research of this nature is inconsistencies in how both autism and ADHD, as well as their comorbidities, are measured (Havdahl & Bishop, 2019), leading to significantly different reports of prevalence for anxiety and depression (Hossain et al., 2020). Both the lack of clarity and the perceived high prevalence suggest that further research is required in these populations to understand the high levels of mental illness and to identify effective targets for intervention. Such research should aim to better address the complex support needs of this population (Verkuijl, Perkins, & Fazel, 2015). The study aims to further

understanding of emotion beliefs in neurodiverse adolescent populations by bridging neurodiversity-affirming principles with critical realist approaches to maintain methodological rigor, while critically exploring the deficits of diagnostic models and pathology-based models. This balanced approach aims to develop a more nuanced perspective than either provide alone, and respect principles of neurodiversity while acknowledging the real-world challenges faced by neurodiverse young people. With this, practical and evidence-based insights and support can be offered by schools and educational psychologists.

2.5 Neurodiversity, Executive Function and Emotional Regulation.

A growing body of research has identified overlap in both symptom profiles (Antshel & Russo, 2016) and psychiatric comorbidities for ADHD and ASC (Craig et al., 2016; Jenson & Steinhausen, 2015). One tangible example of this is the recognition of comorbidity of ASC and ADHD, precluded by previous diagnostic frameworks including the ICD-10 and the DSM-IV. Allowing simultaneous diagnosis recognises the real-word clinical presentations seen in schools and overlap of profiles (American Psychiatric Association, 2013). This is recognised in review by Taurines, Schwenck, Westerwald, Sachse, Siniatchkin, & Freitag (2012) that highlights the interwoven nature of ADHD and ASC through shared genetic, neurobiological and risk factors which suggests that they may either share underlying mechanics or even exist along a continuum. While it is important to acknowledge that no two neurodiverse young people are the same, the overlap is attributed in part due to neurobiological similarities across ADHD and ASC that impact behavioural and cognitive profiles through their influence on inhibitory control, cognitive flexibility, and regulation. Differences in these profiles account for variation across the cognitive and behavioural profiles of young people within and across diagnostic groups (Faustino, 2021). Across both ADHD and ASC, and anxiety and depression, emotion regulation difficulty is recognised as a trans-diagnostic factor (Craig et al., 2016). Exploring commonalities in emotional regulation behaviours helps to make sense of diagnostic overlap and offers insights into the underlying mechanisms that impact regulation.

In both ADHD and ASC, emotional dysregulation is thought to be an impact of executive function differences. Research links both ADHD and ASC to increased emotional reactivity and difficulty recognising emotions (Lugo-Candelas, Flegenheimer, McDermott &

Harvey, 2017). Greater hyperactivity and impulsivity are thought to play a greater role in ADHD, while heightened emotional response and use of maladaptive coping strategies such as avoidance or suppression are more associated with ASC (Jaisle, et al 2023; Lugo-Candelas, Flegenheimer, McDermott, & Harvey, 2017). In both cases, this regulation difficulty is a risk factor for mental illness. Difficulties managing emotions are not unique to a single mental health disorder but are common across a number of diagnoses and act as a mechanism that contributes to the onset, maintenance and expression of mental health issues. Research also recognises neurological differences in the amygdala and pre-frontal cortex: areas associated with executive functions more generally but in particular with impulse control, reasoning and emotional regulation in ADHD and ASC (Chen, 2016).

This makes these populations important for emotion regulation research. Review by Taurines et al. (2012) supports the grouping of ADHD and ASC participants due to the previously mentioned symptom overlap and neurobiology. By grouping, we can start to explore and understand transdiagnostic features, such as cognitive flexibility, inhibitory control and social cognition to better understand both commonalities and differences. However, studies suggest that these groups demonstrate differences in the use of internalising and externalising emotion regulation behaviours (Dellapiazza, Auras-Torrent, Michelon, & Baghdadli, 2021). In addition, executive function differences related to cognitive flexibility and inhibitory control are present to differing degrees in both groups (Faustino, 2021) which may impact associations between beliefs and regulation. Therefore, comparing these groups in research on emotion regulation and mental health may help to understand these cognitive profiles and better understand etiological pathways and transdiagnostic factors. This knowledge can guide both understanding and support to contribute to improvements in mental health outcomes for neurodiverse adolescents.

A challenge in providing this support is the current state of child and adolescent mental health services (CAMHS), which have been described as in crisis (Benton, Boyd & Njoroge, 2021; Gunnell, Kidger & Elvidge, 2018). The funding for and provision of mental health support in the UK has been significantly reduced (England & Mughal, 2019; Lepper, 2015) in the face of growing diagnoses of emotion related mental illnesses (Pitchford, Fahy, Ford, Wolpert & Hargreaves, 2019). This places growing demand on already oversubscribed services (Frith et al., 2016) and particularly impacts neurodiverse young people, as these young people are highly

represented among CAMHS users (20.1% for ADHD and 14.9% for ASC) (Maurice et al., 2022). England and Mughal's review of services found that child and adolescent mental Health services (CAMHS) see only 25% of those referred and waiting times can be up to one year (2019). Pre- Covid-19 pandemic reports have been calling for investment and improvement to services since 2015 (Department of Health & NHS, 2015), since this point demand on services has increased (England & Mughal, 2019). As a result, young people often spend a long time on waiting lists (Gee et al., 2020) as thresholds for access to specialist services increase (Crenna-Jennings & Hutchinson, 2018). A recent secondary analysis of the British Child and Adolescent mental health survey (Parker, Tejerina-Arreal, Henley, Logan & Ford, 2019) suggests that for these neurodiverse young people who struggle to have their mental health needs met by services are at greater risk of exclusion from school.

Alongside the growing scarcity of access to mental health services, there has been a growing focus on the role of schools to provide mental health support. The 2017 green paper 'transforming child and young people's mental health provision' (Department of Health & Department for Education, 2017) recommended the development of multi-disciplinary teams, including counsellors and educational psychologists in schools. This report suggests that the familiar environment and varied professional skills sets available made schools uniquely placed to support mental health needs (Gee et al., 2020). School-based mental health support teams, often in collaboration with educational psychologists, are increasingly delivering interventions aimed at providing preventative support for anxiety and depression among adolescents. Further understanding of the role of emotion beliefs in this population could help understand prevalence rates for mental illness and inform the design and implementation of targeted interventions aimed at improving the mental health of neurodiverse populations.

The study will explore the relationship between emotion beliefs and mental health for young people with diagnoses of ADHD and ASC. The researcher will explore beliefs, regulation and mental health in each population separately to understand how possible neurological differences may impact these factors. Additionally, aligned with a principle of neurodiversity that views characteristics as existing across a spectrum, these groups will be analysed together due to significant overlap in cognitive differences and co-morbidities. Grouped and separate

analysis will help to understand how differences and similarities will impact regulation and mental health.

2.5 The Current Study

Emotion belief research is a growing field, with increasing evidence of the mediating role of emotion regulation on mental health outcomes for adolescent populations (Somerville et al., 2024). However, adolescent research remains a limited field that would benefit from further study. As there are developmental changes to cognition and regulation in adolescence (Garnefski, Legerstee, Kraaij, van den Kommer & Teerds, 2002; Hollenstein & Loughheed, 2013; Zimmerman & Iwanski, 2014), increased risk of mental illness (Costello & Maughan, 2015; Deighton et al., 2019) and differences in development of beliefs (Hecht, Yeager, Dweck, & Murphy, 2021) this is an important time to conduct research. During this high-risk period, the identification of risk factors and the development of interventions become increasingly important. Effective targets for interventions, such as emotion beliefs, present viable opportunities for educational psychologists to achieve low resource, high impact interventions. The study aims to answer the following questions:

Research Question 1: What is the relationship between emotional beliefs, emotion regulation, and mental health outcomes in neurodiverse young people?

Research Question 2: What are young people's perceptions of the relationship between emotion beliefs and mental health?

To date, there is no research that explores emotion beliefs in neurodiverse research populations. Existing research has stated that more diverse research samples would be beneficial to understand demographic and clinical influences on the relationship between beliefs and mental health (De France et al., 2019; Ford and Gross, 2019). As young people with ASC and ADHD are more likely to experience executive function difficulties related to emotion recognition (Preece et al., 2023), regulation (Dağdelen, 2021) and cognitive flexibility (Uddin, 2021) it is important to identify if the same relationships exist in this research population. In addition, research suggests both overlap of symptoms and comorbidities as well as differences in regulation behaviour. Therefore, comparative research will also be beneficial in helping to

understand the relationship between beliefs and mental health and how diagnoses may mediate this.

The Emotion Beliefs Questionnaire was adopted for this research. It is designed to evaluate beliefs about emotion regulation and utility across positive and negative valences and has been validated for use in adolescent research samples. This provides more comprehensive insight into the relationship between different beliefs and regulation as well as offering insight into the influence of emotional valence. However, its use so far has been limited to a single study in adolescent populations to date and this is the first use in a neurodiverse sample. In addition, the complex and interacting physiological and neurodevelopmental factors that may influence the relationship between beliefs and mental health (Goldsmith, Pollak, & Davidson, 2008; Zimmermann & Iwanski, 2018) would be best explored using in-depth qualitative analysis to gain a deeper understanding of young people's beliefs and approach to regulation. The current study draws on convergent mixed methods to achieve this.

2.6 Implications for EP Practice

Emotion beliefs are an attractive target for intervention due their malleable nature (Ford & Gross, 2019; where there is evidence of the belief change for both control (Kneeland, Dovidio, Joorman & Clarke, 2016; Bigman, Mauss, Gross & Tamir, 2015) and usefulness beliefs (Tamir et al., 2015). This is particularly true for adolescents whose beliefs systems are forming so they can be addressed before becoming entrenched. As mental health support in schools aims to be preventative, early intervention to change beliefs may be a way to reduce the risk of development of mental illness. The educational psychologist is uniquely positioned to guide support for neurodiverse young people's mental health as they hold links to community, school and home as well as knowledge of development, neurodiversity and mental health (Roffrey, Williams, Greig & Mackay, 2016).

3. Research Methods

3.1 Overview

This research investigates whether the relationship between emotion beliefs and mental health outcomes, mediated by emotional regulation, is present in neurodiverse adolescents diagnosed with autism spectrum condition (ASC) or attention deficit hyperactivity disorder (ADHD)..The study involved two groups: one with ASC in a mainstream secondary school setting and another with ADHD in an alternative provision. The research utilised a two-phase mixed-methods convergent design (Creswell & Plano Clarke, 2018, 2022). Phase One involved an online survey with four measures to assess emotion beliefs, emotion regulation strategies, and mental health indicators. Phase Two consisted of semi-structured interviews to explore regulation strategy use and perceptions of emotional control and usefulness in these two participant groups. The findings from both phases were compared to draw conclusions in a convergent mixed-methods approach (Moseholm & Fetters, 2017). Both groups were compared to identify differences and analysed together and compared with existing research on neurotypical populations. This chapter will detail the epistemological perspective, research methodology, and approach to data analysis employed in the study.

3.2 Theoretical Perspective

Table 1:

Theoretical Perspective Overview

Epistemology	Constructionism/Use of post positivist methods.	
Theoretical perspective	Critical Realism	
Methodology	Mixed methods – convergent design	
Method	Online survey	Semi-Structured Interviews
Data type	Quantitative	Qualitative

Data Analysis	Descriptive and inferential	Percentage Coverage Analysis Thematic Analysis
Integration	Percentage coverage calculations Comparison of themes and quantitative data.	

A critical realist perspective was adopted (Bhaskar, 2016) for this research because it integrates a realist ontology, which acknowledges the existence of 'social facts' as observable and objective realities (Pring, 2004), with an understanding that these facts are subjectively interpreted and understood through examination of individuals' perspectives and experiences (Elder-Vass, 2022, Maxwell, 2024). As the research applies existing theory to a new research population, critical realist concepts of abduction (working backwards from theory to explore gaps and propose hypotheses) and retroduction (exploring underlying factors in observed phenomena to revise theory) were employed (Danermark et al., 2019; Meyer & Lunnay, 2013). This aligns with a research design that assesses an observable phenomenon and explores understanding and perception of this to make sense of this through both inductive and deductive analysis (Meyer & Lunnay, 2013; Proudfoot, 2022). This perspective was also helpful when applying a neurodiversity affirming lens to the practical requirements of research aimed at application to the classroom. Balancing the need for identification of quantifiable variables and addressing difficulties faced by this population, while also being neurodiversity affirming, required an approach that matches the complex realities faced by neurodiverse young people.

In this study, a convergent mixed-methods design is used to combine quantitative findings with qualitative insights to achieve a more complete understanding than either provides alone (Creswell & Plano-Clarke, 2018). The study recognises measures of anxiety, depression, and emotion regulation strategies as objective truths that exist independently of human perception, while also acknowledging how these are subjectively interpreted by young people and influenced by their understanding and beliefs. Most importantly, this aligns with the researcher’s belief that young people’s experiences cannot be understood without the inclusion of their voices in research.

3.3 Reflexivity and Researcher Background

The researcher's previous experience as a teacher, trainee psychologist, and support worker, where positive psychology was applied to promote mental health, should be acknowledged. In addition, my stance as a neurodiversity affirming professional should be acknowledged as this frames my understanding of neurodiversity. This approach is reflected in the selection of a mental health model that recognises both positive and negative aspects to explore how ASC and ADHD can pose mental health risks while also identifying positive, protective factors. It is also evident in the prioritisation of the voices of neurodiverse young people within the research. However, it should be acknowledged that adopting a critical realist perspective means that exploration of challenges with emotional regulation and symptoms of anxiety and depression are relevant to research and should be explored These experiences motivated research planning and are likely to influence research design and data interpretation. Furthermore, theoretical assumptions from the literature review will inform the analysis, particularly regarding regulation and emotion beliefs, introducing a top-down approach to analysis (Braun and Clarke, 2022). In addition, a bottom-up approach was adopted through application of principles of reflexive thematic analysis were applied when exploring perceptions of beliefs and factors influencing regulation. In this case, the researcher's prior knowledge of neurodiversity, regulation and the school context and resulting subjectivity is perceived as a strength and positive influence in reflective thematic analysis (Gough & Madill, 2012). The researcher sought psychological supervision to aid in identifying and maintaining awareness of the influence of researcher perspective (Elliot, Ryan & Hollway, 2012) and to promote reflection (Lazard & McAvoy, 2020). This supervision was conducted with both psychologists and research supervisors to ensure ongoing awareness and inclusion of multiple perspectives in analysis.

3.4 Research Design

A convergent mixed methods design was adopted (Creswell and Plano Clarke, 2018), where collection of quantitative (phase one, survey data) and qualitative data (phase two, interview data) was used. Quantitative data explored the relationship between emotion beliefs

and mental health and the potential mediating role of emotion regulation. Qualitative data gave a more comprehensive insight into regulation strategies, young people's perceptions of factors influencing this and their view of the influence of beliefs on mental health. Following this, findings were merged during data analysis to combine insights from both phases (Huynh, Hatton-Bowers & Howell Smith, 2019). The structure of the two-phase design is outlined below in Figure 3. Research questions are outlined below in Table 2, indicating which research phase each question relates to.

Table 2:

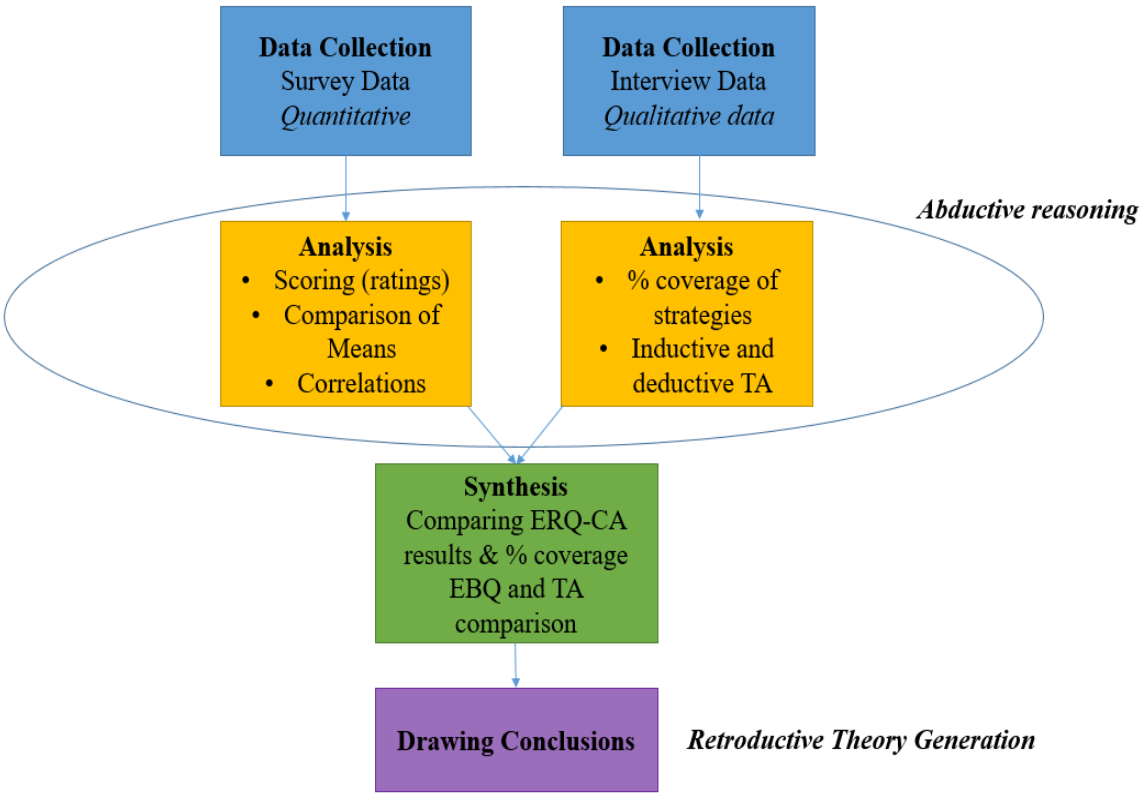
Research Questions.

Research Question	Phase one survey	Phase two interviews
1: **What is the relationship between emotional beliefs, emotion regulation, and mental health outcomes in neurodiverse young people? Specifically, to what extent do emotional beliefs indirectly predict mental health outcomes via emotion regulation?**		
1.1: What is the relationship between emotion beliefs and mental health measures? Is this moderated by diagnosis?	✓	✓
1.2: What is the relationship between emotion beliefs and emotion regulation strategy? Is this moderated by diagnosis?	✓	✓
1.3: What emotion regulation strategies do young people use and does this differ by diagnosis?	✓	✓
2: What are young people's perceptions of the relationship between emotion beliefs and mental health?		
2.1: What are young people's perceptions regarding the usefulness of emotions and the extent to which they can be controlled?	✓	✓

2.2: What do young people perceive as factors that influence emotion regulation		✓
2.3: How do young people perceive the influence of emotion regulation on mental health?		✓

Figure 3

Methodology Overview



Note. TA refers to Thematic Analysis. ERQ-CA refers to the Emotional Regulation Questionnaire – Child and Adolescent.

3.5 Ethical Approval

Ethical approval for this research was granted by the University College London Research Committee in July 2023. This was updated in May 2023 to reflect changes in the research design, including the change from use of solicited journals to interviews and a change in research sample. The study complies with British Psychological Society Code of Ethics (British Psychological Society, 2021). Participants were informed of their right to withdraw at any time and responses were pseudonymised for data analysis to ensure confidentiality. An adult known to the young person was available following interviews to offer support if required following interview.

3.6 Recruitment.

The research project originally intended to explore emotion beliefs in looked after young people in local authority care. However, following a lengthy recruitment stage in which multiple levels of permission were sought, it became clear that this would not be feasible due to difficulties with access and the timeline constraints associated with doctoral research. As a result, the intended research population was changed to focus on young people diagnosed with autism spectrum condition (ASC) or attention deficit hyperactivity disorder (ADHD) in Key Stages 3 and 4 during the academic year 2023-2024. A specific age range was selected due to reduce the impact of the changes in beliefs and self-regulation that occur during this period of adolescence (Yurgelun-Todd, 2007; Zimmerman & Iwanski, 2018; Schwizer, Gotlib & Blakemore, 2020; Somerville et al., 2023). Due to changes in the research approach and a limited time for data collection, responses were collected via self-report from young people only and not their parents or teachers. This meant that results relied on self-report measures and that additional behavioural measures could not be used to triangulate findings. This is particularly challenging in a neurodiverse sample where some young people may experience and recognise emotions differently to their peers. In addition, the overall sample size was also smaller than originally planned for, which limited statistical power.

For Phase One of the research (an online survey), convenience sampling was used. Local authority Educational Psychologists and school-based Special Educational Needs Coordinators

(SENDCo) were contacted and provided with an information and consent sheet (see Appendix A). Ten Inner London local authority educational psychology services and twelve Secondary School SENCos were contacted by email. Out of these 22, responses were received from two settings—one through an educational psychologist and another through a school SENCO. The first setting was a mainstream secondary school and the second was a secondary alternative provision. Consent and information sheets were distributed to parents of eligible students by school staff and the SENCO. At the end of the online survey, participants were asked to indicate if they were happy to participate in semi-structured interviews at Phase Two of the study. They were asked to notify the named school-staff member if they wanted to participate.

3.7 Phase One

3.7. 1 Phase One Participants.

Table 3

Setting 1 Participant Demographics

Setting 1: Mainstream Secondary Provision (n = 9)

Age	Gender	Diagnoses
12	F	ASC
12	M	ASC
13	M	ASC
14	F	ASC
14	M	ASC
14	M	ASC
14	M	ASC
15	M	ASC
15	F	ASC

This table outlines participant information from Setting 1, an inner London mainstream secondary school. All participants had a diagnosis of autistic spectrum condition (ASC). There were nine participants in total, with 3 (33%) female and 6 male participants (66%).

Table 4

Setting 2 Participant Demographics

Age	Gender	Diagnoses
12	M	ADHD
13	M	ADHD
13	F	ADHD
13	M	ADHD
14	M	ADHD
14	M	ADHD
14	M	ADHD

This table outlines participant information from setting 2, an inner London alternative provision secondary school. All participants had a diagnosis of attention deficit hyperactivity disorder (ADHD). One participant identified herself as experiencing both ASC and ADHD, however had not been formally diagnosed with ASC. Participants were aged 12 (14%), 13 (43%) and 14 (43%). Participants were primarily male (86%) with only 1 female participant (14%).

3.7.2 Phase One Procedure.

Questionnaires were administered via Microsoft Forms using a link or QR code, allowing completion on multiple devices. The survey output could be easily exported to Microsoft Excel for scoring and imported into SPSS data analysis software for analysis purposes. The survey was open from January 2024 to February 2024. Despite the small sample size, an online survey was

used as it allowed insights to be gathered on sensitive topics, including emotion regulation and mental health while reducing the impact of researcher presence on responses (Braun, Clarke, Boulton, Davey & McEvoy, 2021; Heiervang & Goodman, 2011).

Initial quality assurance was carried out to assess the accessibility of the survey and consent forms. The tool was shared with trainee educational psychology colleagues who assessed its functionality and identified any errors in accuracy of wording. Following this, the tool was shared with the youth inclusion team of an Inner London local authority, consisting of former service users now employed by the local authority. They recommended using visual resources to depict the scales used in the survey to ensure accessibility. (A copy of these visual resources is included in Appendix C). A final version of the survey is included in Appendix B.

3.7.3 Phase One Measures

Emotion Beliefs.

Emotion Beliefs Questionnaire (EBQ) The EBQ (Becerra, Preece & Gross, 2020) is a 16-item self-report measure of emotion control beliefs. It assesses the usefulness and controllability constructs identified by Ford & Gross (2018) for both positive and negative emotions. Four subscale scores with 4 items each are included: Positive controllability, positive usefulness, negative controllability, and negative usefulness. Responses are given on a 7-point Likert ranging from strongly disagree (1) to strongly agree (7). The control scale includes items such as 'Once people are experiencing negative emotions, there is nothing they can do about modifying them'. Usefulness items include 'There is very little use for negative emotions'. Higher scores are linked to maladaptive beliefs of emotion (negative useful, negative controllability). The Cronbach's alpha for this scale was 0.82, indicating a high level of internal consistency.

Emotion regulation.

The Emotion Regulation Questionnaire Child and Adolescent (ERQ-CA)

The ERQ-CA (Gullone & Taffe, 2012) is a 10-item self-report questionnaire to assess emotion regulation. It has a two-factor structure with items loading to use of cognitive reappraisal (CR) or

expressive suppression, with 5 items linked to each factor.. Responses are given on a 7-point Likert ranging from strongly disagree (1) to strongly agree (7). Items for cognitive reappraisal include items such as ‘When I want to feel happier, I think about something different’. Items related to expressive suppression include ‘I control my feelings by not showing them.’ The ERQ-CA was selected as it is a well-validated tool that accounts for developmental differences in emotion regulation (Gong, Wang, Zhang, Zeng & Yang, 2022; Villacura-Herrera; Gaete; Andaur, Meza, Robinson & Núñez, 2022). A Cronbach's alpha of 0.77 was calculated, suggesting satisfactory internal consistency.

Mental Health,

The Warwick-Edinburgh Mental Well-being Scale (WEMWS)

The WMWS (Tennenat et al., 2007) is a 14 item self-reported questionnaire assessing the positive well-being aspects of mental health. Items assess hedonic (related to feeling, happiness and pleasure) and eudainomic (related to self-actualisation and satisfaction (Ryan and Deci, 2001). Responses are given on a 5-point Likert from none of the time (1) to all of the time (5). The scale factor structure has been described as uni-dimensional, loading to one ‘well-being factor’ (Tennant et al., 2007). Multiple studies have validated the psychometric properties with adolescent populations (Melendez-Torres, 2019; Clark et al., 2011). A Cronbach's alpha coefficient of 0.72 was identified indicating acceptable internal consistency.

The Revised Children’s Anxiety and Depression Scale-25 (RCADS-25).

The RCADS-25(Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000) is a 25-item self-reported questionnaire that assessed anxiety and depression that has been validated in neurodiverse samples (Becker, Schindler, Holdaway, Tamm, Epstein & Luebbe., 2019; Kaat & Lecavalier., 2015) The scale provides an overall score and individual scores for two subscales, total anxiety and total depression. Items provide descriptions of symptoms (e.g. “I worry when I think I have done poorly at something” or “I feel sad or empty”) and are rated by frequency of experience on a 4-point Likert scale including never, sometimes, often or always. A Cronbach's alpha of 0.74 was identified, suggesting good internal consistency.

3.7.4 Phase One Analysis

An analysis of the survey data was conducted using Microsoft Excel and SPSS statistical analysis software, version 26 Microsoft Excel was used to score the individual scales for each measure. These scores were assessed based on specific rating criteria tailored to each measure. For instance, severity ratings (refer to mental health measure threshold ratings in section 4.2 for detailed information on individual ratings) were applied to scores for depression and anxiety using the Revised Child and Adolescent Anxiety and Depression Scales (RCADS-25).

Between Groups: Within the Study

Descriptive statistics (mean, median, and standard deviation) were identified by SPSS and used to compare averages between the two diagnostic groups within the research sample (ASC, n= 9), ADHD, n = 7). Following this, a Mann Whitney U test was used to compare mean ranks between the groups.

Subsequently, correlational analyses were conducted to assess relationships between emotion belief scores (EBQ), regulation scores (ERQ-CA), and mental health measures (RCADS-25 and WEMWBS). This analysis aimed to identify whether the relationship between emotion beliefs and mental health observed in neurotypical populations exists in this research population.

Between Groups: Comparison with Existing Research

Descriptive statistics (mean, standard deviation) the for overall group (n = 16) were compared with descriptive statistics from existing research into emotion beliefs using the EBQ and regulation using the ERQ-CA to compare averages of emotion beliefs, regulation approach with existing neurotypical populations.

3.8. Phase Two

3.8.1 Phase Two Participants

All participants participated in both phases of the study.

3.8.2 Phase Two Procedure

Semi-structured interviews were carried out in phase two of the study. All phase one participants who agreed to take part in phase two were offered the choice of a virtual or in-person interview. Virtual interviews could be completed without audio and visual if young people preferred. One young person requested a virtual interview using typed responses and without audio or visual. This interview took place on Microsoft Teams, chosen for its accessibility and ease of recording and transcribing responses into an interview transcript. The remaining interviews were conducted in person at the school settings. Interviews were conducted across three occasions in setting 1 and across four occasions in setting two. A total of 16 interviews were conducted.

Semi-structured interviews were used to provide more detailed insight into young people's beliefs and regulation approaches. This approach allowed for qualitative exploration of the meanings young people attributed to the phenomena that had been quantitatively assessed (Roberts et al., 2019). Additionally, it enabled further exploration of emotion regulation approaches beyond those assessed by the ERQ-CA (cognitive reappraisal and expressive suppression). Young people's perspectives on the factors influencing emotional control and the relationship between emotion beliefs and mental health were also explored in a more dynamic and engaging manner compared to surveys or structured interviews alone (Vassilopoulos, 2020)

3.8.3 Phase Two: Interview Schedule Development

The interview schedule was initially developed based on the study's research questions and informed by existing literature. A key focus during interview development was ensuring accessibility for young people. The interview was structured into three sections, exploring regulation strategies, emotion beliefs, and perceptions of the relationship between emotion beliefs and mental health. These will be outlined in more detail below. Visual prompts were incorporated to assist with potential challenges in identifying emotions for young people with ASC or ADHD. These visual aids were presented at the beginning of the interview and referred to as needed if participants encountered difficulty answering questions. Additionally, several verbal prompts were prepared to help address any difficulties that might arise during the

interview. The detailed interview schedule, including both verbal and visual prompts, can be found in Appendix D.

Part one of the interview was intentionally designed to be accessible and straightforward, with the objective of gaining insight into the utilization of emotion regulation strategies by young individuals. This was adapted from prompts used by English et al. (2017) for solicited journals. A summary of this adapted structure is included below:

1: Describe the best/worst part of their day.2: Identify their emotion – *If they were unable to, they were offered a prompt with faces to choose from choosing from a list of nine positive 9 positive (happiness, amusement, affection, pride, self-confidence, attraction, interest, hope, and connectedness) and 8 negative (anxiety, homesickness, anger/irritation, fatigue, jealousy, loneliness, sadness, and feeling put down) emotions*.

3: Identify the amount of effort they made to regulate. *Effort levels are reported on a 7-point Likert scale from 'I did not' (1) to 'a great deal' (7).*

4: Identify their emotion regulation strategy – If they were unable to identify this, an initial prompt is provided for them to identify an emotion regulation strategy they adopted from 3 strategies cognitive reappraisal - *"I tried to think about a situation differently in order to change my mood";* Distraction - *"I shifted my attention away from what was making me emotional" and Suppression "*"I tried not to show on the outside an emotion I felt on the inside" on the same 7-point Likert Scale. An alternative of 'none of these' can be selected.

5: Identify barriers and facilitators to regulation by describing any factors (e.g., time alone, social support) that promoted or limited the success of regulation.

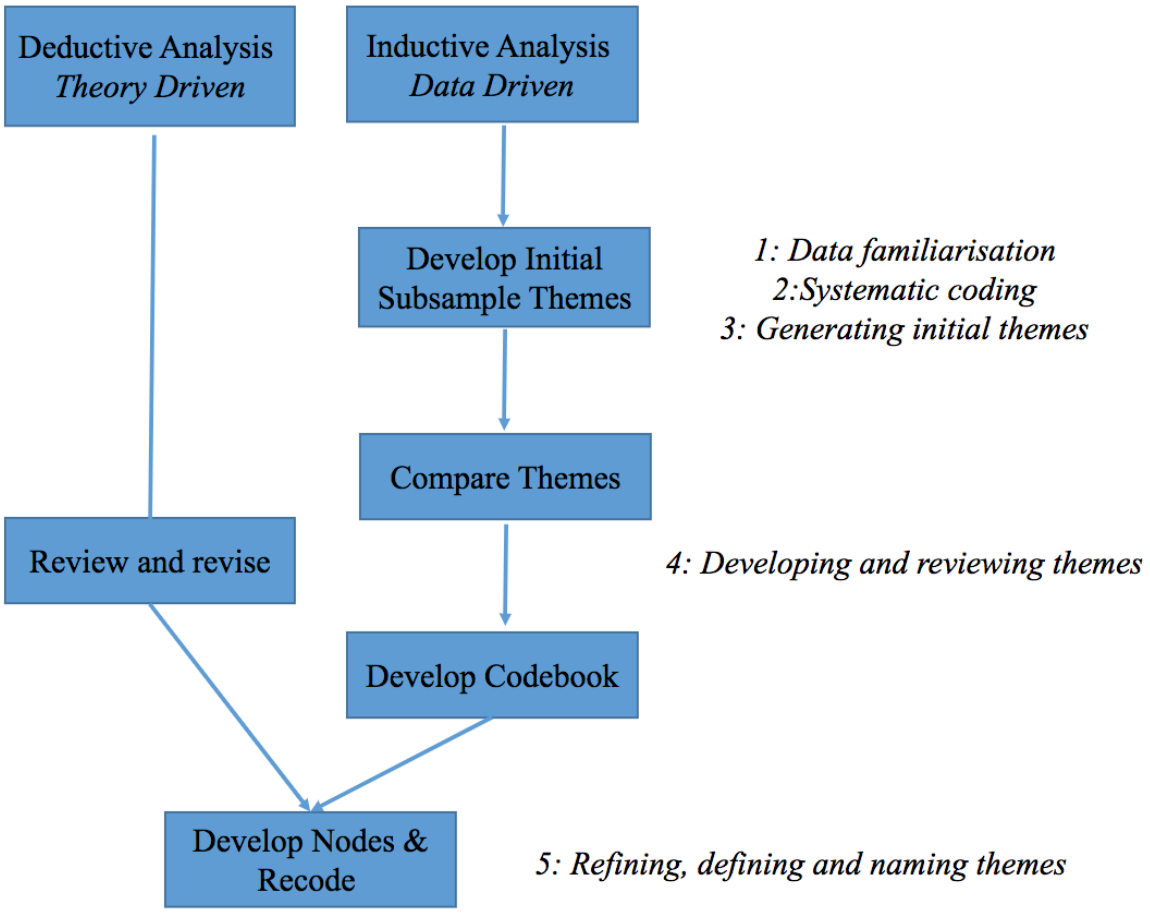
Part two of the interview was developed by the researcher and structured based on the Emotion Beliefs Questionnaire (EBQ) by Becerra, Preece, and Gross (2020). In this part, young people were asked about their perceptions regarding the controllability of emotions for themselves and others, as well as the perceived usefulness of emotions. These questions were asked separately for both positive and negative emotions.

Part three of the interview was also developed by the researcher based on existing research on the relationship between emotion beliefs and mental health (Somerville, 2024; Ford et al; 2019; Tamir et al., 2007). In this part, young people were asked about their perceptions regarding the impact of emotions on their life in general, as well as more specifically in relation to their overall functioning and mental health.

3.8.4 Phase Two Analysis:

Figure 4

Thematic Analysis Process



Note. Figure 4 draws on the structure outlined by Proudfoot et al. (2022).

In line with the critical realist approach, thematic analysis was conducted using a method that aligns with codebook analysis, as described by Braun and Clarke (2022). This approach involves structured coding with early theme analysis, resembling coding reliability methods, while also incorporating aspects of Braun and Clarke's reflexive thematic analysis (Braun and Clarke, 2021, 2022). Both deductive (creating a preliminary codebook) and inductive (allowing unexpected themes to emerge) approaches were employed. This method was chosen because it allows underlying theory to inform the analysis and enables theory to be reviewed and refined based on emerging themes, facilitating a dynamic interaction between theory and data (Fereday & Muir-Cochrane, 2006). Additionally, this approach supported the integration of qualitative and quantitative data by quantifying certain codes, facilitating convergent data analysis (Danermark et al., 2019; Meyer & Lunnay, 2013).

The literature review of research on emotion regulation supported the development of an initial codebook, with a focus on strategies outlined in the process model of regulation primarily (Gross, 2015; Parkinson & Totterdell, 1999). Codes were reviewed and refined throughout the analysis process. A simplified version of the codebook was employed for theory-driven codes, incorporating only three components identified as a simplified adaptation of Boyatzis' framework (1998) as discussed in DeCuir-Gunby, Marshall, & McCulloch (2011). These components included code name, definitions, and examples.

Data-driven codes were developed using an approach aligned with Braun and Clarke's 6-stage thematic analysis (2006). Each diagnostic group was coded individually to identify initial themes, which were then reviewed and refined. Given the high level of consistency across themes, it was decided to combine the data from both groups. These themes were used to create nodes within NVivo qualitative data analysis software. The dataset was coded in NVivo according to previously developed nodes, and themes were further revised and refined through iterative analysis until the final thematic map was generated.

As described by Braun and Clarke (2022), codebook thematic analysis is suitable for research that requires clear conclusions that can be implemented in practice. This approach is often adopted as a pragmatic compromise in research facing limitations in time and resources (Smith & Frith, 2011). This makes it particularly relevant to time-limited doctoral research projects that aim to generate practical implications for practice.

4. Results

4.1. Preparing the data

During data preparation raw survey data was downloaded to Microsoft excel and reviewed for completeness. In the dataset, there was one missing response for item 13 of the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS), which accounts for approximately 0.09% of the total responses. Individual survey scale raw scores were converted to standard scores using their individual scoring scales. This data wise inputting to SPSS and distribution was assessed using histograms. Normal distribution was identified was the EQB, WEMWBS and RCADS were not normally distributed. For this reason and due to sample size limitations, non-parametric tests were used for this research. The Man-Whitney U test was used to compare the independent groups (n=7 and n=9), and Kendall's Tau was used to identify strength and direction of association in a small sample (n=16).

4.2. Phase One Results

4.2.2. Research Question 1.1: What is the Relationship between Emotion Beliefs and Mental Health Measures? Is this Moderated by Diagnosis?

Beliefs about Emotion Controllability.

Table 7:

Descriptive Statistics (Mean and Standard Deviations) and Correlations Controllability and Mental Health Measures (Revised Child and Adolescent Anxiety & Depression Scales (RCADS -25) and Warwick Edinburgh Mental Wellbeing Scale (WEMWBS)

Variable	M	SD	5: WEMWBS	6: RCADS -25 Anxiety	7: RCADS -25 Depression
1: EBQ Total	50.1	16	-.092	.243	.138
2: EBQ General Control	25	9	-.034	.137	.027
3: EBQ Positive Control	13.4	4.6	-.017	.034	.027

4: EBQ Negative Control	11.6	5.2	-.130	.217	.161
5: WEMWBS	42	11.6	1	-.538**	-.658**
6: RCADS 25 Anxiety	57.9	17.4		1	.728**
7: RCADS 25 Depression	61.8	14.3			1

Measures of wellbeing had a non-significant negative correlation with controllability beliefs (EBQ score), while measures of anxiety and depression are positively correlated. This links the belief that emotions are uncontrollable to lower wellbeing and higher symptoms of anxiety and depression however correlations are small and not statistically significant.

Beliefs about Emotion Usefulness.

Table 8:

Descriptive Statistics (Mean and Standard Deviations) and Correlations Usefulness Beliefs and Mental Health Measures

Variable	M (SD)	4: WEMWBS	5: RCADS -25 Anxiety	6: RCADS -25 Depression
1: EBQ General Usefulness	25.1 (7.9)	-.101	.319	.165
2: EBQ Positive Usefulness	10.5 (4.7)	-.306	.323	.252
3: EBQ Negative Usefulness	14.6(4.5)	-.009	.269	.125
4: WEMWBS	42 (11.6)	1	-538**	-.658**
5: RCADS 25 Anxiety	57.9 (17.4)		1	.728**
6: RCADS 25 Depression	61.8 (14.3)			1

Measures of wellbeing have non-significant negative correlations with usefulness beliefs (EBQ score) while measures of anxiety and depression are positively correlated. Correlations are stronger for usefulness beliefs. This links the belief that emotions are not useful to lower

wellbeing and higher symptoms of anxiety and depression. However, it should be noted that correlations are small and not statistically significant.

Mental Health Measure Threshold Ratings.

A comparison of the number of young people rated at each level of the Warwick Edinburgh Wellbeing Scale across the ASC and ADHD groups was carried out. 11.11% reported average or above average levels of well-being in the ASC group in comparison with 42.86% in the ADHD group. Wellbeing ratings were higher for probable clinical depression for the ASC group (26.98% higher). Threshold measures were included to identify a need for mental health support in groups. Individual data was not shared, however existence of mild and clinical scores were highlighted to schools.

Table 9:

Group Comparisons of Wellbeing ratings measured by the Warwick Edinburgh Wellbeing Scale.

WEWBS Threshold Ratings	ASC	ADHD
High wellbeing (60+)	0 (0%)	1 (14.29%)
Average (51 – 59)	1 (11.11%)	2 (28.57%)
Low (45 – 50)	2 (22.22%)	2 (28.57%)
Possible/mild depression (41-44)	2 (22.22%)	0 (0%)
Probable clinical depression. (14-40)	5 (55.55%)	2 (28.57%)

Comparison of the number of young people rated at each level of the Revised Child and Adolescent Anxiety and Depression Scale (RCADS –25). In the ASC group, 33.33% were rated within clinical threshold for total symptoms compared with 0% in the ADHD group. Similarly, 44% were rated at high severity in the ASC compared with 28.57% in the ADHD. Within Clinical Threshold for depression were closer across the groups (33.33% for ASC and 28.57% for ADHD).

Table 10:

Severity ratings for anxiety and depression symptoms measured by the RCADS-25

RCADS Threshold Ratings	ASC (n = 9)			ADHD (n= 7)		
	Total	Anxiety	Depress	Total	Anxiety	Depress
Normal Range (0-64)	5 (55.55%)	5 (55.55%)	5 (55.55%)	4 (57.14%)	5 (71.43%)	3 (42.86%)
Borderline Clinical Range (65-69)	1 (11.11%	0 (0%)	1 (11.11%	3 (42.86%	0 (0%)	2 (28.57%
Within Clinical Threshold (70+)	3 (33.33%	4 (44.44%	3 (33.33%	0 (0%)	2 (28.57%)	2 (28.57%)

4.2.3. Research Question 1.2: What is the Relationship between Emotion Beliefs and Emotion Regulation Strategy? Is this Moderated by Diagnosis?

Between Groups Comparison: Within Study.

Beliefs about Emotion Controllability

Table 11:

Descriptive Statistics (Mean and Standard Deviations) and Correlations Emotional Control Beliefs and Emotion regulation Strategy.

Variable	M	5: ERQ- CR	6: ERQ-ES
1: EBQ total	50.1 (16)	-.230	.165
2: EBQ General Control	25 (9)	-.278	.124
3: EBQ Positive Control	13.4 (4.6)	-.237	.223
4: EBQ Negative Control	11.6 (5.2)	-.220	.081
5: ERQ-CA Cognitive Reappraisal (CR)	26.7 (5.8)	1	-.292
6: ERQ-CA Expressive Suppression (ES)	17 (5.4)	-.292	1

Note. M refers to mean; standard deviation is represented in brackets.

Emotion control beliefs have a non-significant negative correlation with use of cognitive reappraisal and positively correlated with expressive suppression. Correlations are stronger for cognitive reappraisal, although all correlations are small and not statistically significant.

Beliefs about Emotion Usefulness

Table 12:

Descriptive Statistics (Mean and Standard Deviations) and Correlations Emotional Usefulness Beliefs and Emotion regulation Strategy.

Variable	M (SD)	4: ERQ- CR	5: ERQ-ES
1: EBQ General Usefulness	25.1 (7.9)	-.120	.104
2: EBQ Positive Usefulness	10.5 (4.7)	-.124	-.398*
3: EBQ Negative Usefulness	14.6 (4.5)	-.141	-.018
4: ERQ-CA Cognitive Reappraisal	26.7 (5.8)	1	-.292
5: ERQ-CA Expressive Suppression	17 (5.4)	-.292	1

Note. M refers to mean; standard deviation is represented in brackets.

Emotion usefulness beliefs have a non-significant negative correlation with use of cognitive reappraisal and positively correlated with expressive suppression. EBQ positive usefulness had significant negative correlation with ERQ expressive suppression. This suggests that the belief that positive emotions are usefulness is associated with greater use of expressive suppression. All other correlations were small and not statistically significant.

The Moderating Role of Diagnosis

Table 13:

Descriptive Statistics (Mean, Range and Standard Deviations) between ADHD and ASC group's diagnosis.

Variable	M		Med		R		SD	
Group	ASC	ADHD	ASC	ADHD	ASC	ADHD	ASC	ADHD
1: Total EBQ	46.3	55	48	55	26	69	9.7	21.5
2: General Control	22.5	28.3	23	16	17	37	5.3	12
3: Positive Control	12.2	15	12	15	12	16	3.7	5.4
4: Negative Control	10.2	13.3	11	14	8	21	2.6	7.1
1: General Usefulness	23.9	26.7	23	25	17	32	6	10.1
2: Positive Usefulness	10.1	11	12	32	7	20	3	6.6
3: Negative Usefulness	13.8	15.71	14	10	13	14	4.2	4.9
5: ERQ-CA Cognitive Reappraisal	28.1	24.9	30	28	13	22	4.3	7.2
6: ERQ-CA Expressive Suppression	18.2	15.4	19	14	15	22	4.5	6.5
7: Warwick Edinburgh Wellbeing	39.8	45	39	48	28	39	9.2	14.3
8: RCADS Total	61.6	57.8	25	57	46	44	15.8	19.1
9: RCADS Anxiety	61.3	53.4	57	54	44	48	15.1	20.3
10: RCADS Depression	61.8	61.7	57	45	45	36	14.6	15.1

Descriptive statistics identified that both mean and median EBQ scores were greater in the ADHD group (suggesting less adaptive emotion beliefs). Expressive suppression and cognitive reappraisal use were greater in the ASC group. Measures of mental health indicated greater symptoms of depression and anxiety and lower levels of wellbeing in the ASC group.

A Man-Whitney U test was run to assess whether there was a statistically significant difference in beliefs, emotion regulation and measures of mental health between the ASC and ADHD group. This indicated that differences between the two groups in emotion beliefs, regulation and mental health measures were not statistically significant.

Table 14:

Man-Whitney U Test Results

Measure	Total rank difference (U)	Sum of ranks (z)	Significance ($p < .05$)
ERQ-CA Expressive Suppression	19.000	-1.336	.182
ERQ-CA Cognitive Reappraisal	22.000	-1.009	.351
EBQ – General Control	19.500	-1.276	.210
EBQ – Positive Control	18.500	-1.285	.174
EBQ – Negative Control	23.500	-.854	.408
EBQ – General Usefulness	27.500	-.424	.672
EBQ – Positive Usefulness	27.000	-.481	.630
WEMWBS	24.000	-.794	.427
RCADS -25 Total internalising	25.500	-.638	.536
RCADS – 25 Anxiety	23.500	-.847	.408
RCADS – 25 Depression	29.500	-.214	.837

Comparisons with Neurotypical Peers: Comparison with Existing Research.

Emotion Regulation Strategy

Table 15:

Descriptive statistics comparing ERQ-CA scores of neurotypical adolescents and the current, neurodiverse research population (Mean and Standard Deviations)

Variable	Mean				
Study	1 The Current Study	2 Longiro et al., 2023	3 Balan et al., 2017	4 Villacura-Herrer et al., 2023	5 Skymba et al., 2022
ERQ –CA Expressive Suppression	17 (5.47)	11.26 (3.31)	11.51 (4.33)	13.28 (3.37)	X (x)
ERQ-CA - Cognitive reappraisal	26.68 (5.80)	x (x)	x (x)	20.71 (4.11)	20.88 (4.38)

Note. Mean (M) and standard deviation (SD) are shown in the table. Standard deviation is included in brackets.

Strategy use is greater in the neurodiverse population, for both expressive suppression and cognitive reappraisal both expressive suppression and cognitive reappraisal, when compared with neurotypical populations.

Emotion Beliefs

Table 16:

Descriptive statistics comparing EBQ scores of neurotypical adolescents and the combined sample, this study (Mean and Standard Deviations)

Variable	Mean (SD)		
Study	1: The Current Study	2: Ranjbar et al., 2023	3: Berglund et al., 2013
2: General Control	25.00 (.901)	21.79 (4.85)	15.25 (5.92)
3: Positive Control	13.44 (4.59)	11.27 (4.78)	7.90 (3.37)
4: Negative Control	11.56 (5.17)	10.52 (5.91)	7.35 (2.89)
1: General Usefulness	25.12 (7.87)	24.83 (3.96)	17.53 (6.67)
2: Positive Usefulness	10.50 (4.69)	8.00 (3.96)	6.76 (3.32)
3: Negative Usefulness	14.62 (4.47)	16.82 (5.91)	10.76 (5.12)

Note. Number in brackets represents standard deviation.

A greater EBQ score indicates a belief that emotions are uncontrollable and not useful. Scores for emotion control beliefs are greater in the combined (ASC & ADHD) sample in this study than neurotypical adolescent populations (Ranjbar et al., 2023) using the EBQ. Usefulness beliefs were more mixed, with positive usefulness beliefs greatest in the neurodiverse sample from the current study but greater for negative usefulness in the neurotypical population in Ranjbar and colleagues' study (2023)

Mental Health

Table 17:

Descriptive statistics comparing Revised Child and Adolescent Anxiety and Depression – 25 item scores for the current neurodiverse research sample with neurotypical research populations (Mean and Standard Deviations)

Variable	Mean (SD)			
Study	1 The Current Study	2 Carlander et al., 2024	3 Lisøy et al., 2022	4 Young et al., 2021
RCADS-25 Anxiety	57.9 (17.4)	6.37 (4.66)	15. (9.1)	13.9 (9.13)
RCADS-25 Depression	61.8 (14.3)	7.98 (5.93)	10. 1 (5.8)	13.5 (8.1)

Note. Number in brackets represents standard deviation.

Table 8 shows a significantly higher level of anxiety and depression symptoms in the current research population when compared with existing research with neurotypical samples.

Table 18:

Descriptive statistics comparing Warwick Edinburgh Mental Well-being Scale scores of scores for the current neurodiverse research sample with neurotypical research populations (Mean and Standard Deviations)

Variable	Mean (SD)			
Study	1	2	3	4
	The Current Study	Ringdal et al., 2018	McKay et al., 2017	Clarke et al., 2011
WEMWBS	42 (11.6)	50.2 (9.8)	50.08	48.8 (6.8)

Note. Number in brackets represents standard deviation.

Table nine shows lower well-being scores for the current research population when compared with existing neurotypical research samples.

4.4. Phase Two: Thematic Analysis of Interviews

Thematic Analysis was used to answer the following research questions. Questions 1.1-1.3 were answered through consideration of data from phase one of the study and phase two. Whereas questions 2.1-2.3 were answered through thematic analysis alone. Themes are outlined below with the research questions that they answer.

Theme 1: 1.1: What is the relationship between emotion beliefs and mental health measures? Is this moderated by diagnosis?

2.1: What are young people's perceptions regarding the usefulness of emotions and the extent to which they can be controlled?

Theme 2: 1.2: What is the relationship between emotion beliefs and emotion regulation strategy? Is this moderated by diagnosis?

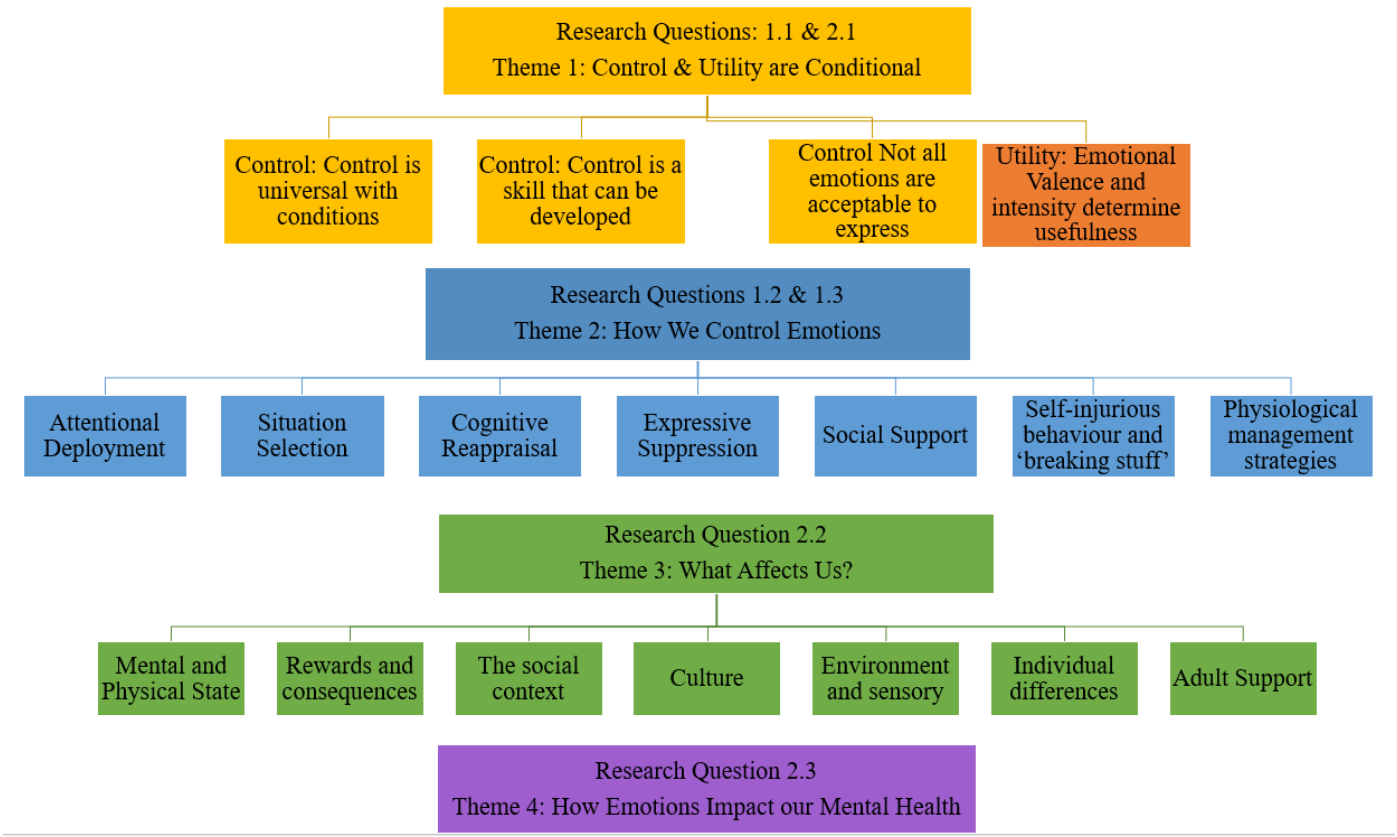
1.3: What emotion regulation strategies do young people use and does this differ by diagnosis?

Theme 3: 2.2: What do young people perceive as factors that influence emotion regulation?

Theme 4: 2.3: How do young people perceive the influence of emotion regulation on mental health?

Figure 5:

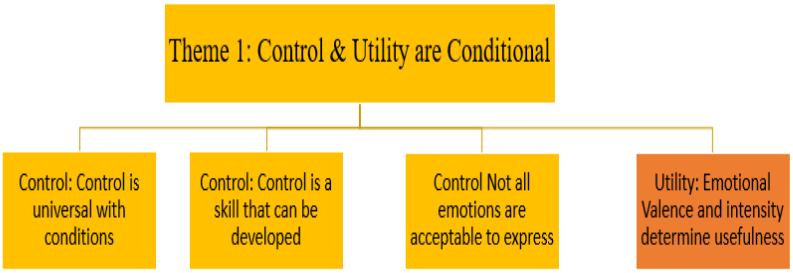
Thematic Model



4.3.1. Theme 1: What we believe: Control and Utility are Conditional.

Figure 6

Theme 1 subthemes.



Theme one explores participants' emotion beliefs, specifically related to the controllability and usefulness of emotions. Young people discussed whether they believe that emotion control is something that can be achieved, something that might be possible under certain conditions, or something that is just not possible at all, referred to as conditional control. In addition to this, young people described their perceptions of the malleability of control, whether this can be learned or is determined by predisposition. This theme includes references to control and utility to explore young people's understanding of the nature of these ideas. Perceptions of the utility of emotions were identified, distinguishing between positive and negative emotions.

Subtheme: Control is Universal but With Conditions.

Group 1: ASC. In the ASC group, a belief in conditional control, control which is possible but influenced by a number of conditions, such as emotional valence, intensity or the cumulative impact of emotions, was described in most cases, which aligns with existing research related to the nature and distribution of emotion control beliefs (Somerville, MacIntyre, Harrison & Mauss, 2024). According to Ford and Gross's framework of emotion control beliefs, this superordinate belief of controllability is impacted by a range of subordinate beliefs related to specific emotion characteristics including the type, valence, intensity or channel (expressive behaviour, physiological experience) as well as specific targets (general and individual beliefs). These beliefs were identified in interviews. When young people were asked about both general and personal control beliefs, most young people felt that conditional control was universal, however control ability varied between people.

"No, it's like for some people it's controllable but for some people it's hard to control. All people can control but some people find it easier than others."

In many cases, boundaries of control were related to the type of emotion or valence. With negative emotions being identified as harder to control.

"I think most emotions can be controlled to an extent. Yes. Sometimes when people get angry, or when I get angry at other people, then sometimes it can be hard for me to control it.

Young people shared perceptions that emotion control varied by emotional valence, whereas positive emotions did not require control and instead, faded away.

"It's like a bicycle pump like you, you like, you pump up and then it slowly fades away."

Similarly, a young person reported that less intense negative emotion also did not require control. Suggesting that control is only required for intense and negative emotions.

"And you know, it's sort of because they have an endpoint for example, being late to class you know, as soon as I get to class that moment is over and it just sort of goes away.

This recognises a belief that control is possible but is influenced by a number of different factors. One young person described emotional control as occurring through control of emotion inducing events, such as passing an exam, which then determines emotional responses.

"I can control like something like having happiness you can control, like if you if you get like a good grade and you're happy about that, then that's what you can control."

This suggests that the young person believes that emotion control occurs by controlling events that will create an emotional response rather than through control of emotional responses. This aligns with the use of antecedent strategies to control avoid emotional experiences. This illustrates that there some variety in the way in which control is described and perceived in subordinate control beliefs within responses from participants who showed consistency in overall beliefs about control.

Group 2: ADHD. Participants in the ADHD group primarily also shared a belief of conditional control. However, one young person stated that emotions were uncontrollable, stating control was not possible and not expanding on this.

"You just can't"

Similarly to the ASC group, a young person shared that they did not believe that positive emotions required control. Stating that positive emotions 'go down' after a person becomes tired.

"It [positive emotions] would be probably it would probably go down when I'm tired after."

This suggests that control beliefs are different depending on emotional valence where positive emotions are not controlled but come and go. In addition, reference to the role of tiredness suggests that energy levels are a self-regulatory resource and that ability to control emotions is perceived as being influenced by this.

Subtheme: Control is a Skill that Can Be Developed.

Group 1: ASC. Young people referred to control as a skill that is changed, both positively and negatively, through experience. Direct teaching of control strategies, experience of emotions and developmental maturation were all named as factors influencing control. This theme clarifies how young people view control and, importantly, whether they believe that this can be developed. This offers guidance around the current beliefs that young people hold but also provides insights into how adaptive beliefs can be developed in the future.

"I think people have a lot more control over their negative emotions, because I think that's generally what people get taught, especially in a young age like this, how you regulate anger, you know, count to ten or things like that."

This references explicit teaching of emotion control strategies as determining emotion control ability. Similarly, repeated exposure to emotions was described as incrementally increasing emotional control ability, through its impact on appraisal of the emotion.

"Yeah. If you have same thing again, it will make you think a bit differently. In the long term you can do things that might affect if that thing were to happen again, you'd have a different response."

In addition, there was reference to the impact of maturation as improving emotional control, through a reduction in behavioural expression of emotion, such as crying. This again identifies control as a developing trait that improves with maturation.

"Because I need to get used to it. Because when I'm older, when I'm old, I can't be doing the same thing. I just, I just felt like I should grow out of it."

An alternative influencing factor on the development of control was the experience of 'trauma' as described by the young person, which was felt to increase emotional reactivity in specific situations.

"Trauma or just like just strict parents maybe…It could make certain things harder for you to do. Certain phrases or words have more meaning to you than others."

This suggests a view that control is a malleable trait that can be developed through learning and experience, both increasing control through learning of strategies and development and reducing control through increased reactivity as a result of adverse experiences

Group 2: ADHD. As in the ASC group, the ADHD group primarily viewed emotion control as a malleable Skill. This group generally referred to the negative impact of experiences on emotional control, such as adverse childhood experiences. One young person did reference an improvement in control ability and described this as having as having a positive impact on their behaviour in school.

"I used to fight, get in trouble. As I said, I'm doing better. I'm just saying there are always times where you can change like, how you're doing."

Reference to adverse childhood experienced in the ADHD group related to exposure to negative experiences generally.

"It depends on what times you go through like, who they are, or like what happens in their life. I dunno, I just know that certain people go through things, and it makes it harder to control"

However, there were also more specific references to the witnessing of domestic abuse for one sibling has leading to poorer emotional control and more negative expressive behaviour than their siblings that did witness abuse.

"I was nine and I'm the only child that remembers everything physical that happened. Okay, that's why, my, me and my sisters so different."

They further develop their point, stating that the impact on control occurred due to a lack of role models for positive strategies for emotion regulation suggesting social learning plays a role in the development of emotional control.

"Yeah, like a role model for how people should get along because when I was younger, my family used to fight all the time. That's why I'm so aggressive now."

However, the young person also described their anger as being related to their personality, which was felt to be inherited from their parent.

"But we've just had a rough few years because we both have the same level of anger, so we clash. We have the same personality. I don't like that, but I can't change it, obviously."

This suggests a view of emotional control as being related to personality and not as being malleable, as the previous responses suggest. This identifies some inconsistency in their perceptions of the malleability of emotional control.

Subtheme: Emotion valence and intensity determines usefulness.

Group 1: ASC. Beliefs about the utility of emotions were rated as useful, not useful or conditionally useful. Similarly to beliefs about control, these were primarily rated as conditionally useful by the ASC group. Emotional valence was identified as being an important factor in the utility of emotions and positive emotions were more consistently identified as being useful. Responses were categorised as positive valuations (emotions are useful) or negative (emotions are not useful). This sub-theme was selected as it explores if and how usefulness beliefs impact regulation. As there is limited research exploring these beliefs, it was considered important to explore the factors influencing usefulness.

Emotions are useful. The usefulness of positive emotions was identified, firstly through their impact on the development of relationships.

"You know, you can bond with someone over something that you both find funny or you both enjoy watching and if you have situations where you both feel positive together, then I guess you'll start to associate that person with positive emotions and then you start to enjoy, like time with them more and become a happier person generally"

This young person identified hedonic experience due to positive emotions as helping to build relationships. In addition, they refer to being a happier person' which suggests pleasure positively impacts psychological wellbeing. The influence of emotions on motivation was also identified, with positive emotions, such as excitement, increasing motivation to complete work.

"I'll generally save things that I'm excited to do and do that last if there's an order of things I have to do. And yeah, if I'm happy about doing things, I guess I'll just be I'll put in more effort into them."

Negative emotions were perceived as less useful by participants. However, they were also recognised as providing motivation to complete actions.

"I think all of them to be honest with you like even if you're angry, that can motivate you towards something even if the end result isn't necessarily good, but it definitely gives you energy to go and do something."

In addition, the value of experiencing a diverse range of emotions was recognised as being important for psychological wellbeing.

"Right, bad emotions, they are useful, because you can't just always be happy, or life will be boring."

Furthermore, the experience of negative emotions was described as an indication that rest is required, which benefits mental health.

"Again, if you're feeling down, you just don't bother doing stuff, maybe that's a good idea to not do that thing. Forget that party, maybe you're better off chilling."

Emotions are not useful. When emotions were described as unhelpful, this was primarily due to the impairment that they cause to functioning. This example references positive emotions as being unhelpful due to the intensity of emotion, where feeling 'too excited' was described by the ASC group as reducing focus on learning while at school.

"Well, if I'm trying to do work, and I feel too excited about something in the future, then it might distract me."

Similarly, young people described a direct impact on academic performance as a result of 'feeling negative', recognising the influence of emotional valence on utility of emotions.

"It might make you do negative things. Like if you're feeling negative, then you won't be doing so well in school. So, you might be getting lower scores and tests than you used to."

This impact on academic performance was described as mediated by motivation, where negative emotions reduce motivation to complete tasks.

"Yeah, anger if you're brooding and sulking about something you're probably just going to not do stuff. And depending if you don't do stuff that's going to screw you over later."

An alternative explanation of the impact of negative emotions on functioning was through their impact on decision making.

"Emotions inform decision making. So, dependent on your mood, you will either make a good decision or a stupid decision. So generally, it's better to be better mood so you don't make stupid decisions. Okay, so I guess they aren't always helpful. It depends on the emotion."

Group 2: ADHD. The ADHD group also primarily held the belief that emotions were conditionally useful, depending on valence. However, there was greater recognition of the positive impact of negative emotions and experience of a range of emotions in supporting daily functioning.

"You just need emotions to function. Yeah, because you should be able to feel something while you're doing stuff."

One young person reported that the feedback that emotions give, being able to 'feel stuff' guided their behaviour and helped them to make the right decisions.

Emotions are useful. The ADHD group also identified the positive impact of positive emotions on development of relationships. This was identified as being a cycle of feeling good, doing helpful things and this helping them to build friendships. This recognises the positive impact of social inclusion on wellbeing identified in the Complete State Model and identifies positive and protective factors that can be used to promote mental health identified by young people.

"So, if you're doing good stuff, it makes you think, 'I know I'm doing something good.' As well for other people and myself. I'm gonna make new friends and just know, like in the future, you know, they will pay you back, they will, you know, they will help you when you need help. This process of making friends."

These young people also recognised the impact of positive emotions on motivation. This time as having an altruistic impact, encouraging you to 'do good' in the wider world.

"And you're like, I'm gonna go make a massive cake and give it to the homeless. You go give food and then makes you feel proud and..and you do something good with that feeling. So, with that feeling, you can do good"

Negative emotions were more widely recognised as useful in the ADHD group, where the benefits of a diverse experience of emotions were described as necessary.

"Yes, they're helpful. Because sometimes you have to feel that emotion. You have to be unhappy. It's okay to be unhappy."

In addition, similarly to the ASC group, negative emotions were described as social signals which indicate a need for support.

"Because if someone's sad, someone that's happy can cheer them up. So, our emotions show shown someone needs to help us."

This was developed further stating that these signals help us to receive problem solving support from those around us, which is only accessible if emotions are expressed.

"If I got in a fight or something with my friend, Friend A, and I was upset, it would be easier to tell someone. Then they can sort out the situation and then you're friends again. The situation is gone. And that depends on if you choose to express your emotion."

The ADHD group also recognised the role of negative emotions, such as anger, as a motivator for action.

"And you're like, that makes you angry at it. This is just an example. It could encourage you to start a charity for people. A bad emotion which creates a good thing."

Emotions are not useful. Only negative emotions were rated as non-useful in the ADHD group. Firstly, through the negative social impact or social contagion of negative emotions.

"You have yourself a certain emotion... can create a big reaction. So, say if something happens, you know it could affect others, and that could affect others."

This suggests that wider social impacts of emotional expression are considered when determining the value of emotions and their control. In addition, the negative impact of emotions was identified at an individual level. The social impact of emotional expression, particularly of anger, was described as leading to social isolation. Young people felt this impact could be avoided if they were able to 'let go' of emotions to maintain friendships.

"And those emotions could create more things (negative behaviours and interactions) …which basically you're missing out. So basically, you've got to let go."

Finally, it was suggested that expression of negative emotions, such as jealousy, can 'destroy' a person, as they lead to destructive behaviours.

"Like it will just destroy the person that you are like, you can't let you can't let jealousy like overtake all of your emotions and same of anger because if I let my anger take over, then I don't think the school will still be standing."

This suggests that strong emotions can override emotional control. This links to the concept of 'hijack' beliefs discussed in previous research (Veilleux, Salomaa, Shaver, Zielinski, & Pollert, 2015), where strong emotions overcome emotional control. This impact was viewed as leading to isolation and destructive behaviour. This suggests that emotional intensity is a factor influencing emotional control at the identification stage of emotional regulation and suggests that young people perceive some beliefs to be beyond control.

Subtheme: Some Emotions are Unacceptable to Express. Beliefs related to acceptability of emotional expression have been linked to judgments of the value of remaining in control of emotions (Brock, 2023; Goodman, Kashdan & İmamoğlu, 2021; Mauss, Butler, Roberts &Chu, 2011; Zerwas, 2022). Therefore, these values relate more closely to emotion control beliefs, where expression occurs when this is valued more than suppressing. This judgment was based on the emotion's valence, the context in which this was occurring and its intensity. This sub-theme offers insight into why some emotions are expressed, while others are suppressed, and how beliefs underpin these differences. This suggests at the identification phase of emotional regulation outlined in Gross' model, choices are made, and the identified factors explain which beliefs underpin these decisions.

Group 1: ASC. In the ASC group, responses were fairly consisted in that acceptability of expression was dependent on context and type of emotion. Several references were made on the value of expressive suppression to avoid expression of negative emotions, especially anger. This suppression allowed for a reduction in conflict, which was referred to as being the 'easiest route for everyone'.

"I mean, I'll obviously feel them but I'm quite good at sort of staying very calm and talking to someone else in terms of...yeah, I generally won't express annoyance or anything like that."

In addition, there were also a number of responses indicating a belief that it can also be unacceptable to express intense, positive emotions. Visible excitement was frequently described as being 'too much' or an 'overreaction', which wasn't acceptable.

"Well, because I don't want to go to go too overreacted. Just so, like I said overreaction ain't good."

Young people also described displays of visible excitement as leading to a perception of them as ‘very weird’ and ‘annoying’, which suggests social perception is an important factor influencing perceived acceptability of expression, where stronger and more visible emotions are less acceptable to express. Another example of this is the description by participants as being in a ‘good state’. Which referred to a state where no visible emotion was shared. This was felt to allow young people to interact ‘normally’ with others.

“Breathing generally. Just sort of like remaining like... No, like outbursts or anything in front of other people. It’s just sort of being in like a good state and, you know, interacting normally with other people.”

“I guess perhaps, if you're in an environment where you're sort of expected to be doing something or you're leading something or you're meant to be like a role model in front of other people, I guess.”

These quotes suggest that perceived expectations related to emotion expression influence the use of emotion control. Similarly, perceived 'contagion' of emotions was described as an influencing factor, where concerns about transmission of negative emotions limited expression of emotions.

"Sometimes if it's a strong negative emotion, then I would worry about that a little bit, but when it's a small one, I don't really worry because it's unlikely that any of anyone I'm around will also start feeling that negative emotion."

This social influence was also influenced by how familiar young people were with those around them, where predictable and effective responses from others increased the likelihood of emotional expression.

"Negative emotions...you want to keep it to people that are generally very close to you and you want to be more careful about it. Just because you know, they have to be able to understand you properly and where you're coming from and support you in the right way. I guess instead of just going, you know, it's gonna be okay."

An alternative influence on expression of emotions was also provided, where concerns about ability to control emotions when they were expressed influenced the likelihood of expression. This suggests control values are influenced by individual control beliefs.

"But you know, I'm kind of scared that you know, boy, if I literally go bit too far or something like that, so I'm really not sure what's going to happen.

Group 2: ADHD. Values related to emotional control were less consistent in the ADHD group. Negative emotion expression was viewed more positively, with emotions described as important and natural.

"We have to express our emotions because we're human."

However, one young person stated that there was "nowhere" they could express their emotions due to ridicule by others. Visible displays of emotions in public were viewed as having a negative impact on social integration.

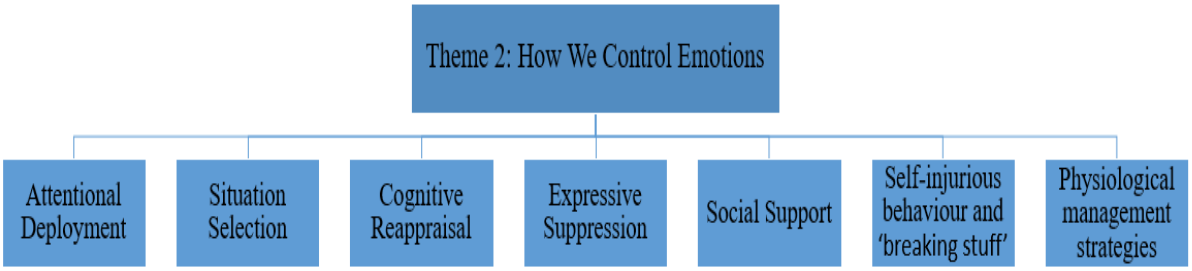
"I can't share my emotions in public. Because it's just weird, silly and everyone's going to think I'm an idiot."

This suggests that overall, there is a more positive perception of expression of negative emotions. However, social perceptions are a key factor in influencing emotion control values.

4.3.2. Theme 2: How we control emotions: The strategies we use.

Figure 7

Theme 2 Sub-themes



Theme two explores how young people report to control their emotions. Responses aimed to contribute to answering research question 1.3: What emotion regulation strategies do young people use and does this differ by diagnosis? Young people were asked to describe how they increased or decreased their experience of emotions and prompts were provided if they were unsure (see interview schedule in Appendix D). A codebook was used to standardise coding of emotion regulation strategies based on existing research by Gross & John, 2003 (See Appendix E). Descriptions of regulation were originally categorised into five groups: Situational selection and modification, attentional deployment, cognitive reappraisal and response modulation. Situation modification was removed as no examples were reported. An additional group was added during coding: use of social support, which referenced both peer and adult support. All strategies were described in both groups apart from self-injurious behaviour, which was only found in the ADHD group. Descriptions and percentage coverage of each strategy are outlined below in table 19. This includes overall and for the ASC and ADHD groups individually.

Emotion Regulation Strategy Use – Percentage Coverage and Coding Frequency.

Each regulation strategy was coded for during thematic analysis. The items coded as emotion regulation strategies totaled 215 codes. For the ASC group, this was 123 items and for the ADHD group this was 92 items. The total number of times each item coded was used to find the percentage coverage of that code within each group and across the total group (215).

Table 19:

Percentage Coverage and number of codes of Regulation Strategy by group (ASC, ADHD) and total.

Note. Number of codes included in brackets.

Strategy	Group 1 ASC 123	Group 2 ADHD 92	Total 215
Attentional Deployment	36% (44)	10% (9)	25% (53)
Cognitive Reappraisal	18% (22)	14% (13)	16% (35)
Social Support	10% (12)	15% (14)	12% (26)
Situation Selection	4% (5)	16% (15)	9% (20)
Response Modulation: Expressive Suppression	12% (15)	6% (6)	9% (21)
Response Modulation: Self-injurious behaviour	0% (0)	10% (9)	4% (9)

Overall, attentional deployment received the most coverage across both groups, accounting for 24% of the total coverage. This percentage was higher in the ASC group, making up more than 1/3 of the total codes for regulation strategy (35.77%), compared with only 9% in the ADHD group. There was a higher percentage in the alternative provision/ADHD group (2.17%) than in the ASC group (0.81%), but the overall number of references was low.

Expressive suppression made up 8.37% of the overall coverage, with a higher coverage in the ASC group at 11.38% compared with 4.34% in the ADHD group. Cognitive reappraisal made up 16.28% of the overall coverage, showing similar representation across both groups, with slightly higher coverage in the ASC group (17.88%) compared with 14.13% in the ADHD group. Social support made up 12.09% of the overall coverage, with higher coverage in the ADHD group (15.22%) compared with 9.76% in the ASC group. Self-injurious behavior made up a small percentage of the overall coverage (1.4%), however, this was entirely from the ADHD group, with 9 codes being attributed to it (2.17% of the total coverage of the group).

Attentional Deployment.

Group 1: ASC. Attentional deployment had the greatest percentage coverage for the ASC group. This was often described as a deliberate shift of attention away from emotional experiences and emotion-provoking events and towards activities to reduce emotional experience. One young person referenced using attentional deployment to down regulate intense happiness, which was felt to be hindering their performance in a musical activity. They described this as replacing emotional experience with focus on an activity and not feeling as though they were consciously using a regulation strategy. This suggests a perception of attentional deployment as being increased focus on behaviour and not decreased focus on emotion.

"Because it doesn't necessarily make me more sad or create more negative emotions. It's just sort of switching out emotions for a really intense focus on something. There weren't really any mechanisms I used or anything I just sort of forgot about being happy and then just threw myself into whatever I was doing, if that makes sense. Like, instead of focusing on emotions, you'd be focusing on how you're acting in a situation sort of make sure that you don't make any mistakes while you're there and things like that."

This suggests that attentional deployment facilitates goal directed behaviour, where emotions are viewed as a distraction from task completion. One young person referenced changing regulation strategy depending on what the 'goal is'.

"It just depends what the goal is in the situation. If the goal is to you know, feel happy and enjoy myself then I'll just let myself relax and enjoy everything but if I feel like I need to get something done, or I need to be doing something then I generally will tend to take my attention away from what I'm meant to be feeling and just do the task."

Similarly, there were several references to the use of attentional deployment to pleasurable or favourable activities, such as cooking, art, reading or even 'counting in my head' in order to reduce experience of negative emotions. Playing games on consoles or mobile phones was often described as a way to reduce anxiety.

"Play games on my phone on the way and that makes you feel less anxious."

An alternative approach to attentional deployment was a focus on alternative thoughts instead of activities. One young person described thinking of 'happy things' in order to reduce focus on negative emotions.

"I've tried to think of happy things, but sometimes it don't work."

This was recognised to have varying levels of effectiveness and was used when it was not possible to change the situation or use distraction with a favourable activity. An alternative strategy for attention deployment was mindfulness approaches. These included grounding techniques and visualisation to reduce experience of the emotion. These referred to the use of a focus on sensory experience to reduce arousal.

"Well, first I do the 5-4-3-2-1 solution that me and my mom, work on. It's all about the senses. And first I do five things for one sense and then four things were another one."

Similarly, visualisation was used, where imagining calm environments was used as an attentional deployment strategy. Young people described increasing focus on visualisation in order to reduce focus on situations that induce emotion.

"Imagine something very, very calm and just put a lot of detail into that thing that you're picturing. Just keep adding on to it. And then because you're just so focused on doing that you sort of forget about everything around you and you sort of return to sort of like…. baseline state".

Two young people referred to the use of 'spacing out' or 'going somewhere else'. This referred to a temporary dissociation from the situation, mentally removing themselves when the emotions become 'extreme' or unmanageable for the young person. This suggests that the intensity of emotions influences the way in which attentional deployment is used and that dissociation for the occurrence of intense emotions due to extreme environments.

"Yes, I mean, sometimes there might be an occasion where I switch off a little bit and just sort of get inside my head. And just like sort of take a break, if you will. So that might happen. If it's a very sort of extreme environment, I would generally let whoever's with me—which is bad practice—sort of like lead where I was going, and I wouldn't think about what I was doing."

Group 2: ADHD. Attention deployment was referenced to a lesser extent in the ADHD group. Many young people described these as 'distractions' which is a strategy used for de-escalation within their setting. The approaches, such as focusing on alternative thoughts, favourable activities and schoolwork were consistent with those mentioned by the ASC group.

"Or you might be able to think of something that makes you happy.. and that will make you happy again. Just trying to think about something else, thinking about positive stuff about it. Not about the negative stuff."

Similar to the ASC group, this approach was recognised as having variable success and being a challenging strategy to use successfully.

"Pretty much. I think of something else. It is pretty hard to do that. To learn to do that."

This group also referenced the use of favourable activities as a distraction from negative emotional experiences, where playing games on a mobile phone or talking to friends helped to reduce experience of negative emotions.

"I wish I could bring my phone in the classroom. To do other stuff and distract myself."

Focus on the work was referenced as something that supported young people to reduce negative emotions, to a lesser extent than in the ASC group. When asked what they would do to reduce feelings of anger and frustration in the classroom they reported:

"I try and pay attention to something; I focus on my work because I have work to do.

Cognitive Reappraisal.

Group 1: ASC. Cognitive reappraisal was referred to in many ways, related to changing perceptions of emotional intensity, specific events and of environments or contexts. There were a number of references to reducing the perceived impact or severity of events in the moment, by reassuring themselves.

"I'll tell myself it's fine."

" (I) thought that I could just finish some of my homework and it wouldn't be that bad."

Young people also described changing perception of the long-term significance of events to reduce their perceived significance and reduce emotional intensity.

"You're thinking about the thing that happened differently. Yeah, maybe you're not caring about it. But you realise it doesn't matter in the long run."

"Well, I just knew that she was going to be coming back soon. So, I just have to think it's going to be okay. She's going to come back soon. Everything's going to be back to the way it was."

The recognition that there will be a return to 'the way it was' references expected consistency being helpful in reducing negative emotions. Similarly, familiar environments that had previously been viewed positively were referenced as supporting reappraisal, reminding young people that the familiar place had previously been somewhere where they had experienced positive emotions.

"I think I meant it as sort of, you know, most of the time you're happy here so it's okay that you're feeling a bit bad".

An alternative description of cognitive reappraisal was reappraisal of the emotional response, rather than reappraisal of the situation. Adopting a perception that emotions are experienced as short-term in nature and will pass helps the young person to reduce the perceived severity of emotions.

"So, I won't constantly feel like this. You know, in the future. I'll feel better. So that's why I'll be fine."

Group 2: ADHD. There was a similar percentage coverage of cognitive reappraisal in both groups. Again, reappraisal was described as occurring in response to emotions and not as antecedent strategy primarily. However, appraisal in the ADHD group often referred to consideration of consequences which would influence behavioural expression of emotion. Positive outcomes were described as being a motivator, where praise was a motivator for controlling excited behaviour.

'Think of all the good things that will happen after. I'm gonna be like, they're all gonna be like well done.'

Similarly, there was reference to consideration of negative consequences as helping to control behaviour.

"You gotta think of the aftermath. Say if you're messing around. Say if you're messing around and you wanna stand on a chair. You've got to think of the aftermath…think would happen. Say I got out of my seat, started jumping around, screaming... I would get in trouble."

Therefore, reappraisal in the ADHD group appears more related to reappraisal of goals and consideration of the desired outcome the young person is working towards. One young person referenced. There was one young person who referenced antecedent cognitive reappraisal across both groups. They referenced pinching themselves to prepare for the pain of a blood test before the event.

"I just pinch to see 'how much did it hurt last time?' I'm trying to prepare myself for that pain, like not doing it just to hurt myself on purpose. But just trying to think oh, it won't be that bad".

Social Support.

Group 1: ASC. Social support was used to code any reference to using interactions with others to regulate emotions. Peer support was referred to as a way to reduce the perceived significance of events by discussing and evaluating them with friends. This wasn't felt to be a conscious attempt to regulate emotions but was instead a by-product of social interactions.

"Talking to my friend wasn't a conscious thing. It wasn't like, I should talk to my friend to make myself feel better. I just sort of ended up talking to her about it, and then afterwards realised, hey, that was good."

This was also referred to as a social support, reassurance approach where young people provided understanding and encouragement and helped young people to feel better.

"Maybe because sometimes if I if I talk about it with my friend that can make me feel a bit better about the situation."

Group 2: ADHD. In the ADHD group, peer support was described as 'cheering up', where young people would provide affection and positive reinforcement to reduce experience of negative emotions.

"Like you know, give you a hug to cheer you up. Depends on what emotion it is you're feeling."

Social interaction was also referred to as a distraction technique if negative emotions were experienced. This suggests that peer facilitated attentional deployment to remove focus from negative emotions.

"So, I look for my friends. I go find them; I chill."

Situation Selection.

Group 1: ASC. Situation selection was referenced by the ASC group as occurring in response to emotions and not as an antecedent strategy. They stated that when feeling intense negative emotions, such as anxiety, the way they can control these is by leaving the environment.

"Because I can like I can, like take a timeout. I can like take a break from stuff and if I feel too stressed and I'd eventually feel less stressed at the end of the timeout".

Similarly, this was referenced as access to a specific calm room, that they could access when required to help reduce feelings of overwhelm. This aligns with existing research on the impact of sensory environment for young people with autism, suggesting environmental factors are an influential factor on strategy choice. They described this as something they could access before their behaviour becomes 'too much'.

"If I'm being... too, if it's too much, too extreme, then they should just add like some kind of... some kind of calm room where I can take a break. Yes, for a few minutes, and then go back to the lesson when I'm ready."

Group 2: ADHD. In the ADHD group situation selection was also primarily described as occurring in response to emotions and not as an antecedent strategy. This was primarily referred to as a way to move away from interpersonal triggers for anger.

"In that situation, you've got to tell someone so they can leave you in peace to be calm."

There was a single example of antecedent situation selection, where a young person referenced 'using' their illness as an excuse to avoid attending a blood test.

"Sometimes I used to just use my condition as an excuse...to like get out, suspend the blood test."

This is an example of situational selection to avoid an anxiety provoking situation.

Response Modulation Strategies

Expressive Suppression

Group 1: ASC. Expressive suppression made up 11.38% of the coverage of regulation strategies in the ASC for managing both positive and negative emotions. Young people described using suppression throughout the day to manage low intensity anxiety. This suggests emotional valence influences the use of expressive suppression.

"I just carry on with my day, because, like I said previously, it's generally small things throughout my day that make me quite anxious."

Descriptions of expressive suppression were related to hiding emotions from others. One young person described a limit on the use of expressive suppression, reporting they would hide emotions from others until they became 'out of hand'.

"If I was with my friends, I would have hidden the emotion, and most of the time I just hide my emotions from everyone, but sometimes it gets really out of hand. Then I would talk to some adults about it."

Breathing strategies were only referenced by those in the ASC group. These were referenced by several young people. These referred to taking a few deep breaths to reduce arousal. These were used in response to states of dysregulation.

"So, I'll take a bit of a deep breath. Take some deep breath but 'that's hard."

Group 2: ADHD. There were less references to the use of expressive suppression in the ADHD group. These were often short-term, and goal directed, such as delaying behavioural expression of emotion in order to avoid negative consequences.

"Yes, I wanted to get up and jump around, keep smiling. I tried to keep a straight face till the end. Then I get excited when I got back to class."

Self-injurious Behaviour and 'Breaking Stuff'

Group 1: ADHD. Reference to self-injurious behaviour was only made by two individuals in the ADHD group. In addition, the desire to break and damage objects around them was also referenced to reduce feelings of anger.

"I just felt like I wanted to be angry and break stuff."

The young people were unable to explain what this achieved but felt that breaking things reduced feelings of anger. Additionally, there was reference to behaviours that were described as unconscious and were mildly self-injurious, such as biting nails until they bled.

"When I was younger, I used to bite stuff, I used to bite my nails. I still bite my nails. Really bad"

The young person referenced the use of nail biting to manage anxiety, which research suggest is co-morbid with ADHD. Nail-biting has co-morbidity with ADHD (Ghanizadeh, 2011). There were also direct references to intentional self-injurious behaviour, where head banging against a wall was used as a way to regulate anger.

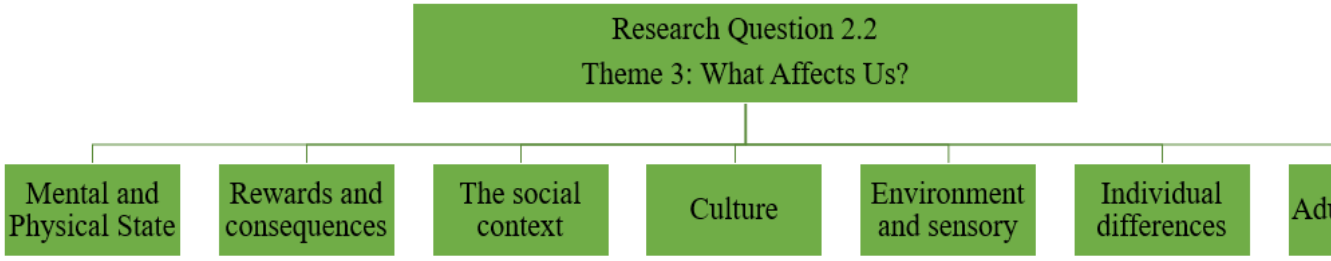
"I just kept banging my head on the wall and doors. Because I like to hurt myself. Not All the time? It's just whenever I feel like it...Ok, when I'm angry."

This was explained as a way to 'get yourself to hospital with brain damage', which suggests that this may also serve a purpose aligned with situational selection.

4.3.3. Theme 3: What Affects Us: Individual differences, Characteristics of Emotion, Availability of Resources and our Environment.

Figure 8

Theme 3 Subthemes



Theme three explores which factors young people perceived as influencing their emotion regulation. Responses answer research question 2.2: What do young people perceive as factors that influence emotional control? Factors were discussed during interviews as anything that made it easier or harder to control emotions. In addition, young people were asked about how acceptable they perceived expression of emotions to be, these are defined as emotion control values, based on the work of Mauss and colleagues (2010). Emotion control values are values related to the expression and control of emotions and which factors influence these. Young people were also asked about the perceived level of effort required to control emotions, based on the work of English (2017), these effort levels gave insight into how control is perceived, and which factors were perceived as increasing effort levels. The factors perceived to influence control were emotional intensity, mental and physical state, rewards and consequences, physical context, social context, sensory environment, culture, and individual differences (diagnoses, communication ability), Adult support. (RQ 2.2).

Emotional Intensity Reduces Control. References to the impact of emotional intensity on emotional control were only made in the ASC group. More intense emotions were perceived as more difficult to control.

Group 1: ASC. This young person referenced intensity and valence together but felt that the intensity of anger and resulting physiological impact of intense emotions was the factor influencing emotional control.

"Well, they don't use up a lot of breath like anger does."

The young person reported that challenges in managing anger were related to the 'way the body feels' and that the physiological experience of anger felt more challenging to manage. Similarly, this young person described intensity and valence together and equated the significance of the event and the intense feelings with a reduction in control in some situations.

"Most of the time. I can control it. I'm not sure that it might have something to do with how negative or severe the incident has happened."

This was also described for positive emotions, where 'small things' were less likely to elicit an intense response and reduce emotional control.

"Maybe when it's a small thing, when you get praised for something good you did then you will be able to control that emotion."

The level of effort was described as related to the severity of emotion for both positive and negative emotions.

"A lot of effort, a lot of effort because I was just being so excited, so I really had to work hard to bring it down."

This suggests that more intense emotions require higher levels of effort to manage, which indicates a perception of thresholds of controllability, which are determined by intensity of the emotion and the subsequent effort required to control this. One participant referenced deliberate low effort being applied to the control of emotion to maintain attention on learning, which suggests that effort is perceived as coming at a cost to general cognition and learning.

"I'm trying not to try. I'm trying to do to work in class for crying out loud. So, I want to be more focused on learning."

Cognitive Load is Cumulative and Decreases Emotional Control. This was referenced by several participants. This referred to the impact of increased 'emotional or mental load' being a factor that increased mental reactivity and decreased emotional control. This referred to the presence of stresses in life, such as bereavement or academic pressure.

Group 1: ASC. In the ASC group, there was reference to a reduction in control when a young person 'had a lot on their mind' referring to external stressors.

"When you've got a lot of shit on…on your mind. When you've got exams. When you're not chilled, angry. Then it's harder."

"And it might just be piling up in your mind. Because I know people. It's hard. Like, it's hard for them to, to control their emotion because they're going through a lot or something."

These stressors were described as cumulative. This suggests perceived thresholds for control, where limits of tolerance for external stressors influence control. In addition, there was reference to cognitive load, where young people would find it harder to control emotions when they were focused on academic tasks. This again suggests a perception of limits of control related to cognitive capacity.

"I'm trying really hard to focus. I might be, it might be easy for me to get angry at him over the smallest thing."

Tiredness was also referenced as being a barrier to emotional control. Young people described this as increasing their emotional reactivity.

"I'm too tired to deal with this bullshit. That's what it is. I'm just like oh fine, I'll just sulk off."

They described ‘sulking off’ as allowing anger to take over and being unable to engage in the situation any longer.

Group 2: ADHD. In the ADHD group tiredness and hunger were referred to as reducing emotional control. Stating that they made it hard for the young person to apply the effort required to manage their negative emotions.

“I was tired and hungry at that point. So, it was hard for me to try to.”

However, this was also referenced as being a facilitator to management of negative emotions, where tiredness in the morning reduced emotional reactivity and angry responses.

“In the morning. If I'm less tired, I've just woke up. The last thing I wanna do is have a fight. Get mad.”

These contrasting views identify some differences in the impact of tiredness.

Rewards and consequences Support Temporary Suppression. Consideration of perceived rewards and consequences of behavioural expression was described by both groups as a facilitator of emotional control. Consequences included negative social interactions and behavioural sanctions at school while rewards were financial, physical, and only mentioned in the ADHD group.

Group 1: ASC. In the ASC group, there was reference to the expected consequences of emotional expression as influencing control of emotions. Several young people reported that they were more likely to control their emotions, specifically anger, if they perceived negative consequences as a result.

"I mean, if the consequence of you doing that is a very negative thing. You hit someone; you say something really rude. You do something that's got a lot of negative consequences."

This suggests that consideration of consequences plays a role in the control of behaviour. This was only referenced by Upper Key Stage Four participants. Which may suggest consideration of consequence is a factor that is more influential in later mid adolescence.

"Then that will screw stuff up further down the line. (I) Just thought of the consequences of being angry, which are very not good"

The influence on emotional control occurs through suppression of emotions in the moment, which may or may not be expressed later. This was perceived to allow young people to better control their emotions and respond when they were calmer.

"Taking a moment and sort of thinking about it, like let's think about this more later because I'm not in the right mindset to think about it."

"I stopped myself from replying to it first of all, because I thought anything I say right now is not going to be helpful to the situation. So, let's focus on it later when we're a bit more sort of in, we're more focused on it and we're calmer and stuff."

Group 2: ADHD. Consideration of the consequences of behavioural expression of emotions was also identified in the ADHD group, where consideration of both positive and negative outcomes were facilitators to the control of emotion, suggesting metacognitive process of evaluating outcomes is applied to both. A young person referenced thinking of the positive outcomes that will come from controlling excitement, helping to temporarily suppress emotions.

"Think of all the good things that will happen after... (They will) Tell me how good I am and tell me how good I'm doing. How proud. I'm gonna get to have like a little jump around."

This response also references being allowed to 'have a little jump around'. This suggests that upcoming opportunities for physical activity may be viewed as a reward and help to suppress emotions temporarily.

"You've got to think of the aftermath…think would happen. Say I got out of my seat, started jumping around, screaming and being excited. I would get in trouble."

There was also direct reference to the idea of delayed gratification, knowing that the 'good thing' would come eventually, and that emotional control would facilitate this.

"Because sometimes you've just gotta wait. It's just like not, not every single good thing happens instantly."

The ADHD group also referenced the rewards of positive reinforcement through rewards as being a facilitator of emotional control. These referenced more immediate or short-term rewards, compared were related to physical rewards, such as money or items being given.

"I'm only going to school and behaving good so my mom's boyfriend can buy me my basket of clothes on Shein."

One young person referenced being sent home as a positive outcome, where they became calm and were allowed to access favourable activities, such as using their games console. They reported that outbursts and dysregulation often facilitated access to this.

"I actually liked it. I went home and I played Fortnite."

A Familiar Social Context Increased Control. The social context refers to who the young person is with at the time they are experiencing an emotion, which was described as influencing the likelihood of expression and which emotion regulation strategy was used.

Group 1: ASC. Overall, young people reported that the familiarity of those they were with was an important factor, with control increasing with familiarity.

"It was easier at school actually because of my friends."

Being with friends was described as a facilitator to emotional control because they felt able to adopt their preferred emotion regulation strategy, whereas expressive suppression was more likely to be adopted with unfamiliar people. The impact of social context on regulation strategy was referenced by several young people.

"Well, if I'm with my friends, I might be managing my emotions differently to how I would manage my emotions when I'm around my family. But sometimes if it's a friend that I've known for a very, very long time, or it's one of my best friends, then I might just do it in the same way that I do it with my family."

Another young person described non-familiar peers as 'draining people', where more energy was required to be in their presence. This increased challenge made it more challenging to also control emotions.

"So like if I'm hanging out with friends, and I just am really, really tired of carrying on talking to them and maintaining like, you know, I'm happy to be here with you then I will really just make up an excuse to leave and I could just sort of recharge"

Taking alone time to 'recharge' and process emotions was described by several young people as being a facilitator to emotional control. One explanation for this was the time it allowed for focusing on processing and understanding the emotion.

"If I've just experienced something, I might go off by myself to be alone. It's easier to regulate because you've got time to think about it and go, what's going on?"

Furthermore, negative social interactions were often cited as barriers to emotional control, especially in managing anger and frustration. The young people commonly described feeling "annoyed by" those around them when discussing situations where controlling anger was most challenging.

"When someone annoys me. Okay. If I get annoyed. It's hard. For me at least"

"When I get annoyed, if someone is rude to me."

"Well, it might have something to…have something to do with the kids and name calling me."

Interpersonal interactions were described as more challenging to manage than day-to-day challenges. These observations highlight the significant impact of negative social interactions on emotion regulation, particularly within the ASC group.

"A person getting rude to you. Then you're probably going to be a bit more annoyed than if you've just missed the bus"

"If I've had a bad interaction with them. Just like once in the past, then it's going to be more difficult for me."

"it's easier if I have something to focus on for the next day that will make it better but if it's just an interaction, then I'll tend to hold on to it for quite a long time.

However, a contrasting view was expressed by one young person who described a hesitance to express emotions in any social context due to the attention that this drew to them and their emotional state. They reported that they would not show emotions visibly to others if they were upset as this would encourage those around them to start unwanted conversations about emotions,

“To like, to like, talk try to talk to me or about it."

Group 2: ADHD. The presence of trusted adults was described as a facilitator of the control of emotions. Young people reported that the way in which they controlled their emotions was influenced by the presence of trusted adults. Young people described trusted adults as those they knew well and who were able to understand them, providing support that they felt was helpful. This was the same across both groups.

“I need to trust someone so that I can, like, express myself. Because I don't really express myself to people.”

This was referenced by several young people and suggests familiar adults' impact emotional control by reducing the likelihood of expressive suppression.

“I'd say talking. But I can't talk to like anyone I have to talk to a certain person. I talk to Teacher A a lot. I’ve known Teacher A for a while. Since before I came this school. From my other school as well. He knows a lot about me. He just understands.

In the ADHD group, there were also references to how crowded social environments and interactions negatively impacted emotional control emotional control. When asked which places would be harder to control emotions, responses related to places with “*Lots of people.”*

“In town. Because it’s loaded with people.”

These public forums were described as more challenging because the young people felt they were being observed.

“When they keep on staring at you and saying things.”

Whereas alone time was frequently described as a facilitator of emotional control. This suggests reducing social interaction is a facilitator to emotional control, particularly anger.

"Being alone to just sit down and calm myself down."

In the ADHD group, there was also reference to negative interactions as being a barrier to emotional control. Similarly, being annoyed by others' behaviour in the classroom was presented as a cause of this.

"If people start raising their voice at me. If people start tapping me or if people start getting annoyed"

However, the ADHD group referenced the role of perceived intent around behaviour as more influential than behaviour. Stating that knowing a person was intentionally frustrating them made it more challenging to control emotions.

"They're just doing it on purpose to wind you up."

"And they're talking about your family for instance, you know, that they're doing that on purpose."

A perception of intent to upset or 'wind up' was recognised as influencing the way in which a young person would manage their emotions. They reported that they were more likely to show a behavioural expression of anger if they felt that the person they were interacting with had negative intent.

"I'd take a different approach because I know they don't intend to do good."

In the same way, when a person was causing frustration, but this was perceived as accidental, this made emotional control easier.

"The other person doesn't know that they're doing that. It's easier to control your emotions if you know what's going on"

It was also reported to be more challenging to 'move on' from situations if a resolution was not achieved. This was also referenced in the ASC group, where negative social interactions did not allow for simple resolutions. Similarly, the ADHD group referenced being more impacted by social situations that were not resolved.

"Because I won't…I will not let people leave without a reason. Like I have to have a reason for everything or I'm not going to…Yeah, without an explanation. I won't."

Culture. Culture refers to the indirect impact of culture on emotional control through its influence on individual and societal beliefs around emotion regulation and mental health. Culture was only referenced by the ASC group.

Group 1: ASC. One young person referenced that their individual culture, specifically German heritage, had impacted their view of punctuality. They felt that increased focus on punctuality increased their anxiety in response to 'small' stresses during the day around lateness, which they felt negatively impacted their ability to control their emotions.

"This is going to sound ridiculous, but my dad is German. So, there's always been a sort of very strict sense of routine and getting there early instead of on time and things like that. So that obviously affected it quite a lot. I think."

In addition, a young person referenced wider culture as impacting emotional control. This impact occurred through changes in understanding of emotions and wellbeing, which have then led to changes in the way that emotions are managed. This suggests young people perceive an impact of societal attitudes on emotional control and mental health.

"I think it's getting easier for the new generations, because I think there are a lot more coping mechanisms in place and people are people that are ultimately researching more into emotional states as opposed to just physical states and things like that. I think it's getting better."

The Physical Environment Influence Strategy Choice and Our Sensory Environment Impacts Control. References to the impact of environment and sensory factors on emotional control were made across both groups. Young people distinguish between different contexts, such as home and school and environmental factors that influence control. Environmental factors refer to physical and practical aspects of the situation, such as access to gaming and personal items at home and levels of privacy. Whereas sensory aspects related to aspects of the environment such as noise levels of physical proximity to others.

Group 1: ASC. The context of the classroom was described as a facilitator of emotional control as it provided distraction from emotional experience. The presence of access to favourable activities at home also acted as a facilitator.

"If I was at school and I was in an assessment and then I would just then just forget it. And if I was at home then I would like do… do some fun stuff to try to distract me"

In this example, attentional deployment to favourable activities is described as being more accessible while at home, compared with school. This suggests that practical factors, like access to mobile phones and games consoles, impact on the way in which young people manage their emotions. Similarly, references to increased ability to control emotions at school related to the presence of distractions to support attentional deployment.

"Lessons are very easy. Because I'm focused on what I'm doing in class and things like that."

In the ASC group, there were multiple references to the focus on learning activities being a facilitator to emotional control, where expression of emotion was described as a barrier to effective working.

"At school, I might manage it differently. Because I have to focus on learning because I really enjoy learning as much as I can at school."

In addition, quicker and more discrete strategies, such as breathing strategies were favoured in public forums, whereas more time-consuming strategies, like visualisation were only used in more private spaces.

"I generally use it for exams, like before going into exams, but I've tended to use it for smaller things because it's takes like a few seconds, so it'd be weird if I stood in the middle of a corridor."

Young people referenced challenges managing emotions in busy and crowded environments, stating that these environments increased feelings of anxiety and frustration and made control of emotions more challenging. They named areas such as the school corridors being challenging due to both the proximity of others, but also the noise levels and unpredictability of their peers' behaviour.

"Corridors can still be quite difficult because, you know, kids everywhere and they're bumping, and no sense of space and it's just chaotic and difficult, despite me wearing headphones of course, on the way to class."

Young people described a perceived lack of awareness by their peers of their noise and proximity, which led to negative interactions. Young people's descriptions of these did not always directly reference their sensory experience, instead describing feelings of frustration and annoyance.

"Yeah, just people who aren't at all involved in what's going on, doing their own thing and being annoying. Especially those in the lower school. They are very annoying sometimes. They can be really unaware."

The volume of the environment was described as a barrier to controlling emotions, where sensory overwhelm led to tiredness. This suggests that the cognitive effects of overstimulation may negatively impact emotional control.

"Just being really loud, noisy making a scene. Being really annoying. Being stupid. That's what lower school does. It makes me really annoyed. It makes me mad. It can just knock me out."

When describing contexts that facilitated emotional control, young people often described physical space as a facilitator.

"Because I sit like far to the right, on the front and it's very spacious."

"But if it was like an almost empty area, with not many people might just it might help me a bit better."

Moreover, young people reported that familiar spaces are facilitators of emotional control. This was reported to be due to previous positive experiences and a level of predictability, which reduced experience of negative emotions and supported emotional control.

"Generally, in environments that I'm comfortable it's easier, so like the music department, I practically live there. So, if I, you know, band disputes or anything or orchestra is getting really chaotic and noisy and it's sort of easier to do it because I know I'm in a place that I really enjoy being in. I know the environment so well that I know nothing is gonna happen and I'm just very comfortable around there basically.

Group 2: ADHD. The ADHD group's responses were very similar in relation to the environment, reporting that busy and smaller environments were more challenging to manage emotions in. Again, references were often made to the 'annoying' behaviour of others, without specific reference to their sensory experience. However, these are often related to environmental noise. When asked about times it was a challenge to control their negative emotions, they reported that environmental noise influenced their ability to control emotions.

"Everyone is like screaming or just making loads of noise and just being annoying."

"While I went computing, was arguing over the middle computer and next door because people are like listening to music."

"Not particular places, just times. I'd need to block out the noise."

These all describe environmental noise as being a barrier to emotional control. However, this was not explicitly stated as being the barrier. Transition was also described as a factor that increased experience of negative emotions and reduced emotional control. This was described as impacting emotional control at a general level across the school and individually.

"Like yesterday when you have all single lessons in the school. The school just goes completely crazy and it's too much for them."

The young person describes days with single lessons as requiring more frequent transitions which lead to more challenging days for the school community, on these days there are more outbursts whereas on days with reduced transitions people are 'more relaxed and cool.'

Individual differences Influence Control. Individual differences relate to the perceived impact of diagnoses and communication abilities on control of emotions. Reference to the impact of diagnoses were only made in the ADHD group.

Perception of Diagnoses.

Group 2: ADHD. Multiple participants in the ADHD group referenced the perceived influence of diagnoses of ADHD and ASC on an individual's ability to control emotions. These refer to experience and learning that young people gain as a result of facing health conditions and the impacts on emotional regulation that they perceived as occurring as a result of being neurodiverse. One young person referenced learning ways to control their emotions because of difficulties faced due to a medical diagnosis, which impacted their physical health, where they

learned to suppress emotions around frustration they faced “Just from my condition.” Young people also shared insights into how they perceived different diagnoses impacted response to and control of emotions. These primarily related to expectations of reduced control of emotions for neurodiverse people, indicating perception of diagnosis impacts young people’s expectations around control of specific emotions: *“I also can't really control it. Because like, I got autism and ADHD. And I was supposed to be tested for ODD ages ago, but I never ended up getting it done.”* This suggests that young people perceive diagnoses of ADHD and ASC as being barriers to control of emotions for themselves, which may then impact their effort to regulate. This impact was also referenced in relation to the emotional control of others, when describing his brother’s emotional control, it was shared that: *“His emotions are a bit harder to control because he's got, like, like attention difficulties.”* These descriptions related specific cognitive differences with challenges in controlling different emotions. For example, ADHD was described as reducing emotional control of positive emotions such as excitement. This suggests a view of control that is determined by individual traits and differs between emotions: *“But with ADHD, it's more silly and hyper is what they can’t control.”* Similarly, they referred more generally to individual differences around emotional control. ‘Anger issues’ were referenced in a comparable way to diagnoses, recognising an emotion specific impact of a perceived additional need: *“Kids with anger issues it'd be really easy to lose control. It will be way easier for them to lose control than most people like kids.”*

Communication Ability Supports Emotion Control.

Group 2: ADHD. The ADHD group alone identified the role of individual differences related to communication ability as being a factor in emotional control. Young people reported that emotional control varied between people and communication ability was a facilitator of emotional control. It was reported that those who express themselves can better share how they feel and draw on social support. When discussing what made people better at controlling their emotions, a young person responded.

"I mean, it depends on if they're good at expressing themselves to people. Depends on if you're, if you're like, good at speaking to people, or you're like quite good, like, explaining how you feel. But with me, I will not really good at explaining how I feel."

This relates to both general and personal control beliefs.

"Because I don't really express myself to people. I don't entirely know. Sometimes things into words."

It was also recognised by young people that when they were experiencing elevated levels of emotional arousal, this negatively impacted their communication skills. This decreased their ability to communicate then reduced their ability to control their emotions.

"Sometimes, like, me when I get really angry, it's just hard to like, talk to someone. To calm down.

This suggests a cycle of challenges, where the ability to share emotions with others prevents emotional control and this impaired control further reduces communication ability.

Adult Support Facilitates Control. Adult support was described by young people as influencing their ability to regulate through the control that adults hold over their environment

and actions, which influence access to resources and which regulation strategies are used. References were made across both groups.

Group 1: ASC. Adult support was described primarily as facilitation of other emotion regulation strategies. In some cases, this was through provision of social support as reassurance to and support to use cognitive reappraisal.

"She like, tried to calm me down. She'd say like 'he's going to back next time."

Similarly, there was support from adults to modify situations, where situation modification of the sensory environment is facilitated by an adult who has awareness of the young person's needs.

“She sits with me and makes the environment calm.”

The practical support that adults provided was felt to be preferable to support from peers in the ASC group, where they felt more able to share problems with trusted adults.

"Maybe I would prefer to be helped by a trusted adult, like one of my parents or guardians, or maybe even teachers, but I might not want to share it with my friends."

Additionally, trusted adults were seen as more able to take problem solving action to resolve emotion inducing situations.

"Well, in my opinion, adults can have a bit more experience than my friends. So, they will know how to—I think they would know how to manage the situation a bit better than if I asked one of my friends. Yeah. So, it's not about how they talk to you necessarily. It's more to do with what they can do about it."

Many young people referenced the impact of adult support in accessing ‘time out’ or to make changes to the sensory environment. When discussing their use of situation modification and selection, young people referenced the use of time out.

“A few times. I just stood outside and waited and tried to calm myself down.”

When asked why this was not used more often, the young person reported that they did not have access to ‘time out card’. These were referenced on multiple occasions as something that young people would like to access but that were not currently available to them. These were made available by the adults in school. The young people reported that if they were more able to access this, they felt that would improve their emotional control.

“Like, if I was given a timeout card then I can control like anger or something or happiness, etc.”

Group 2: ADHD. The focus of adult social support was similar in both groups. Both drew on adult problem-solving support to resolve emotion inducing issues.

"I would tell someone that I know can take action on what's going on. It would be easier to tell someone, then they can sort out the situation, and then you're friends again. The situation is gone. And that depends on if you choose to express your emotion."

In both groups, the ability to change or leave the situation was facilitated by adults. When choosing to leave a room, they must seek permission to do so.

"I told Teacher A, I if I don't leave this classroom…his arms are going to be broken. His whole body is going to be broken."

Similarly, when the young people referenced situational selection, this was often adult led, such as being taken to a 'calm down space' by adults or even being sent home to calm down. This is demonstrated using the language 'being sent' or 'I was moved'.

4.3.4. Theme 4: How emotions impact our mental health: The Dual Impact of Chronic Negative Emotions: Direct Mental Health Consequences and Indirect Social Isolation.

Theme four, how emotions impact our mental health is related to young people's perceptions of the relationship between emotions and their mental health. As research suggests a relationship between emotion beliefs and mental health where emotion regulation strategy use is the mediating factor (Gross & John, Ford et al., 2018; Somerville, 2024), young people were asked about their views on the impact of emotions on functioning, mood, wellbeing, and life more generally. Young people described the way in which positive emotions promote resilience and wellbeing and motivate behaviour. Whereas they describe persistent and severe negative emotional experiences as leading to anxiety and depression.

Group 1: ASC. Young people in the ASC group referenced the influence of short-term emotions on mood, which was described as a more long-lasting experience. The most common viewpoint in the ASC group was that negative emotions had a negative impact on mental health through the impact on mood.

"Well, if you're feeling...if you've got a happy emotion or positive emotion, that can possibly make you feel happy. But other times, if it's a negative emotion, it can make you feel in a negative mood. Not good."

Positive emotions were perceived to have the opposite effect compared to negative emotions, indicating that emotional valence influences how emotions affect mental health. Positive emotions are believed to promote resilience during difficult periods, potentially lowering the risk of mental illness.

"Specifically, happy emotions like excitement and things like that, like looking towards the future. I think they can generally make you have better mental health in the future. Because you're like constantly looking forward and you're like, I really want this to happen... I guess, as you're moving through, like maybe hard times that would be quite good."

This also recognises the impact of positive or 'happy emotions' in increasing motivation, with excitement for the future helping to both achieve goals but also to have a more positive

mindset. One young person developed this further, describing the positive impact of positive emotions on self-esteem.

Positive or 'happy emotions' were described as increasing motivation, particularly excitement for the future, which aids in achieving goals and fostering a positive mindset. Additionally, one young person developed this further stating that positive emotions develop self-esteem.

"Happy? That makes you that makes you want to do stuff more stuff more often or, you just feel better about yourself.

This suggests that 'doing stuff', completing tasks and achieving goals as a result of this motivation leads to a more positive self-perception. One young person also recognised the impact of negative emotions on functioning, which is linked to diagnostic criteria for generalised anxiety and for depression (DSM-5; American Psychiatric Association, 2013).

"Well, if I've got something to do like homework, and it's due for the next day, then my negative emotions will be just saying get it done. Get it done. Get it done. And so that will make me feel anxious."

One young person, in upper key stage four, described a positive impact of negative emotions, describing a balance of positive and negative emotions as being necessary for good mental health.

"I guess it's always healthy to have some negative emotions, to have a good variety, but I didn't know about looking for like, long term. I think too, definitely too much negative emotion is bad for your mental health, obviously. But I think a good balance is probably needed for good mental health."

This recognises a more nuanced view of emotions, where a balance of positive and negative emotions is important in maintaining mental health. This acknowledges the importance of balancing positive and negative emotions for mental health. The reference to "too much" negative emotion suggests a threshold beyond which mental health can be negatively affected. Other young individuals described a cumulative impact of negative emotions, which supports this view.

"Because it will just be in your mind. It will just build up in your head and it'll just be hard for you to maintain it."

In addition to the cumulative impact of negative emotions, young people referenced the persistent experience of negative emotions as negatively impacting mental health.

"It's when you've got lots of different negative emotions for a long time."

This recognises a threshold of tolerance related to endurance over time in addition to a perceived threshold for the cumulative effect of negative emotions. These views on the impact of negative emotions align with comments made in relation to expressive suppression where young people discuss suppressing emotions until they are unable to any longer. An alternative perspective was offered by an upper key stage four young person who felt that difficulties experiencing and increasing positive emotions also had a negative impact on mental health. Although this mirrors views about the impact of negative emotions, it also recognises regulation and experience of positive emotions as being influential for mental health.

"But I think a lot of people nowadays are struggling with their happy emotions and trying to feel better about themselves. And they don't really know how to get to that point, I suppose."

Group 2: ADHD. The ADHD group acknowledged the detrimental effect of ongoing negative emotions on mental health. They observed that persistent negative emotions arise when negative emotions are not managed effectively, potentially leading to the development of mental illnesses.

"You might get like really sad. And if you don't do anything about it, you might just get depressed."

This description views the progression from experience of negative emotions to experience of depression as on a continuum. It was also perceived that when experiencing mental illness, this becomes harder to change or 'get out of'.

"Because…if you're really sad for a long time, that sad doesn't just become sad, like…it turns into depression. And then it's really hard to get out of that."

When asked how experience of negative emotions develops to mental illness, one young person described a relationship between rumination and prolonged experience of negative emotions leading to inaction.

"Because you just keep on thinking about it. But you don't want to do anything about it."

This aligns with research related to the role of rumination in the development of depression (Zuzama, 2020). Young people perceived this relationship as involving reduced behavioural action and increased negative emotional experiences due to rumination. One mechanism through which this occurs is the negative impact of emotions on communication ability and subsequent regulation, as discussed in factors influencing emotional control.

"Because you keep on thinking about it…it just makes you get sadder and sadder and sadder. Then it'd be even more harder to talk to someone about it."

An alternative pathway between emotional control and mental health was described as the social impact of anxiety and sadness. Where persistent experience of negative emotions reduced social functioning and social integration.

"If you're always angry, it could affect your mental health badly because if you're always angry, I think you're going to end up staying angry for quite a while, like you would end up permanently being angry."

"I mean, anxiety could (affect your mental health) ... and it could be caused by you being by yourself, like being not being with loved ones."

These descriptions align with descriptions of psychological functioning and subjective wellbeing associated with definitions of wellbeing. This suggests an indirect influence of emotional control on wellbeing for young people.

4.4 Summary

Phase 1. Results for Research Question 1.1 offer tentative support for the relationship between emotion beliefs and mental health in neurodiverse populations. Insignificant positive correlations were identified between maladaptive usefulness and control beliefs and symptoms of

anxiety and depression. In addition, non-significant negative correlations were found for maladaptive beliefs and wellbeing. While small effect sizes and not significant, they are in expected directions and supported by descriptions of belief and regulation behaviour in the qualitative data and warrant further exploration with greater statistical power.

Correlation size indicates that relationships are stronger between beliefs and symptoms of anxiety and depression than wellbeing. In addition, positive usefulness beliefs appear more strongly correlated than negative, indicating an impact of valence on beliefs. Comparisons of means between the ASC and ADHD group identified higher scores for symptoms of depression and anxiety, and lower well-being and greater use of both expression and reappraisal in the ASC group. While a Mann-Whitney U test did not identify a statistically significant difference in either regulation or mental health between these groups thematic analysis did suggest differences in the use of regulation strategies indicating that further research is required to identify if greater levels area identified in the ASC population. When compared with existing neurotypical research samples, scores for emotion beliefs were slightly higher for the current study, suggesting higher prevalence of maladaptive beliefs in neurodiverse young people. In addition, this there is greater use of regulation strategies for this group for both adaptive and maladaptive strategies.

Phase 1 & 2. Levels of expressive suppression and cognitive reappraisal were greater in the neurodiverse sample compared with existing neurotypical research. No statistically significant difference was detected when the ASC and ADHD groups were compared for strategy use. However, percentage coverage for qualitative data identified higher levels of attentional deployment in the ASC group and greater use of self-injurious behaviour in the ADHD group suggesting differences in approaches to regulation. (RQ1.3)

Phase 2. Young people described control as a skill that can be improved, which is impacted by experience and developmental maturation. They described control as having limits influenced by the cumulative impact of emotions and their valence and severity. Usefulness of emotions differed depending on emotional valence, which aligned with quantitative data for the significant association for positive usefulness beliefs and strategy use. (R1 2.1). Young people perceived control as influenced by emotion characteristics (severity and valence) and individual (communication ability) and contextual factors, suggesting they perceive a complex interaction of factors (RQ 2.2). The long-term and cumulative impact of negative emotions were identified as increasing

symptoms of anxiety and depression in addition to the indirect impact of the social consequences of expressing negative emotions. The indirect impact led to social isolation which reduced well-being (RQ 2.3).

Together, this suggests a relationship between beliefs and mental health in this population that is moderation by a range of external factors. Young people appear to be aware of this impact, which suggests an openness to intervention. Further research is required to more precisely understand these relationships, particularly around the impact of emotional valence on usefulness beliefs.

5: Discussion

The current study aimed to explore the relationship between emotion beliefs, emotion regulation, and mental health in key stage three and four pupils with ASC or ADHD. It sought to determine whether the relationship between control and usefulness beliefs and mental health, mediated by emotion regulation as per Ford and Gross's 2019 framework, could be observed in a neurodiverse sample. It also aimed to identify how young people viewed this association and which factors they perceived as influencing their ability to regulate their emotions. This chapter will discuss findings by research question, linking them to quantitative or qualitative data and relevant literature, before discussing the study's strengths and limitations and suggesting areas for further research. Primarily, conclusions were drawn from the novel qualitative data obtained from this population, supported by the direction of correlations in the quantitative data. However, recruitment challenges and the subsequent pragmatic approach led to a small sample size, reducing the statistical power of the quantitative analysis. Despite this, the rich information from the qualitative analysis strengthened the conclusions. Finally, the study will consider the implications of its findings for theoretical models, serving as a foundation for further research and educational psychology practice.

The study findings tentatively support existence of the relationship between emotion beliefs and emotion regulation identified in neurotypical populations. Interview responses offer insights into the mechanisms underlying this relationship while supporting correlational data. Although the correlations are primarily non-significant, they share directionality of correlations identified in previous research. This suggests that emotion beliefs are associated with mental health outcomes through the mediating role of emotional regulation. Higher levels of maladaptive beliefs and poorer mental health were found in all areas except for negative usefulness beliefs in the neurodiverse population when compared with neurotypical adolescent peers. A significant negative correlation between positive usefulness and expressive suppression was identified, which may suggest that viewing positive emotions as useful is linked to greater suppression of negative emotions. No significant differences were found between ADHD and ASC groups, although regulation strategies varied in interview data, with higher strategy use in the ASC group and use of self-injurious behaviour in the ADHD group. Attentional deployment was identified as the most use strategies overall and was used as a response modulation strategy.

Emotions were seen as controllable and useful, but this was impacted by a number of factors. Young people's perception of the relationship between emotions and mental health was that negative emotions were linked directly linked to mental health through prolonged negative affect and indirectly through social isolation.

5.1: RQ 1.1: What is the Relationship between Emotion Beliefs and Mental Health Measures? Is this Moderated by Diagnosis?

Emotion beliefs and anxiety and depression

Control Beliefs and Anxiety and Depression. Non-significant positive correlations were identified between all EBQ measures of control and symptoms of anxiety and depression measured by the RCADS-25. Although these correlations were small and non-significant – which may be related to small sample size – they support current theorising about the association between control beliefs and mental health (De Castella et al., 2013, 2018; Ford & Gross, 2019; Ford et al., 2018; Kneeland, Goodman& Dovidio, 2020; Somerville et al., 2024). The strongest association identified was between negative control beliefs and anxiety compared with depression, which suggests maladaptive beliefs related to anxiety are more influential on psychopathological symptoms, however this requires further exploration given the small sample size which limits accuracy of measures of association. Negative control beliefs were more strongly associated than positive for both anxiety and depression, which indicates that valence moderates this relationship. This supports the application of the Extended Process Model of Emotional Regulation as it identifies that young people monitor emotional valence and that this influences regulation behaviour. This is supported by qualitative descriptions of the perceived role of emotional valence in emotion control. Together, these results support the relationship between beliefs and mental health in neurodiverse populations and warrant further research, particularly studies that differentiate between emotions and emotional valences by using the emotion beliefs questionnaire (EBQ) to identify specific impacts of beliefs.

Usefulness beliefs and Anxiety and Depression. The non-significant positive correlation between all measures of usefulness beliefs and symptoms of anxiety and depression suggests an association between usefulness beliefs on mental health. The direction of correlation supports existing research that maladaptive usefulness beliefs are associated with increased anxiety and depression (Berglund et al., 2023). Correlations were strongest between usefulness beliefs and anxiety, with positive usefulness beliefs having a correlation and negative usefulness beliefs a correlation. When compared with correlations for depression for positive usefulness beliefs and for negative usefulness beliefs, this data suggests a stronger relationship between usefulness beliefs and anxiety which requires further exploration in larger sample provides more statistical power and allows the relationship to be asserted with more confidence. Across both variables, the relationship with positive beliefs was strongest, which suggests value in assessing emotional valence in subsequent research to develop conclusions that are both more certain and more generalisable. Qualitative data suggests that maladaptive beliefs related to the usefulness of positive emotions in the ASC sample increased suppression use. This finding offers insight into the relationship between usefulness beliefs and mental health.

The limited scope of the current study prevented exploration of the interaction between multiple variables. This means that interaction between control and usefulness beliefs could not be assessed. Current theories suggest that emotion beliefs may interact (Berglund et al., 2023) and that the belief that negative emotions are uncontrollable and not useful may contribute to feelings of panic or hopelessness. This would provide an alternative explanation for their influence on mental health. This highlights the need for large-scale analysis studies to isolate the impact of usefulness and control beliefs across emotional valences in order to guide intervention and support.

Emotion Beliefs and Wellbeing

Control Beliefs and Wellbeing. Control beliefs had a non-significant negative correlation with measures of wellbeing, which is consistent with existing research (Tamir et al., 2007; Deplancke et al., 2022; De Castella et al., 2013; Veilleux et al., 2021). The correlation was

slightly stronger for negative control at -.130 than for positive (-.017) although the difference between these is small. Given the small sample size, small differences in relationship will be difficult to ascertain, however both quantitative and qualitative data highlights significance of emotional valence on the relationship between control beliefs and psychological wellbeing. The weaker association between control beliefs and wellbeing suggests a weaker relationship between control beliefs and wellbeing than is identified for symptoms of anxiety and depression.

Usefulness Beliefs and Wellbeing: The correlations between usefulness and wellbeing are stronger than those for control beliefs, with negative associations for both positive and negative beliefs. The correlations between positive usefulness beliefs were notably larger than negative usefulness beliefs which are again small, and non-significant but align with hedonic models of wellbeing that suggest avoidance of positive emotion will be detrimental to psychological well-being. This relationship is further supported by interview responses, which describe suppression of positive emotions in the ASC group corresponding with lower wellbeing score. Therefore, while conclusions suggest that positive usefulness beliefs have a greater influence on well-being, possibly through their influence on suppression of positive emotions.

The Moderating Role of Diagnosis

Comparison with Existing Research. When comparing the combined neurodiverse sample with existing research samples, scores across almost all areas of control and usefulness, (with the exception of negative usefulness), were higher, indicating elevated levels of maladaptive beliefs within this research population (see Table 7). Scores were slightly lower in prior research in neurodiverse populations (Ranjbar et al., 2023). In line with existing research, symptoms of anxiety and depression were higher in the neurodiverse population than in their neurotypical peers (Carlander et al., 2024; Lisøy et al., 2022; Young et al., 2021). While the study's small sample and limited statistical power prevent generalisation to the wider population, these findings tentatively suggest that emotion beliefs are associated with mental health in neurodiverse populations. Additionally, well-being scores were lower than neurotypical comparisons (Ringdal et al., 2018; McKay et al., 2017; Clarke et al., 2011). If adopting the complete state model of mental health, this suggests beliefs impact all areas of mental health,

with the greatest impact on symptom severity. However, these conclusions remain tentative and indicate a need for further research to assess these associations more precisely.

Comparisons within the study: Comparisons between groups give less of a clear picture of this relationship. A lack of statistically significant difference between the groups for usefulness and control beliefs when assessed using the Mann-Whitney U test suggests that the role of emotion beliefs is similar for those with ADHD and ASC and that conclusions can be applied across these groups. Exploring associations in a larger sample would allow more sensitive analysis and more confident assertion of this statement.

5.2: RQ 1.2: What is the Relationship between Emotion Beliefs and Emotion Regulation Strategy? Is this Moderated by Diagnosis?

Control Beliefs and Emotional Regulation

Control Beliefs and Cognitive Reappraisal. A non-significant negative correlation was found between Emotion control beliefs and cognitive reappraisal, for both positive control and negative control. This aligns with existing research stating that the belief that emotions are controllable is linked to adaptive, antecedent regulation occurring during the emotion generation process (De Castella et al., 2013; Ford et al., 2018; Kneeland et al., 2016; Tamir et al., 2007 and Somerville et al., 2024). This also supports Ford & Gross' framework (2019) related to the structure and impact of emotion beliefs. Reappraisal use was greater in the ASC group and there were higher levels of adaptive emotion control beliefs. This suggests that this framework can be applied to neurodiverse research samples and that there may be qualitative differences in regulation approach between these groups. Further exploration using analysis that controlled for external factors, such as setting or alexithymia, that may influence regulation will allow this to be asserted with more confidence.

Control Beliefs and Expressive Suppression. A non-significant positive correlation was found between Emotion Control Beliefs and expressive suppression for both positive control and negative control. Research linking control beliefs to suppression has found a mixed picture, with some identifying no relationship (Ford et al., 2018 & Tamir et al. 2007) and others finding the same positive correlation (Goodman et al., 2021 and Vuillier et al., 2021. Although correlations

are small and non-significant, the supporting qualitative data suggests that neurodiverse young people are adopting suppression when unable to avoid emotional stimuli and that this behaviour is influenced by control beliefs. Furthermore, qualitative data suggests that young people adopt what they deem to be socially acceptable responses to stimuli, where placing value on the importance of emotional control further increases use of suppression. This indicates that use of expression, deemed a maladaptive strategy by research, is occurring in this population and provides a target for intervention. These results tentatively suggest that emotional regulation mediates the relationship between emotion control beliefs and mental health outcomes in neurodiverse adolescents, as was identified in neurotypical adolescent and adult populations.

Usefulness Beliefs and Emotional Regulation

Usefulness Beliefs and Cognitive Reappraisal. A non-significant and weak negative correlation was found between both positive and negative usefulness beliefs and cognitive reappraisal. Findings lack statistical power, and further research is required, however, this tentatively suggests that usefulness beliefs are less related to reappraisal than control.

Usefulness Beliefs and Expressive Suppression. A significant positive correlation was found between positive usefulness beliefs and expressive suppression. This is a surprising finding as one would expect increased suppression to be related to a belief that emotions are not useful, indicated by a positive correlation. However, this may suggest that the belief that positive emotions are useful leads to greater suppression of negative emotions, in order to experience more positive emotions. Additionally, in interviews young people referred to achieving academic success as a way to 'control' their emotions by encouraging experience of positive emotions. Suppression of emotions in order to focus on work was also described by this group. This may suggest that expressive suppression is being used as a long-term strategy to redirect attention from emotions to tasks in order to enable academic success. According to Maslow's Hierarchy of Need (187) this may be preventing the meeting of their needs related to emotional security and may create increased academic pressure.

5.3: RQ 1.3: Which Emotion Regulation Strategies Are Used and Is This Moderated by Diagnosis?

Expressive Suppression and Cognitive Reappraisal: Integrating Quantitative and Qualitative Data.

Expressive Suppression Summary. Emotion regulation assessment indicates that neurodiverse populations use expressive suppression more than neurotypical peers, including both those with ASC and ADHD (see table 4). Although a statistically significant difference was not identified for ERQ-CA scores between groups, descriptive statistics showed higher expressive suppression in the ASC group. This is supported by qualitative data which showed double the percentage coverage of expressive suppression, suggesting this approach is more commonly adopted by autistic young people. Given the young people's ability to recognise this as negative emotion, this suggests that this difficulty does not occur at the identification stage due to alexithymia but at the selection stage of emotional regulation – where young people have a limited repertoire of regulation strategies and rely on maladaptive approaches. Given the perceived relationship between anxiety and depression and suppression, this may explain higher symptom severity scores in this group. Interview responses revealed that autistic young people were less accepting of emotional expression and felt social pressure to present as 'normal,' which influenced their use of suppression, as noted by one participant. Increased social communication challenges in ASC may account for this difference.

Responses suggest that suppression was applied to a range of emotions when they were deemed unacceptable to express these emotions. The ADHD group tended to use suppression in the short term to avoid negative consequences, indicating a more flexible use of suppression, which research suggests can be adaptive (Bonanno, Papa, Lalande, Westphal & Coifman, 2004).). This aligns with findings that individuals with ASC are more likely to use internalising strategies, while those with ADHD are more prone to externalising. As those with ASC are more likely to experience more significant alexithymia, this may account for the difficulties with selection of appropriate strategies and increased use of suppression (Oakley et al., 2022). This may also account for the increased use of regulation as numerous inappropriate strategies are

selected. By contrast, those with ADHD are more likely to behave impulsively, which is linked to decreased suppression.

Cognitive Reappraisal Summary: The reappraisal scores were higher in neurodiverse populations compared to neurotypical populations reported in previous studies (Longiro et al., 2023; Balan et al., 22023; Villacura-Herrera et al., 2023; Skymba et al., 2022). The ASC group showed higher use of reappraisal, although this was not statistically significant, possibly due to small sample size and the lack of statistical power. However, this conclusion is supported by qualitative data, indicating that there was greater use of reappraisal in the ASC group, as well as greater adaptive emotion beliefs, which supports the perceived relationship. Differences in the cognitive profiles of young people with ASC and ADHD may mediate this relationship. Some individuals with ASC are more likely to engage in structured and analytical thinking, which are facilitators for reappraisal, although challenges with cognitive flexibility may be a barrier to successful reappraisal. It may be that the young people apply cognitive reappraisal at early stages of regulation, but this is impacted by cognitive differences related to cognitive flexibility which impact the effectiveness of emotional regulation. On the other hand, young people with ADHD may struggle to inhibit emotional stimuli and maintain focus on reappraisal attempts. This suggests that the complex relationship between beliefs and reappraisal is likely impacted by several diagnosis-related factors, and further research is required. One explanation is that higher levels of unsuccessful strategy foster unhelpful emotion regulation beliefs and cycles of maladaptive regulation. When the two groups (ASC and ADHD) were compared using a Mann-Whitney U test, no statistically significant differences were identified between groups. This suggests that the impact of regulation goes beyond suppression and reappraisal, and includes use of other strategies, such as attentional deployment. This suggests that the extended process model is applicable to neurodiverse adolescents and that regulation may be impacted at several stages of regulation. Further research exploring executive function differences may offer insight into specific cognitive differences that impact regulation.

Interview Data: All Other Regulation Approaches.

Attentional Deployment: Attentional deployment was the most represented strategy across the combined sample (36%). According to the extended process model of regulation, this

often occurs in the emotion generation cycle and is typically less effective (Gross, 2015), which supports the view that maladaptive regulation impacts mental health. The ASC group utilised attentional deployment to a greater extent (20% higher), describing this as focus on work instead of emotions. This was described as helping to manage in overwhelming sensory environments. This may account for poorer mental health identified in this sample due to reliance on strategies that provide short term relief from negative emotions but have limited long-term effect (Gross, 2015). The short-term impact may encourage further use of attentional deployment, which acts as a barrier to the development of adaptive long-term regulation strategies. The lower levels in the ADHD group may be explained by the challenges with sustained focus and inhibitory control which prevent focus on distraction (Faustino, 2021).

Response Modulation, Self-injurious Behaviour. Existing research suggests that increased prevalence of externalising emotion regulation behaviours is more pronounced in those with ADHD than those with ASC, which is supported by the greater percentage coverage of self-injurious behaviour and 'breaking things' in the ADHD group (10%) compared with no references in the ASC group. Difficulties with inhibitory control may account for this difference, which again identifies possible factors that may moderate the relationship between beliefs and regulation (Faustino, 2021). This indicates a need to also assess externalising regulation strategies, going beyond the use of the ERQ-CA in this population. Teacher and parent observational measures may help to identify externalising behaviours such as self-harm.

Situation Selection. Both groups referred to situation selection as taking time out from the classroom in order to calm down. There was more use in the ADHD group (16%) than the ASC group (4%) which may be accounted for by an increased rigidity around rule focused behaviour in autistic groups, meaning young people feel less able to leave the classroom when a break is required. Similarly, differences in the described flexibility of behaviour management in alternative and mainstream provision suggest that SEMH specialist provision are more able to accommodate individual behaviour support systems. Interview data stated that adult support was a significant factor in facilitating time out, which supports this hypothesis. Additionally, this suggests that autonomy may also be a mediating factor for adolescent populations.

Social Support: Social support made up 12% of the overall and was greater in the ADHD group (by 5%). This may be related to differences in social communication ability for some

learners with ASC, which are a barrier to drawing on social support. As social support has been identified as mediating the relationship between ASC related neuroticism and mental health (Solberg et al., 2019), ability to draw on social support may affect the impact of neuroticism on mental health.

5.4: RQ 2.1: What Are Young People's Perceptions Regarding the Usefulness of Emotions and the Extent to Which They Can Be Controlled?

The body of research utilising the Emotion Beliefs Questionnaire (EBQ) in adolescent populations is limited. This study identified similar mean scores for general usefulness and control and there were no significant differences across groups. When compared with two existing studies, the current neurodiverse research sample was slightly higher than that of Ranjbar and colleagues (2023), who explored beliefs in Iranian and American adolescents, and significantly higher than that of healthy controls in a study by Berglund and colleagues (2023) comparing these with schizophrenia-spectrum disorders. This may suggest an association between neurodiversity and emotion control beliefs. However, the data from this single exploratory study is insufficient to establish this, highlighting the need for further research exploring emotion beliefs in neurodiverse research populations.

Perceptions of Control Beliefs

Qualitative data identified a belief in general control across two groups, with both identifying a number of conditions that the ability to regulate emotions, including valence intensity and the cumulative impact of emotions. This outlines a view of control that has thresholds, both on the total intensity or period of time which emotions can be controlled for and the type of emotions that can be controlled. This aligns with interview responses around regulation strategies such as attentional deployment and suppression which involve short-term avoidance of emotions and not management.

One view of control shared by the ASC group was that it is achieved through control of events, such as achieving a certain grade, and not through management of the emotions

experienced upon receiving that grade. This again aligns with regulation responses which refer to avoiding emotion to focus on work and emotions as a distraction from learning. This suggests a focus on academic work to avoid negative emotions that may be occurring in this population (ASC) which is negatively impacting their mental health. Maladaptive beliefs, relating to the unacceptable nature of expression for both positive and negative emotions in the ASC group are likely to result in increased expressive suppression and a negative impact on mental health. Control was described as a skill that can be developed and changed. The view of control as being influenced by experience suggests that young people are open to developing these skills. However, there was a focus on the negative impact of adverse experiences and upbringing, and reference to these being more fixed. This may require more support to address.

Perceptions of Usefulness Beliefs

The beliefs as to the usefulness of emotions were similar across both groups when measured by EBQ, with no statistically significant differences. However, thematic analysis found that valence was viewed as influencing usefulness less in the ADHD group, who acknowledge a more positive impact of negative emotions. This may be related to deficits in cognitive flexibility, where more blanket understanding of emotional usefulness was applied (Geurts, Corbett & Solomon, 2009), which can impact some young people with ADHD or ASC and is potentially more impactful for people with ASC.

5.5: RQ 2.2: What do Young People Perceive as Factors that Influence Emotion Regulation?

Characteristics of Emotion: Valence and Intensity

A number of factors that impact emotion regulation were identified during semi-structured interviews, particularly the characteristics of emotions, including their valence and intensity. Emotion control beliefs held by young people were influenced by the valence of emotions, with negative emotions being perceived as more challenging to regulate, which aligns

with existing research by Eldesouky and English (2023). Findings from the current study suggest that suppression use is influenced by valence, with suppression associated more with positive emotion in the ASC group. This contrasts with existing research in neurotypical populations by Eldesouky and English (2023) which found that suppression use was consistent across positive and negative valence. This may suggest differences in how valence impacts regulation in neurodiverse samples, highlighting a need for further research using the emotion beliefs questionnaire in this sample to understand possible differences.

Young people reported emotional intensity as a factor influencing emotion regulation, with more intense emotions being reported as more challenging to regulate and requiring different strategies. This finding aligns with existing research by Sheppes and colleagues with neurotypical adults, which found that more intense emotions are managed through avoidance whereas milder emotions are managed through reappraisal (Sheppes, Scheibe, Suri & Gross, 2011; Sheppes et al., 2014). This would explain higher levels of avoidance related strategies, particularly in autistic young people who may experience more intense emotion (Mazefsky Borue, Day & Minshew., 2014; Mazefsky et al., 2013). Therefore, cognitive resources influence regulation, with effort and tiredness influencing strategy choice. Sheppes (2014) identified that reappraisal was more effortful than distraction, evidenced by decreased performance on a Stroop test, and is therefore more likely to be applied when cognitive resources are challenged.

These findings are supported by physiological monitoring studies, which show that distraction and reappraisal intervene at different stages of emotion generation, depending on the intensity of the emotional response (Lewczuk, Wizla, Oleksy & Wycesany, 2022). Therefore, more cognitively demanding emotions may be met with less cognitively demanding strategies. Differences in experience of emotional intensity and executive function abilities associated with ASC and ADHD are therefore likely to influence strategy choice. This will be influenced by beliefs about the effort related to regulation and their ability to control emotions.

Individual Differences: Perception of Diagnoses & Communication Ability

Young people in the ADHD group named diagnosis as a factor impacting their ability to regulate emotions, particularly highlighting that they perceived that ADHD-related attentional differences impacted their emotional control, particularly for positive emotions. This interview

data provides novel insights into the factors that this population perceive as influencing their regulation. This may suggest that expectations around diagnoses may impact young people's beliefs about their ability to control emotions, which in turn impact regulation. Alternatively, this may suggest that previously identified differences in cognitive flexibility and inhibition influence regulation in neurodiverse populations (Maw, Beattie & Burns, 2024). Interestingly, there was no reference to diagnosis or the impact this may have on recognition or control of emotions in the ASC group. However, evidence suggests that both ASC and ADHD have associations with difficulties in identifying emotions, known as alexithymia, which impacts the identification and selection phase of emotion regulation (Oakley et al., 2022). When applied to the extended process model of emotional regulation this would suggest that difficulties in the identification stage would impact young people's ability to identify when a regulation strategy is required and negatively impact regulation.

These findings again recognise the perceived impact of emotional valence but also show the importance of psychoeducation about diagnoses as part of interventions to address maladaptive beliefs and increase knowledge of possible impacts of diagnosis on regulation. Similarly, the ADHD group also noted that difficulties with communication skills impacted their ability to share their emotions with others and to seek support, which is crucial for drawing on social support to manage emotions. This highlights the different perception of the role of social support across the ASC and ADHD groups and the importance of targeting emotion related communication skills to develop confidence in intervention, both of which guide the nature of support.

The Context: The Social and Physical Environment

The surrounding environment was named as an influencing factor on regulation for both the ASC and ADHD group. Moving to familiar, calm and quiet areas were referenced by both as supporting regulation. For the ASC group, this often involved moving away from sensory stimuli, while the ADHD group described moving away from negative social interactions that triggered anger. Situation selection had higher percentage coverage in the ADHD group, which appears related to the ability of young people to access this in alternative provision, whereas the ASC group reported that access to this strategy was controlled by adults and frequently

unavailable. This recognises autonomy and access to time-out as influential factors in regulation for adolescent populations, particularly in mainstream settings. Therefore, professionals should involve young people in discussions about provision as access to time-out and fostering autonomy have both been described as supporting regulation.

Furthermore, the social context, i.e. who the young people were with at the time, was reported as influencing regulation strategy. Young people reported to be more likely to suppress their emotions in peer contexts than with familiar adults, which aligns with existing research in neurotypical populations (Wylie De France & Hollenstein, 2023) and the important role of social pressures in all adolescent populations. As ASC adolescents' acceptance of expressing emotions to others was lower than their ADHD peers, this may reduce access to social support, which is recognised by the complete state model as a protective factor for well-being (Chu, Saucier & Hafner, 2010) and may account for differences in well-being across the groups.

5.6: RQ 2.3: How Do Young People Perceive the Influence of Emotion Regulation on Mental Health?

Young people recognise two main ways in which emotion regulation impacts mental health. Firstly, internal factors related to their affective experience, such as emotional intensity and duration of negative emotions when these are not regulated. Secondly, the indirect impact of social isolation on well-being is due to rejection following the socially unacceptable expression of negative emotions, such as anger.

Internal Factors

Young people described the intense or long-term experience of anger and sadness as developing into depression and anxiety and experience of positive affect counteracting this. This aligns with the Complete State Model and explains how poor regulation would cause young people to move along the continua towards mental illness, where experience of negative affect leads to symptoms of depression and anxiety This theorising is aligned with research on the detrimental impact of chronic negative affect on development of anxiety and depression as a

result of impaired regulation (Watson & Clarke, 1988; Young, Sandman & Craske, 2019) and the protective influence of positive affect (Gross & John, 2003; Lyubomirsky, King, & Diener, 2005). Such thinking may reflect maladaptive usefulness beliefs where black and white thinking about positive and negative emotions leads to avoidance and suppression and long-term poor mental health. Additionally, young people describe a cumulative impact of negative emotions which suggest thresholds for emotional control and possible maladaptive beliefs about emotional control. This therefore suggests that intervention can draw on young people's understanding of emotion regulation as a process of releasing emotions to maintain well-being and address maladaptive beliefs.

Rumination was also identified as a factor influencing affective experience, regulation ability and mental health. One young person suggested that rumination can cause depressive symptoms which are a barrier to accessing mental health support. This aligns with research that suggests rumination increases negative affect, reduces engagement with support and decreases use of problem-focused coping strategies to address emotion, particularly for those with difficulties in executive function and inhibition (Watkins & Roberts, 2020). Additionally, research suggests that rumination mediates the relationship between neuroticism and depression in adolescents (Krause et al., 2018; Patel, Day, & Mazefsky, 2016) which has been found to be higher in both ADHD and ASC, with higher levels in ASC (Solberg et al., 2019). These findings highlight rumination as a target for interventions aimed at improving emotion regulation and mental health outcomes.

External Factors

Secondly, young people described the negative social impact of expressing negative emotions as leading to social isolation and as a result, poor mental health. Young people felt that this led to loneliness and decreased social support which exacerbates developing mental health difficulties. Keyes identifies the importance of social inclusion in maintaining wellbeing as part of the Complete State Model of mental health (Keyes, 2005, Keyes et al., 2017) which is aligned with young people's views of the negative impact of social isolation on mental health. This indirect relationship is supported by research, finding that frequent expressions of anger in

adolescents is linked to both deliberate social isolation and peer rejection, which lead to increased stress response, anxiety, and loneliness (Creswell, Hinch & Cage, 2019). However, research also recognises the bi-directional nature of this relationship where social rejection increases frustration and negatively impacts self-esteem (Leary, Twengy & Quinlivan, 2006; Creswell, Hinch & Cage, 2019).

Challenges with social communication are present in both ASC and ADHD populations, with increased severity in the latter. As a result, social interaction challenges and rejection may create a self-fulfilling prophecy, where young people blame themselves and their perceived lack of emotional control for their social difficulties. This suggests addressing beliefs about the usefulness of anger and its expression are a target for intervention alongside support to do so in an appropriate and adaptive manner. This guides the work of EP and school staff when developing interventions and individual support plans to promote adaptive regulation and reduce outburst of anger.

5.7: Strengths and Limitations

5.7.1. Research Contribution

New Insights for Neurodiverse Populations. This study is the first study exploring emotion beliefs in a neurodiverse sample, contributing to the growing body of research evidence related to the study of Ford and Gross's framework for emotion beliefs (2019). Rich, qualitative data supports the view that emotion beliefs impact the way in which young people regulate their emotions and how successful this is. This is supported by complementary correlational data, which although mostly non-significant, is directionally consistent with previous research. Together, this provides tentative support for the previously identified relationship and recognises value in exploring emotion beliefs in neurodiverse populations. As neurodiverse research populations are at high risk of poor mental health, this provides a starting point from which further research can be conducted to develop preventative, school-based interventions to meet these needs. Furthermore, use of the Emotion Beliefs Questionnaire provided insights into both usefulness and control beliefs, with consideration of emotional valence. This, alongside the small but growing body of research (Berglund et al., 2019; Ranjbar et al., 2023) deepens understanding

of emotion beliefs. Existing research explores the use of regulation strategies in neurodiverse population. However, this research uses interview methods to understand their motivations for regulation and the factors that influence this. This helps to identify specific antecedents for emotional regulation and provides specific targets for intervention.

Methodology: Convergent Mixed-Methods. Without the use of person centered and neurodiversity affirming approaches to interview, it would not have been possible to allow the voices of these young people to be heard. Through collection of rich and in-depth qualitative data powerful insights have been gained into the best way to support these young people. In addition, this extends understanding beyond the just expressive suppress data alone. Descriptions of the use of attentional deployment and the reasons underpinning this, as well as the troubling insight into the use of self-injurious behaviour, would not have been captured without the integration of quantitative and qualitative data which was used in this study. Existing research has focused on the use of expressive suppression and cognitive reappraisal, while the findings of this study suggest exploration of a broader range of strategies may be relevant for this research population.

5.7.2. Limitations & Further Research

Correlational Analysis: Causality, Direction of Relationship, and Influencing Factors. The relationship between beliefs, regulation and mental health is complex and likely influenced by a number of factors. This research was unable to control the influence of educational setting, which limits insight into relationships. As the research suggests that manipulation of beliefs can influence regulation (Kappes & Schikowski, 2023), this suggests there is value in exploring direction of causality in this research, particularly if targets for intervention are to be identified to improve mental health. As regulation experiences and beliefs may develop in tandem, and interact, it is unlikely that this is a simple directional relationship. However, this does call for further research to explore this.

Sampling Issues. The researcher faced significant challenges with recruitment, requiring a change of research sample at a late stage in the research project. As such, convenience sampling was adopted to ensure study completion. As a result, the study consisted of two settings, a mainstream secondary and an alternative provision. The nature of these settings is likely to influence strategy use, with an alternative provision having smaller classes, more

differentiated and therapeutic support, and a cohort that are more likely to experience emotional dysregulation difficulties. By contrast, the mainstream sample offers a lower level of flexibility for young people related to regulation strategies. However, challenges with regulation ability are likely to be less significant. Furthermore, as the ASC sample were based in one setting and the ADHD sample in another, it makes it challenging to identify if differences were related to diagnosis or differences in practice across settings. Both settings were based in Inner London and were from key stages three or four, which helps to counteract these differences.

In addition, the small sample size reduced the statistical power of the correlational analysis, limited the ability to precisely detect relationships between variables, and increased the risk of missing or incorrectly finding a significant correlation. As ASC and ADHD are both common disorders, making them a large total population, this means that a small sample is not generalisable to the population as a whole. However, the supporting findings from qualitative analysis help to strengthen these conclusions.

A larger sample using multi-level regression analyses across schools would account for clustering within classrooms and schools and allow for control of potentially confounding variables. Assessing young people with ADHD and ASC in one setting would also help to address the impact of differences related to setting. Further research that assesses inhibition, alexithymia and social communication skills and uses regression to control for these would help to accurately establish the relationship between beliefs and mental health in adolescent populations.

Limited measurement of variables. The current study did not assess traits of ASC and ADHD, such as alexithymia and cognitive inhibition, which are relevant to the relationship between beliefs and regulation according to the process model of regulation (Luminet, Kielson & Ridout, 2021). This limits the accuracy of the insights provided. Use of multi-level regression analysis may help to disentangle these complex factors, particularly when variables related to the characteristics of ASC and ADHD, such as alexithymia, may influence this relationship. Additionally, further research that uses experimental designs to manipulate beliefs may help to understand directionality.

5.8: Implications

Implications for Theory

Interview data provides novel insights into young people's views of emotional control, and the thresholds, barriers and facilitators for control. This guides thinking about the impact of emotion control beliefs. Moreover, qualitative descriptions of the relationship between emotions and mental health align with existing research and review and although insignificant, the direction of correlations are aligned with findings from previous research (Tamir et al., 2007; Ford & Gross, 2019; Somerville et al., 2024). This suggests that further research applying Ford and Gross' framework (2019) to neurodiverse adolescents is warranted. Moreover, the young people's description of the role of emotional valence and the significant association between positive usefulness and expressive suppression suggests that emotional valence impacts emotional beliefs, contrasting with previous research. Therefore, this exploratory study provides tentative support for the relationship between emotion beliefs and mental health in neurodiverse populations and indicates a need for further research to better understand the role of emotional valence across control and usefulness.

Implications for practice

Exploration of the Emotion Beliefs Questionnaire to identify risk and guide intervention. Conclusions further support the previously identified relationship between emotion beliefs and mental health. This growing body of research supports assessment of emotion control beliefs as a possible indicator of risk of poor mental health. With further research into support for this relationship in neurodiverse populations, it may be possible to use the EBQ to identify neurodiverse young people at risk of poor mental health. If assessed using the EBQ, specific beliefs can be identified as targets for intervention. For instance, the belief that emotions are beyond control may hinder the development of effective regulation strategies and a barrier to the effectiveness of emotional regulation developing interventions. Thus, understanding these specific beliefs allows for more targeted support, potentially proving more effective than solely focusing on developing regulation strategies. As research suggests that unaddressed maladaptive emotion beliefs are a barrier to therapeutic intervention (Moumne, Hall, Böke, Bastien, & Heath,

2021) there is motivation to identify and address these as part of the planning and review of therapeutic interventions.

Adoption of CBT based approaches to address beliefs & regulation. Research suggests that CBT adapted for neurodiverse young people can be effective in reducing symptoms of depression and anxiety (McBride et al., 2020; Knowles, 2024). The EBQ assesses maladaptive usefulness and control beliefs, offering specific targets for therapeutic work to enhance adaptive well-being and mental health. Research suggests that these beliefs can be positively influenced to address regulation difficulties (Kneeland et al., 2016) and are more easily changed during adolescence compared to adulthood (Ford et al., 2018). This provides a strong case for the use of CBT-based approaches in adolescent populations. In addition, approaches such as Socratic questioning can be delivered by school staff, making the approach accessible for schools. In addition, as effort level appears an important factor in regulation choice, teaching adaptive approaches and providing opportunities to practice these can reduce the level of effort required to increase application of strategies.

Psychoeducation around diagnosis. Interview data identified beliefs related to the negative impact of diagnosis of ADHD on regulation. The ASC group did not identify this link, despite describing maladaptive avoidant regulation patterns, which can be associated with ASC. Therefore, both groups would benefit from psychoeducation about a possible link between ADHD/ASC and regulation to address maladaptive beliefs that diagnosis prevents control, and to understand how diagnosis may influence their emotional experience. Additionally, following the interview responses related to self-injurious behaviour, it would be helpful to explore these behaviours and the purposes they serve with both young people and the adults supporting them, in order to promote use of adaptive regulation approaches. Together, this development of emotional awareness may help to promote positive regulation, helping young people and the adults supporting them to recognise that all learners, including those who experience neurodiversity, can develop their regulation.

Systemic factors: Systemic support refers to support based on analysis of the interacting factors occurring in the systems around the young person (e.g. home, school, community) and focuses on collaborative and ‘joined up’ working approaches. Several targets for systemic support were identified through research, including the lack of flexibility around leaving the

classroom in school systems. Both settings indicated that adult permission was required each time ‘time-out’ was requested which was felt to limit autonomy and ability to regulate emotions. Therefore, EP are positioned to support schools at a systems level through consultation, a key feature in the EP toolkit, to empower head teachers, SENDCo and teachers to develop practice, encourage them to listen to student voice, and to develop flexibility around the use of antecedent strategies such as situation modification and selection. Incorporating young people in developing their support plans while at school will help ensure they develop successful strategies. These experiences of successful regulation can then help to develop positive beliefs around emotional control as well as helping young people to realise that emotions are useful, controllable and that control improves with practice. However, sitting alongside this is the need to develop long-term coping strategies beyond avoidance, as these together with inflexibility of practice may increase the risk of emotionally based school avoidance in high-risk populations.

5.9 Conclusion

The study provided tentative evidence of the relationship between emotion beliefs and mental health identified in neurodiverse populations, supporting further research applying Ford and Gross (2019) framework to this group. This suggests value in further exploring emotion beliefs in neurodiverse young people, in order to identify which beliefs present risk factors for the development of poor mental health. In future, this understanding could be used to guide interventions to address maladaptive beliefs and reduce this risk.

Novel insights were provided by interview data about the way in which these groups regulate, and the barriers and facilitators to this. This supports understanding of how beliefs impact regulation and how successful regulation can be supported in these groups. Additionally, this study identified a moderating role of emotional valence and suggests further research exploration using tools, such as the EBQ, that assess the role of valence are required.

This guides EP practice to support schools to understand regulation behaviour and to remove barriers to effective regulation. These findings provide a basis for further research to guide intervention but also suggest that there may be some differences in the mediating role of regulation in this group and that further research is required. In addition, understanding the role

of importance of beliefs and regulation for mental health is something that all professionals can reinforce in school, helping to promote positive regulation and mental health for this at-risk group.

These conclusions are strengthened by the convergence of quantitative and qualitative data to triangulate and deepen understanding. However, the author recognises that further exploration of these conclusions in a larger research sample is required to state these with greater confidence. In addition to greater statistical power, this would allow for measurement and control of factors that may influence this relationship, such as alexithymia and inhibitory control (Faustino, 202, Oakley et al., 2022). This study provides a first step towards early identification and intervention for an at-risk group of adolescents.

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Appendix A: Information & Consent Sheets, One Page Researcher Profile

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Invitation to take part in a Research Study

Dear Parents/Guardians,

- We are conducting a study aimed at enhancing the mental well-being of young people with Autistic Spectrum Condition (ASC)
- The research explores how beliefs about controlling emotions impact emotional regulation and overall mental health.
- The objective is to determine if similar connections found in other groups exist for young individuals with ASC.
- Participation involves a 10/15-minute in-school survey and an online/in-person interview.
- Benefits include a chance to win £50 or £10 Amazon vouchers.
- Privacy is ensured through anonymisation of data and the use of ID numbers.
- The research is led by Jack Spawton-Rice, a Trainee Educational Psychologist, and supported by Dr. Matt Somerville and Dr. Tom Connor
- Taking part may be helpful in understanding emotions and supporting the mental health of others but there are no consequences if you don't want to take part.

Contact Information

For any questions or further information, please contact:
Contact: john.spawton-rice.17@ucl.ac.uk

1) I confirm that I have read and understood this information sheet, and have had the opportunity to consider the information, ask questions, and have had these questions adequately answered. ☐
2) I consent for the young person named below to participate in the study. ☐
3) I understand that I can withdraw from the research at any time without giving any reason, and that I can withdraw my data up to one month after participation. I understand that if I decide to withdraw, any data I have provided up to that point will be deleted unless I agree otherwise. ☐
4) I understand that all personal information will remain confidential and that all efforts will be made to ensure I, the young person and their school cannot be identified. I understand that my data gathered in this study will be stored anonymously and securely. ☐
5) I understand that the information I provide will be used in a written project report, and that a summary of anonymous group data will be shared with the school ☐
6) I understand that in exceptional circumstances anonymity and confidentiality would have to be broken, for example, if it was felt that a young person was at risk of harm. In these circumstances the safeguarding procedure of both your school and the local authority (Southwark) will be followed. ☐

Name:.....

Name of young person.....

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Invitation to take part in a Research Study

Who Are We?

- Hi, I'm Jack Spawton-Rice, a trainee educational psychologist in Southwark. I've been a teacher and support worker in the past and always enjoyed working with young people.
- I'm working with Dr. Matt Somerville, an expert in emotions and mental health.

Why the Research?

- Our goal is to understand how what you believe about emotions affects how you control your emotions and your mental health. Get a quick overview by watching our short video: https://www.youtube.com/watch?v=US78BzDUL3s.
- Your viewpoint is crucial in helping us to understand how young people with Autism manage their emotions. Your insights can help promote the mental health of other young people.

What Happens if You Join?

- Complete a 10-minute survey online.
- Complete a short interview, either online or in person to talk about your experiences.

Benefits of Participation

- Chance to win Amazon vouchers (£50 or £10).

What happens to your information?

- All your information will be anonymous. No names or school details will be shared.

Participation is Your Choice

- There are no consequences if you don't take part. You might find it helps you better understand your emotions and your insights can help make a difference!
- **Contact for further information – If you have any questions, you can ask your teacher or email me at:** jack.spawton-rice@southwark.gov.uk

Part 1 Survey Link	Part 2 Regulation Journal
https://forms.office.com/e/0QcI3b6A8Mh	https://forms.office.com/e/xgFwEPNckk

What do I do?

I'm a trainee educational psychologist. As part of my job, I work with children, young people and their parents to help them enjoy and do their best at school. As part of my training, I carry out research to help remove barriers to learning.

It is important for you to know

It can be hard to talk about your emotions and your mental health. I hope that by doing so you'll learn about yourself and help others.
Anything you say will be anonymous and only used for research.

Why is the research useful?

The research hopes to find out more about the way our beliefs impact our mental health. If we understand more we can help young people's wellbeing.

What will we talk about?

In the interview I'll ask you about the best and worst part of your week. I'll ask you how you managed your emotions at this time.

3 things I enjoy

Cold water swimming
Reading in bed
Cartoons

3 ways people would describe me

Active
Friendly
A good listener

3 important people in my life

My best friend
My brother
My sister

3 things I'm good at

Running
Biology
Swimming

Appendix C: Final Version Survey

Emotion Beliefs Questionnaire (EBQ)

These questions will also ask about your beliefs about your emotions.

4. These questions ask about your beliefs about emotions in general. Some questions ask about negative emotions (e.g., sadness, fear, and anger). Other questions ask about positive emotions (e.g., happiness, joy, and amusement). For each statement, please rate how much you agree or disagree that the statement is true in general. Circle one answer for each statement. *

	Strong disagree	Mostly disagree	Disagree	Neither agree nor disagree	Mostly agree	Agree	Strongly agree
Once people are experiencing negative emotions, there is nothing they can do about modifying them	○	○	○	○	○	○	○
People cannot control their positive emotions.	○	○	○	○	○	○	○

	Strong disagree	Mostly disagree	Disagree	Neither agree nor disagree	Mostly agree	Agree	Strongly agree
There is very little use for positive emotions.	○	○	○	○	○	○	○
People cannot control their negative emotions	○	○	○	○	○	○	○
It doesn't matter how hard people try, they cannot change their positive emotions.	○	○	○	○	○	○	○
Negative emotions are harmful	○	○	○	○	○	○	○
People don't need their positive emotions	○	○	○	○	○	○	○

	Strong disagree	Mostly disagree	Disagree	Neither agree nor disagree	Mostly agree	Agree	Strongly agree
There is very little use for positive emotions.	○	○	○	○	○	○	○
People cannot control their negative emotions	○	○	○	○	○	○	○
It doesn't matter how hard people try, they cannot change their positive emotions.	○	○	○	○	○	○	○
Negative emotions are harmful	○	○	○	○	○	○	○
People don't need their positive emotions	○	○	○	○	○	○	○
People cannot learn techniques to effectively control their negative emotions	○	○	○	○	○	○	○
Once people are experiencing positive emotions, there is nothing they can do about modifying them.	○	○	○	○	○	○	○
The presence of negative emotions is a bad thing for people.	○	○	○	○	○	○	○
Positive emotions are harmful.	○	○	○	○	○	○	○

Emotion Regulation Questionnaire - Child & Adolescent.

These questions will explore your experience of emotions and how you manage them.

5. These questions are about your emotional life, in particular, how you control (regulate and manage) your emotions. The questions below involve two different aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave.

   Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

	Strongly disagree	Disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Agree	Strongly agree
When I want to feel happier, I think about something different	◯	◯	◯	◯	◯	◯	◯
I keep my feelings to myself.	◯	◯	◯	◯	◯	◯	◯
When I want to feel less bad (e.g., sad, angry or worried). I think about something different.	◯	◯	◯	◯	◯	◯	◯
When I am feeling happy, I am careful not to show it.	◯	◯	◯	◯	◯	◯	◯
When I'm worried about something, I make myself think about it in a way that helps me feel better.	◯	◯	◯	◯	◯	◯	◯
I control my feelings by not showing them.	◯	◯	◯	◯	◯	◯	◯

	Strongly disagree	Disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Agree	Strongly agree
When I want to feel happier about something, I change the way I'm thinking about it.	○	○	○	○	○	○	○
I control my feelings about things by changing the way I think about them.	○	○	○	○	○	○	○
When I'm feeling bad (e.g. sad, angry, or worried), I'm careful not to show it.	○	○	○	○	○	○	○
When I want to feel less bad (e.g. sad, angry, or worried) about something, I change the way I'm thinking about it	○	○	○	○	○	○	○

Warwick-Edinburgh Mental Wellbeing Scale

These questions will ask about your mood, emotions and wellbeing.

6. Below are some statements about feelings and thoughts. Please tick the box that best describes your experience of each over the last 2 weeks

	None of the time.	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	○	○	○	○	○
I've been feeling useful	○	○	○	○	○
I've been feeling relaxed	○	○	○	○	○
I've been feeling interested in other people	○	○	○	○	○
I've had energy to spare	○	○	○	○	○
I've been dealing with problems well	○	○	○	○	○
I've been thinking clearly	○	○	○	○	○
I've been feeling good about myself	○	○	○	○	○
I've been feeling close to other people	○	○	○	○	○
I've been feeling confident	○	○	○	○	○
I've been able to make up my own mind about things	○	○	○	○	○
I've been feeling loved	○	○	○	○	○
I've been interested in new things	○	○	○	○	○
I've been feeling cheerful	○	○	○	○	○

The Revised Children's Anxiety and Depression Scale-25 (A)

These questions will ask about your mood and worries.

8. For the following questions, please select the response that shows how often each of the following things happen to you. There are no right or wrong answers.

	Never	Sometimes	Often	Always
I worry when I think I have done poorly at something	○	○	○	○
I would feel afraid of being on my own at home.	○	○	○	○
I worry that something awful will happen to someone I care about	○	○	○	○
I am afraid of being in crowded places (like shopping centres or cinemas)	○	○	○	○
I worry what other people think of me	○	○	○	○
I feel scared if I have to sleep on my own.	○	○	○	○
I suddenly become dizzy or faint when there is not reason for this	○	○	○	○

I have to do things over and over again (like washing my hands or putting things in a certain order)	○	○	○	○
I suddenly start to tremble or shake and there is no reason for this	○	○	○	○
I have to think of special thoughts (like numbers or words) to stop bad things from happening	○	○	○	○
I think about death	○	○	○	○
I worry that I will suddenly get a scared feeling when there is nothing to be afraid of	○	○	○	○
I feel afraid I will make a fool of myself in front of people.	○	○	○	○
I have to do things in just the right way to stop bad things from happening.	○	○	○	○
I worry that something bad will happen to me.	○	○	○	○

The Revised Children's Anxiety and Depression Scale-25 (D)

These questions will ask about your mood and worries.

9. For the following questions, please select the response that shows how often each of the following things happen to you. There are no right or wrong answers.

	Never	Sometimes	Often	Always
I feel sad or empty	○	○	○	○
Nothing is much fun anymore	○	○	○	○
I have trouble sleeping	○	○	○	○
I have problems with my appetite	○	○	○	○
I have no energy for things	○	○	○	○
I cannot think clearly	○	○	○	○
I feel worthless	○	○	○	○
I feel like I don't want to move	○	○	○	○
I am tired a lot	○	○	○	○
I feel restless.	○	○	○	○

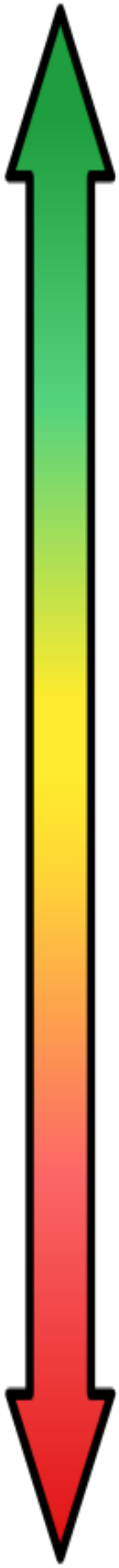
10. Are you happy to participate in phase 2 of the study?

- ◯ Yes
- ◯ No

. Please tell the adult helping you to complete this that you want to take part phase two of the study. Write the name of your school in the box below.

Appendix C: Survey Visual Support Resources

	No effort
	A little bit of effort
	Some effort
	Quite a bit of effort
	A lot of effort.



Strongly agree

Agree

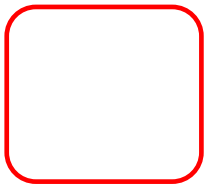
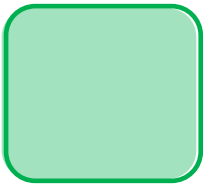
Mostly Agree

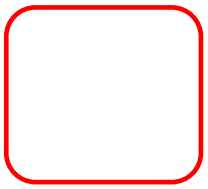
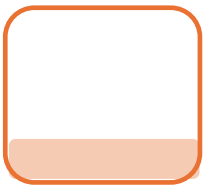
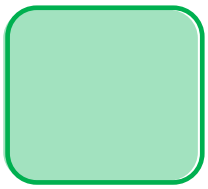
Neither agree or disagree

Mostly disagree

Disagree

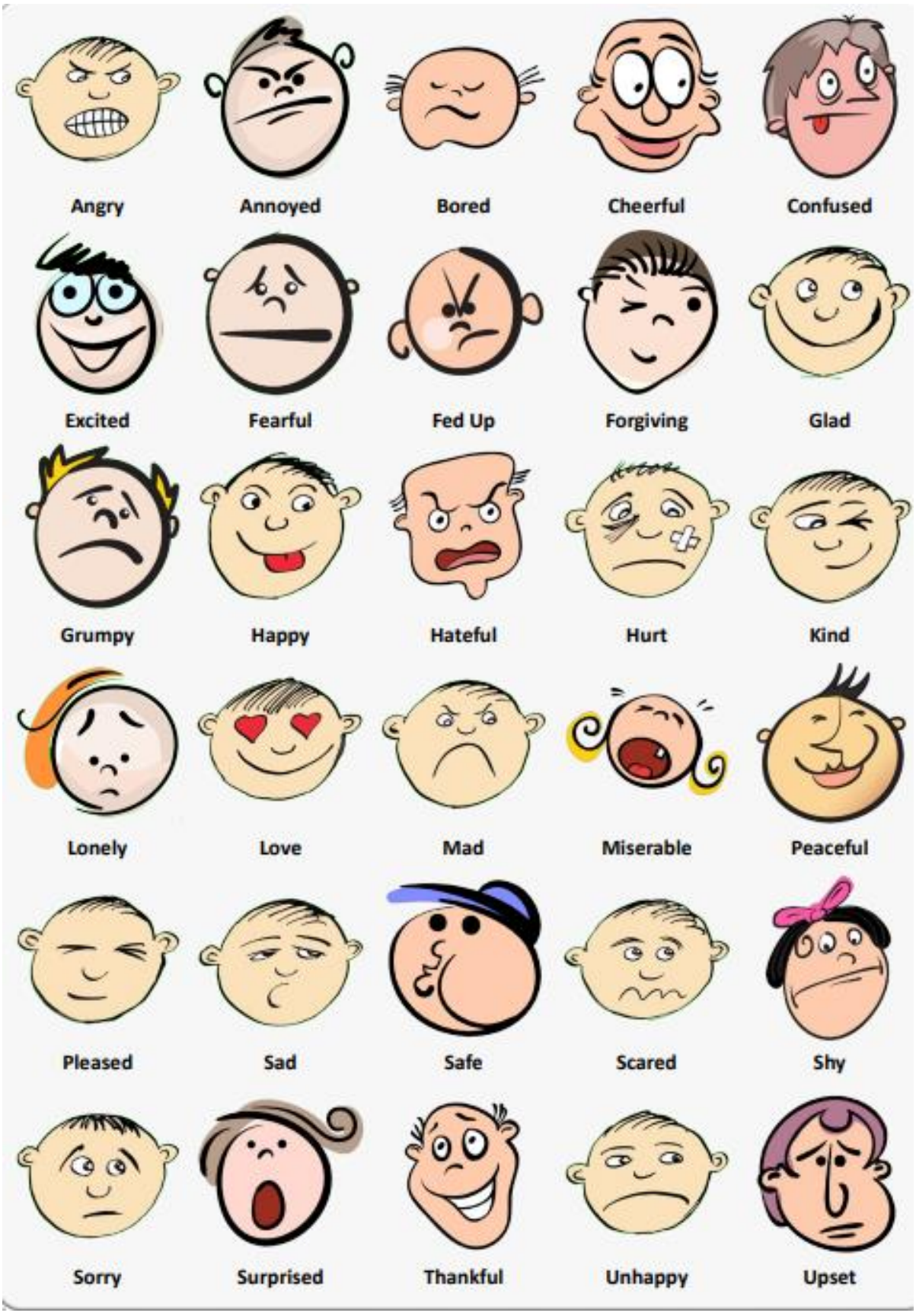
Strongly Disagree

	Never	
	Sometimes	
	Often	
	Always	

	Never	
	Rarely	
	Sometimes	
	Often	
	Always	

If you need to take a break, you can use the time out area.

You don’t need to before you leave.


Angry
Annoyed
Bored
Cheerful
Confused
Excited
Fearful
Fed Up
Forgiving
Glad
Grumpy
Happy
Hateful
Hurt
Kind
Lonely
Love
Mad
Miserable
Peaceful
Pleased
Sad
Safe
Scared
Shy
Sorry
Surprised
Thankful
Unhappy
Upset

Appendix D: Interview Schedule

Interview Schedule

Introduction

Good morning, I'm Jack. I'm a trainee Educational psychologist. I'm looking to find out more about your beliefs about emotions, how you manage emotions and your wellbeing. The interview should take between 25 and 40 minutes. If you want to stop or take a break at any time, that is fine. You don't need to ask and can use the time out area

If any question feels uncomfortable to answer, feel free to skip it or take your time. If you decide later that you don't want your answers included, just let me know, and I'll delete them.

I'll be asking you to think about a good and bad part of your week so some of the questions might be similar for the first and second part.

Any questions or thoughts? It's important that you feel good about being part of this research.

Part 1

1. Tell me about your week
    a. What were the key events?
    b. Which emotions did they cause?
    c. Did you do anything to deal with your emotions during this event? Why/Why not?

2. How much control do you think people have over their emotions?
    a. Is this the same for everyone?

3. How much control do you have over your own emotions?
    a. Are there some you have more/less control over?

4. What impacts your ability to control your emotions?
    a. Are there situations when it's easier/harder
    b. Are there times/when it's easier
    c. Are there certain emotions that are easier or harder to control?

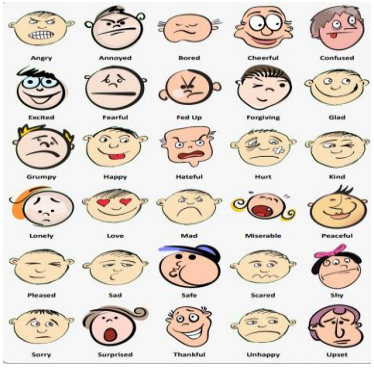
5. Is it ok to express your emotions?
    a. Are there some that are more acceptable than others?
    b. Are there times when it isn't?

6. How useful do you believe emotions are?
    a. Is this the same for pos/neg
    b. Can you give me any examples?
    c.
7. Are there other parts of your life that are influenced by your emotions?
    a. Could they impact your mood?
    b. Could they impact how you function, getting to school etc.
    c. Can you think of a time when they have?
    d. How does [emotion] impact your life

Part 2

1. I want you to think about the best part of week – what made it so good?
    a. If struggling to answer, refer to their account. If still struggling, share vignettes– How do you think they felt? Have you been in a similar situation/felt like this?
        i. Amir won MVP during the school football match, his brother and Dad game to watch and they were proud.
        ii. All of Toni's friends came over to play Fifa on the PlayStation. They did loads of campaigns and were laughing all day.
        iii. Jake loves rugby and found out his brother is taking him to a rugby game at the weekend.
        iv. Tory's friend Jade just told her she might be moving onto the same street as her. She really hopes that she will be living nearby so they can hang out.

2. What was the main feeling you had?
    a. I've got a faces/GIFs (ask them identify the feeling in the GIF)



3. Did you feel you needed to control your happiness/excitement etc [whatever emotion they say] in this situation?
4. How much effort did you make to change it?
    a. I didn't try
    b. A little effort
    c. Some effort
    d. A lot of effort

5. How do you manage your emotions?
   Was it one of these strategies?
    a. "I tried to think about a situation differently in order to change my mood"
    b. "I shifted my attention away from what was making me emotional"
    c. "I tried not to show on the outside an emotion I felt on the inside"
    d. None of these
    e. Tell me about what you did..

6. Why do you think you chose to manage your emotion this way?
    a. Have you always managed your emotions this way?
    b. Do you manage your emotions differently with different people?
    c. Do you manage your emotions differently in different places?
    d. Do you manage your emotions differently depending on the emotion?

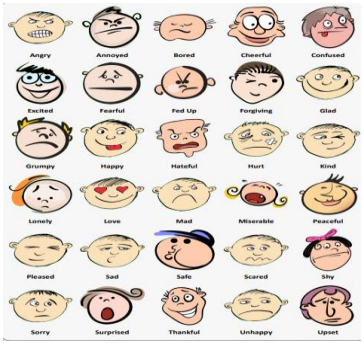
7. Was there anything that helped you to manage this emotion?
    a. Did support from a friend or adult, being alone or a specific activity help?

8. Was there anything that made it more difficult to manage this emotion?
    a. Peers being around, being in public, being tired?

Part 3

9. I want you to think about the worst part of week – what made it so bad?
    a. If struggling to answer, share vignettes– How do you think they felt? Have you been in a similar situation/felt like this?
        i. Sadie overslept and walked into the classroom late. Her teacher asked why she was late in front of everyone. She walked out.
        ii. Kyra's teacher said they were taking photos in art. She loves photography. When she got to art, her teacher wasn't in and they were doing reading
        iii. Sam's friends all went into town on Saturday. They got food and watched a film. Sam only found out on their snapchat posts.
        iv. Lamoure forgot to put her phone on silent and her teacher took her phone. When someone else's went off, they were told to put it in their bag.
        v. Rylee's team played a football match at school. His teacher asked Rylee to come up to the front in assembly and talk about it in front of the school.

10. What was the main feeling you had?
    a. I've got faces and Gifs (ask them to identify the feeling in the GIF)



11. Did you feel you needed to control your anger/anxiety/sadness etc [whatever emotion they say] in this situation?

12. How much effort did you make to change it?
    a. I didn't try
    b. A little effort
    c. Some effort
    d. A lot of effort

13. How did you try to manage this emotion?
    a. "I tried to think about a situation differently in order to change my mood"
    b. "I shifted my attention away from what was making me emotional"
    c. "I tried not to show on the outside an emotion I felt on the inside"
    d. None of these

14. Why do you think you chose to manage your emotion this way?
    a. Have you always managed your emotions this way?
    b. Do you manage your emotions differently with different people?
    c. Do you manage your emotions differently in different places?
    d. Do you manage your emotions differently depending on the emotion?

15. Was there anything that helped you to manage this emotion?
    a. Did support from a friend or adult, being alone or a specific activity help?

16. Was there anything that made it more difficult to manage this emotion?
    a. Peers being around, being in public, being tired?

Appendix E: Thematic Analysis Codebook

Codebook Version 1

Code	Definition	Example
Situation Selection	Avoiding or approaching situations due to the potential emotional impact	Choosing to avoid a lesson that causes anxiety Choosing to sit with familiar peers at lunchtime in order to improve happiness
Situation Modification	Changing a situation in order to change its emotional impact	Reducing the noise level of environment to reduce anxiety
Attentional Deployment	Directing attention away or towards a situation to influence emotional experience	Focusing on the teacher to avoid a negative interaction with peers Listening to music to distract attention from negative emotions.
Cognitive Reappraisal	Changing the way they perceive the situation or emotion to influence its emotional significance	Reframing thoughts about an exam to perceive it as a chance to demonstrate knowledge Viewing anxiety as a motivator or achieve
Response Modulation	Strategies that influence the physiological, experiential or behavioural response to an emotion	Breathing exercises to reduce anxiety. Mindfulness techniques Going for a run/playing football.

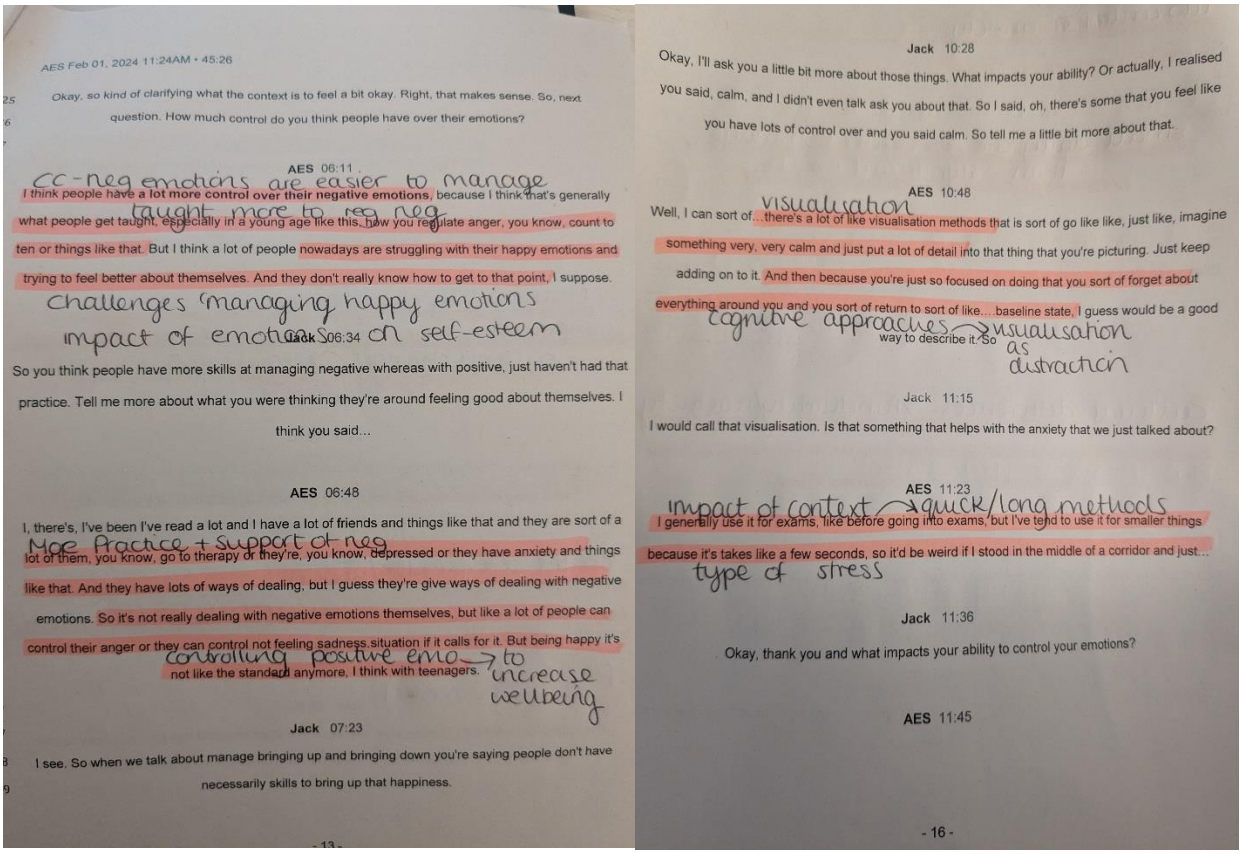
Codebook Version 2

Code	Definition	Example
Situation Modification	Changing a situation in order to change its emotional impact	Reducing the noise level of environment to reduce anxiety

Attentional Deployment	Directing attention away or towards a situation to influence emotional experience	Focusing on the teacher to avoid a negative interaction with peers Listening to music to distract attention from negative emotions.
Cognitive Reappraisal	Changing the way they perceive the situation or emotion to influence its emotional significance	Reframing thoughts about an exam to perceive it as a chance to demonstrate knowledge Viewing anxiety as a motivator or achieve
Response Modulation	Strategies that influence the physiological, experiential or behavioural response to an emotion	Breathing exercises to reduce anxiety. Mindfulness techniques Going for a run/playing football.
Social Support	Drawing on support from adults or peers to alter the emotional experience	Seeking affection from a parent when upset Seeking out friends when feeling frustrated at school – socialising to change feelings

Appendix F: Example Coding

1: Initial Paper Coding: Codebook & General Coding



AES Feb 01, 2024 11:24AM • 45:26

Okay, so kind of clarifying what the context is to feel a bit okay. Right, that makes sense. So, next question. How much control do you think people have over their emotions?

AES 06:11

cc-neg emotions are easier to manage

I think people have **a lot more control over their negative emotions**, because I think that's generally taught more to reg neg what people get taught, especially in a young age like this, how you regulate anger, you know, count to ten or things like that. But I think a lot of people nowadays are struggling with their happy emotions and trying to feel better about themselves. And they don't really know how to get to that point, I suppose.

challenges managing happy emotions

impact of emotions on self-esteem

Jack 06:34

So you think people have more skills at managing negative whereas with positive, just haven't had that practice. Tell me more about what you were thinking they're around feeling good about themselves. I think you said...

AES 06:48

More Practice + support of neg

I, there's, I've been I've read a lot and I have a lot of friends and things like that and they are sort of a lot of them, you know, go to therapy or they're, you know, depressed or they have anxiety and things like that. And they have lots of ways of dealing, but I guess they're give ways of dealing with negative emotions. So it's not really dealing with negative emotions themselves, but like a lot of people can control their anger or they can control not feeling sadness.situation if it calls for it. But being happy it's not like the standard anymore, I think with teenagers.

controlling positive emo → to increase wellbeing

Jack 07:23

I see. So when we talk about manage bringing up and bringing down you're saying people don't have necessarily skills to bring up that happiness.

- 13 -

Jack 10:28

Okay, I'll ask you a little bit more about those things. What impacts your ability? Or actually, I realised you said, calm, and I didn't even talk ask you about that. So I said, oh, there's some that you feel like you have lots of control over and you said calm. So tell me a little bit more about that.

AES 10:48

visualisation

Well, I can sort of...there's a lot of like visualisation methods that is sort of go like like, just like, imagine something very, very calm and just put a lot of detail into that thing that you're picturing. Just keep adding on to it. And then because you're just so focused on doing that you sort of forget about everything around you and you sort of return to sort of like...baseline state, I guess would be a good way to describe it. So

cognitive approaches → visualisation as distraction

Jack 11:15

I would call that visualisation. Is that something that helps with the anxiety that we just talked about?

AES 11:23

impact of context → quick/long methods

I generally use it for exams, like before going into exams, but I've tend to use it for smaller things because it's takes like a few seconds, so it'd be weird if I stood in the middle of a corridor and just...

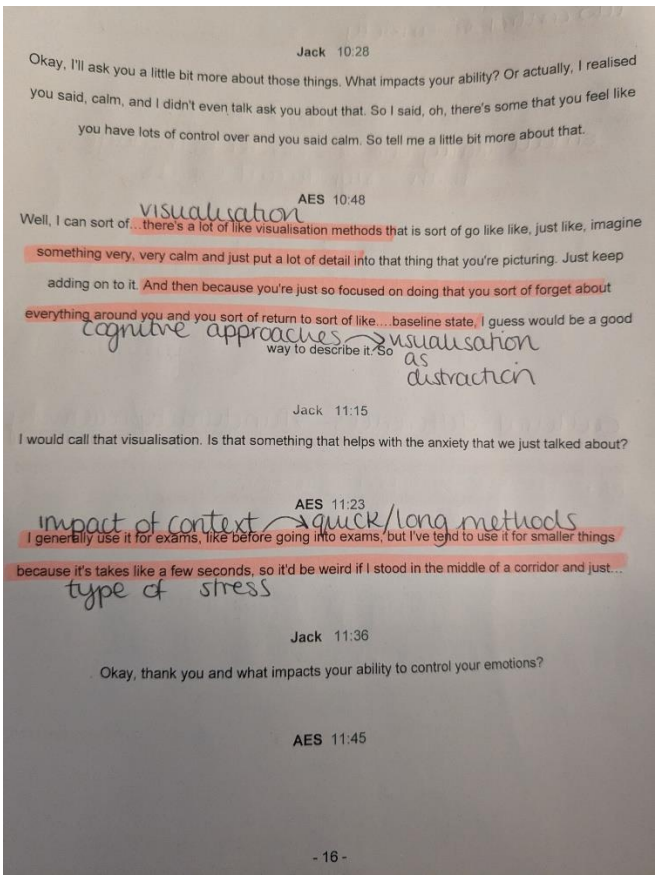
type of stress

Jack 11:36

Okay, thank you and what impacts your ability to control your emotions?

AES 11:45

- 16 -



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visualisation
cognitive approaches → visualisation as distraction

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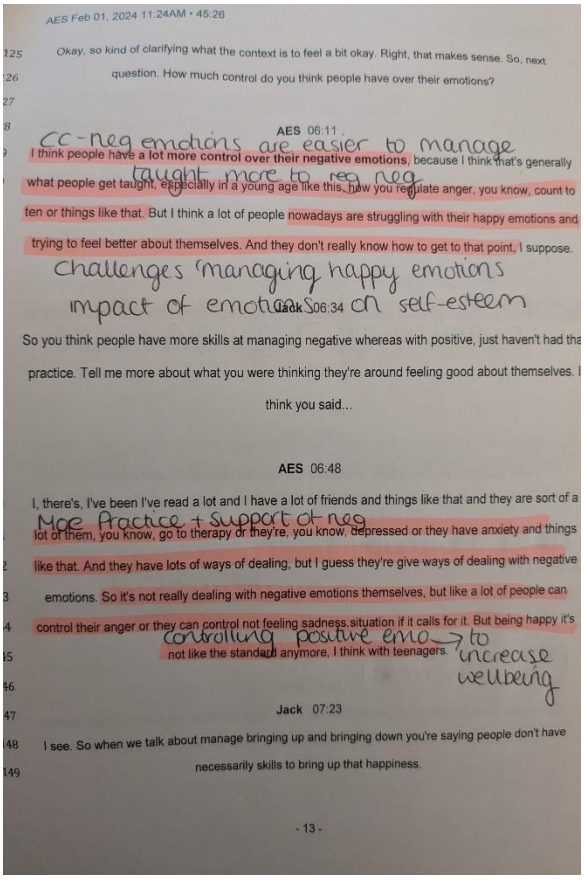
- 16 -



AES Feb 01, 2024 11:24AM • 45:26

Okay, so kind of clarifying what the context is to feel a bit okay. Right, that makes sense. So, next question. How much control do you think people have over their emotions?

AES 06:11

cc-neg emotions are easier to manage
I think people have a lot more control over their negative emotions, because I think that's generally what people get taught, especially in a young age like this, how you regulate anger, you know, count to ten or things like that. But I think a lot of people nowadays are struggling with their happy emotions and trying to feel better about themselves. And they don't really know how to get to that point, I suppose.
taught more to reg neg
challenges managing happy emotions
impact of emotions on self-esteem

Jack 06:34

So you think people have more skills at managing negative whereas with positive, just haven't had the practice. Tell me more about what you were thinking they're around feeling good about themselves. I think you said...

AES 06:48

I, there's, I've been I've read a lot and I have a lot of friends and things like that and they are sort of a lot of them, you know, go to therapy or they're, you know, depressed or they have anxiety and things like that. And they have lots of ways of dealing, but I guess they're give ways of dealing with negative emotions. So it's not really dealing with negative emotions themselves, but like a lot of people can control their anger or they can control not feeling sadness situation if it calls for it. But being happy it's not like the standard anymore, I think with teenagers.
Mge Practice + Support at neg
controlling positive emo → to increase wellbeing

Jack 07:23

I see. So when we talk about manage bringing up and bringing down you're saying people don't have necessarily skills to bring up that happiness.

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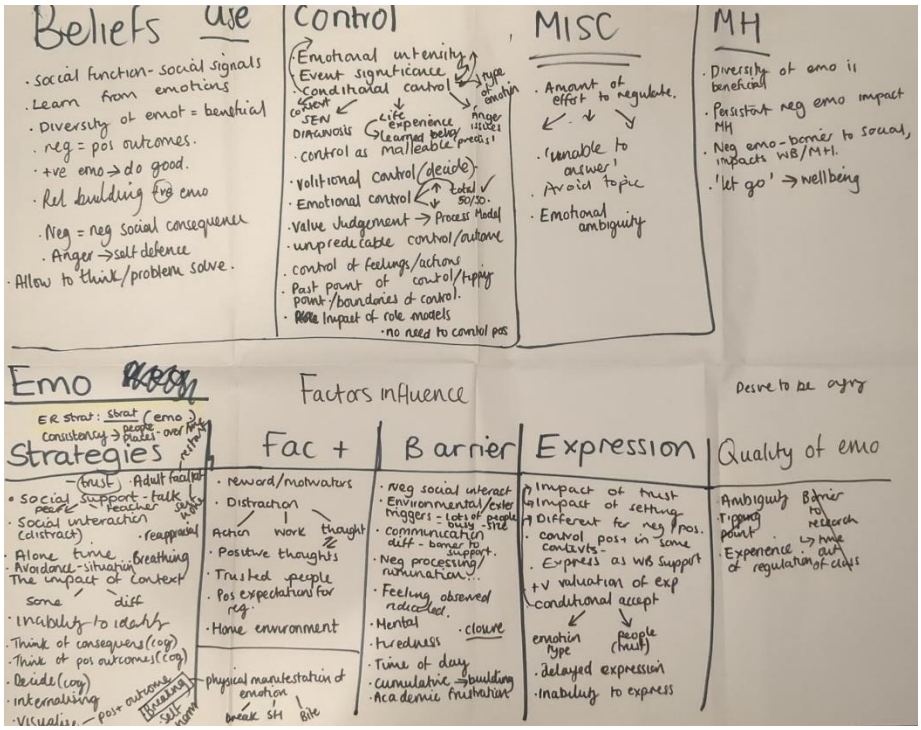
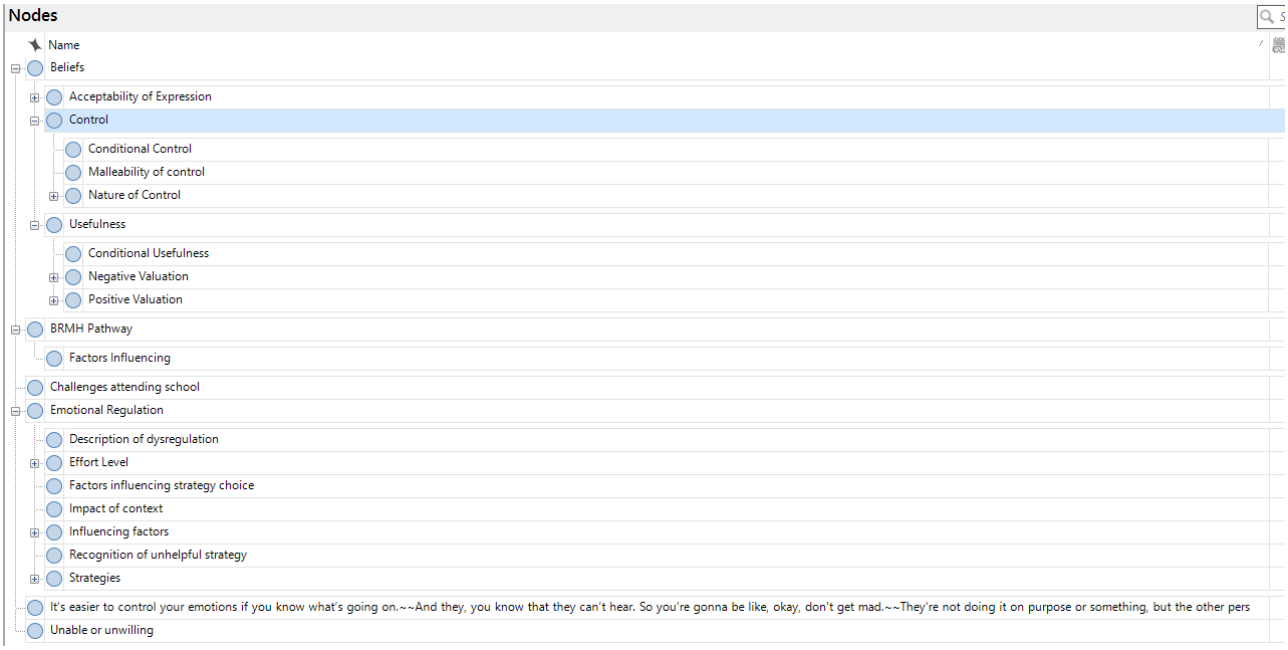
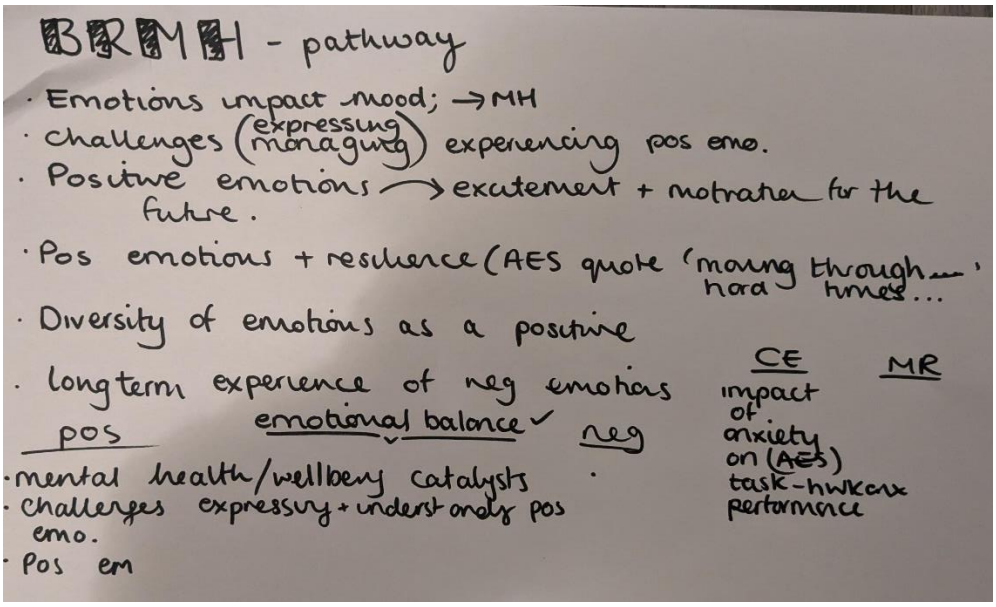
2: Mapping out Codes

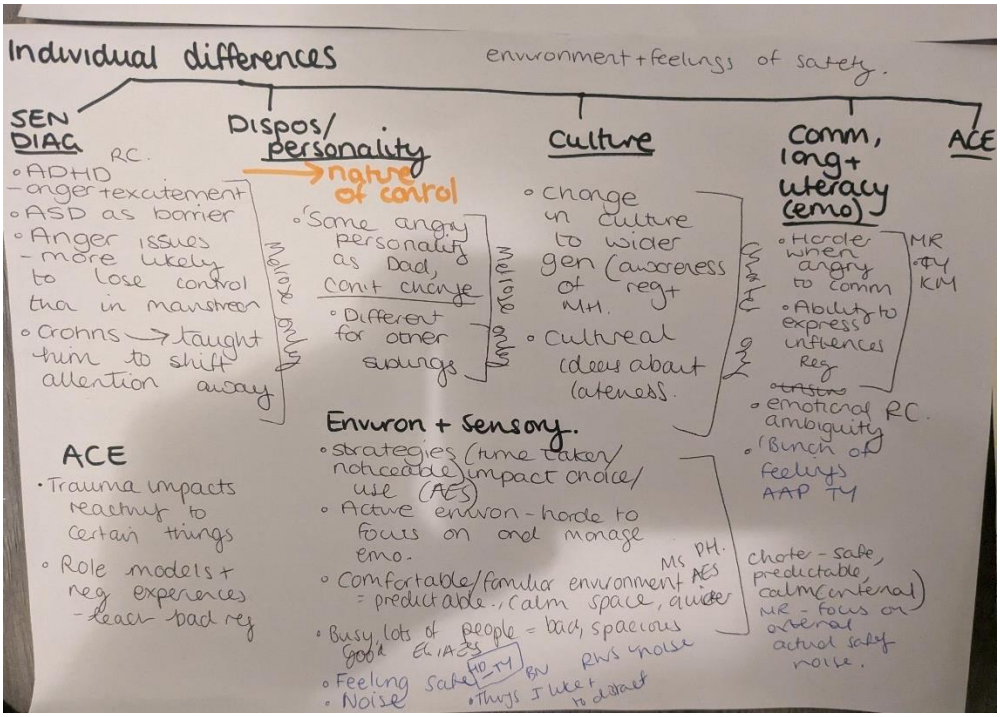


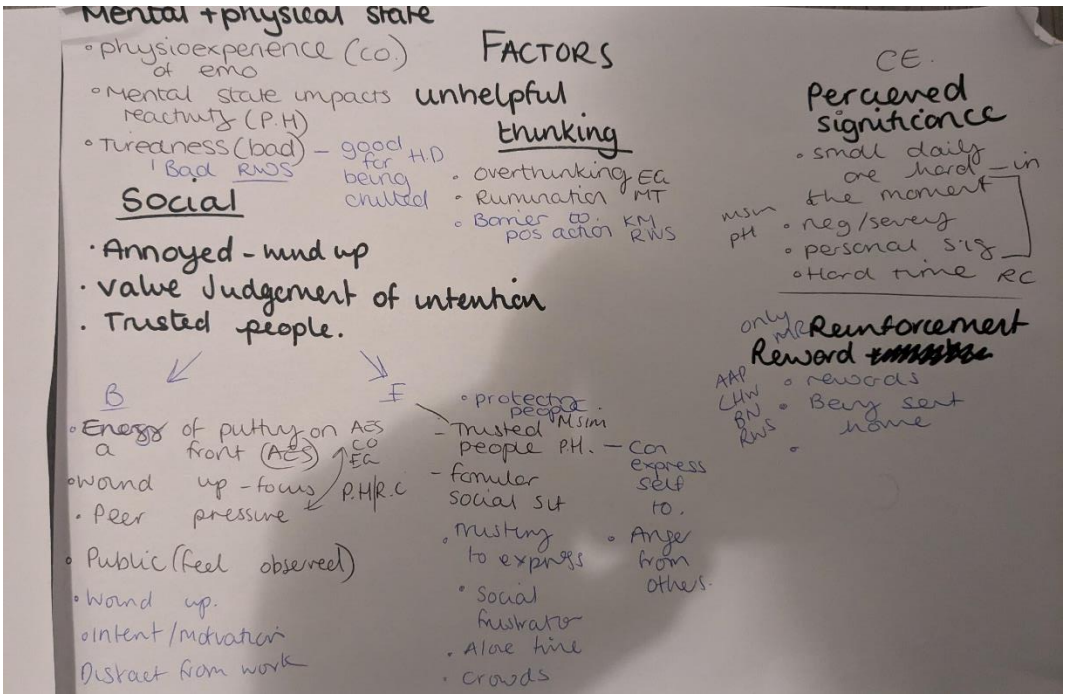
3: Developing Initial Nodes (Separate Nodes for Each Group) & Recoding in NVIVO

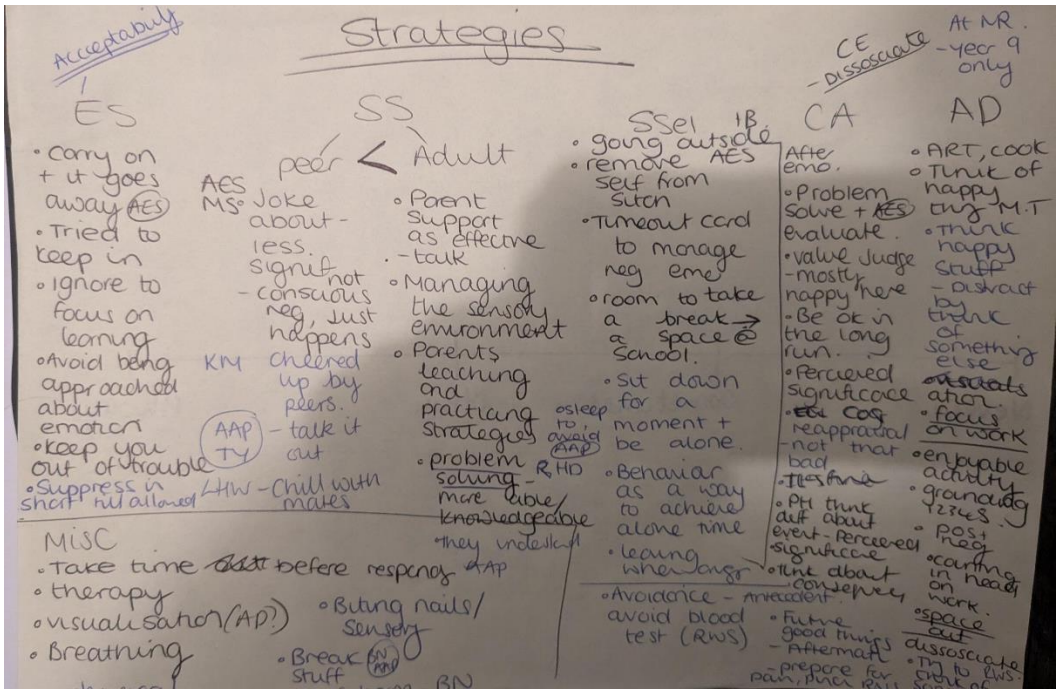


4: Refining Nodes & Reviewing (Decision to Use the Same Nodes for Both Groups)









5: Final Node Structure Outlined on NVIVO: Interviews coding using final node structure

Reference 1 - 0.33% Coverage

Stress a bit, or sort of like anxiety but like over small things, not necessarily the big things. Like you know, being late or something like that is quite difficult to manage.

Reference 2 - 0.79% Coverage

Like, you know, if you had the PIPS, the little alarm that goes off two minutes before the end of the lesson, right and the beginning so you know, my friends will generally gent, generally tend to walk a bit slower. And I'll be like, Come on, guys. We've got to get there before that's we're not late and it's sort of a bit difficult to manage and annoyance and stress, anxiety of that sort of, that's just one example