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**University of Southampton**

Faculty of Environmental and Life Sciences

School of Psychology

Exploring Mindfulness-Based Interventions for Young People in Secondary Provision

by

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Thesis for the degree of Educational Psychology

June 2022

## MINDFULNESS INTERVENTIONS IN SECONDARY PROVISION

## Abstract

The first chapter of this paper provides an introduction to the content and sets the context for the research, as well as providing personal reflections from the researcher.

The second chapter of this document presents a systematic literature review, exploring the impact of mindfulness-based interventions in secondary education settings. Four databases were systematically searched with explicit consideration of inclusion and exclusion criteria and key terminology. 16 articles were identified and critically appraised. Studies took place predominantly in the USA, with two studies taking place in Spain and one in Thailand. Whilst findings between studies varied, critical evaluation of the papers suggested a correlation between mindfulness and improved well-being, including improved emotional awareness and reduced levels of anxiety, though the outcomes measured within each study differed. The impact of intervention was further evaluated by four key factors: the style of analysis, the impact of the environment, the effect of relationships and the frequency of the intervention sessions. Studies utilise correlational data making it impossible to infer causality, and therefore indicating a need for further research considering the effect of mindfulness, particularly in less represented groups, such as students in alternative provision (AP) settings or in countries outside of the USA. There appeared to be a paucity of literature considering the voices of young people (YP) completing mindfulness interventions, with many adopting a quantitative approach, which would also be a helpful focus for future research.

The concept of well-being has become increasingly relevant in recent years, not least within the realm of education. Current understanding is that academic support alone is not enough to provide YP with the tools to thrive in later life. Research shows that many YP are struggling with their mental health but barriers to accessing services mean that they are often not receiving the support they need. A growing body of research has been exploring the potential positive impact of alternative well-being interventions. The empirical paper (Chapter 3) explores the experiences of YP attending an alternative provision setting following completion of a mindfulness intervention. The study adopted a qualitative approach, with seven participants completing a four-week mindfulness intervention created by the

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researcher. Semi- structured interviews took place with all seven participants following the intervention period. Data was analysed through inductive thematic analysis which identified four key themes: ‘understanding and experience’, ‘experience of the mindfulness sessions’, ‘individual impact’, and ‘features of a good mindfulness session’. Implications for practice following the results are discussed, considering how adults working with YP in AP or at risk of exclusion from mainstream should prioritise targeted, preventative and collaborative approaches to supporting well-being. Participant personal preference and needs contributed to their engagement with the sessions and so it will be helpful for the voices of the YP to be heard when designing interventions or curriculum- based support. Directions for future research are considered, with suggestions of further qualitative research to elicit the voices of YP in AP and considering how adaptations to mindfulness interventions within school could prove most beneficial. It would also be helpful for future research to be triangulated with information from school adults and parents.

*Keywords:*

‘alternative provision’, ‘inclusive education’, ‘mindfulness’, ‘young people’

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## Research Thesis: Declaration of Authorship

Print name: Maisie Kelly

Title of thesis: Exploring Mindfulness- Based Interventions for YP in Secondary Provision

I, Maisie Kelly, declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission.

Signature: .....

Date: 01.11.22

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## Definitions and Abbreviations

AP- Alternative Provision

CAMHS- Child and Adolescent Mental Health Service

CYP- Children and Young People

DfE- Department for Education

DH- Department of Health

DHSC- Department of Health and Social Care

EP- Educational Psychologist

PHE- Public Health England

PRISMA- Preferred Reporting Items for Systematic Reviews and Meta-Analyses

RTA- Reflexive Thematic Analysis

UK- United Kingdom

USA- United States of America

YP- Young People

## Chapter 1- Introduction to the research

### 1.1 Context to the research

#### 1.1.1 Research context

The most recent data for exclusions in the UK found that there were 5,057 permanent exclusions across state-funded and special schools for the academic year 2019-2020, compared to 7,894 in the previous year (DfE, 2021). Whilst this may initially seem like an improvement, considering the 2019- 2020 data includes a period of time when national lockdowns due to Covid- 19 meant that schools were not open for the entirety of the spring and summer terms, it suggests there is still something missing in provision to support those at risk of exclusion. When a pupil is excluded from a mainstream setting, alternative provision settings, such as pupil referral units, offer education for a temporary period before reintegration (Kinsella, Putwain, & Kaye, 2019; Lawrence, 2011). The most common reason for exclusion according to this data is persistent disruptive behaviour suggesting that a lack of emotional-regulation skills may be contributing to the difficulties of these students. Emotional regulation refers to how we respond to, experience and demonstrate emotions we feel (Gross, 2002).

Research finds that with regards to students with additional needs, students with social, emotional and mental health (SEMH) needs are the most likely to be attending an alternative provision setting following exclusion from mainstream (Jalali & Morgan, 2018), with statistics suggesting that around one in two pupils in alternative provision have SEMH needs as their primary category of special educational need (House of Commons Education Committee, 2018). Despite these figures suggesting that intervention in alternative provision should focus on supporting well-being and prioritising skills to support good mental health, this is a paucity of published research regarding the voices of these vulnerable pupils and considering strategies which can offer meaningful and effective support.

The longer-term impacts of school exclusion have been highlighted in recent years, with emphasis on the poorer outcomes experienced by YP who are excluded from mainstream schools. For



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example, a review by Timpson (2019) found that in 2015- 2016, just 7% of children who had been permanently excluded achieved passes in English and Maths at GCSE. More recently, only 4.5% achieved a Grade 9- 4 in Maths and English GCSE during the year 2018-2019 (DfE, 2021), the last time these exams were sat due to pandemic restrictions meaning centre- assessed grades were given for the following two academic years. Additionally, the school-to-prison pipeline construct is a term often used to refer to the adverse life experiences associated with individuals who have been excluded, with statistics showing that the majority of prisoners were excluded from school (Gill et al., 2017). All of these statistics and negative connotations associated with school exclusion motivated me to consider the views of this segregated population and to elicit their voices through my study.

### **1.1.2 Personal Context**

When it came to considering areas of research to explore for my thesis, I found myself reflecting on the experiences which led me to begin doctoral study. I chose to pursue a career in Educational Psychology following my own brief career as a teacher, where I found I did not have the time to dedicate to those students who I felt would benefit the most from my support. These were the students who were constantly receiving sanctions because they could not manage their anger, who would never complete their assignments, or who found education so overwhelming that their anxieties meant they found it challenging to even attend. These students, whilst struggling the most to manage the demands of school, were often, in my experience, those who were overlooked or even mislabelled as unteachable or defiant. I found myself thinking about these students and wondering what more I could do.

I moved from working in a secondary mainstream setting to alternative provision, where my eyes were opened to the daily struggles these students faced in managing their emotional regulation. On many occasions I saw first-hand the fight- flight- freeze response unfold in front of me, with an escalation of seconds. This struggle to manage emotions often resulted in incidents and behaviours which left damage or pain that lasted much longer than the initial anger or frustration or stress which

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had led to those actions. It was upsetting to see how such bright and confident YP could become so overwhelmed with emotions that these took over and left them feeling powerless.

In exploring topics for my thesis, I knew that I wanted my research to consider the views of students in an alternative provision setting, given my previous experience and understanding of the struggles these individuals often face, as well as the poor outcomes often associated with exclusion (Timpson, 2019). I wanted to consider this population and explore a possible approach to improve their school experiences. This journey led me to considering the potential impact of mindfulness. My own personal experiences with anxiety have led me to turn to mindfulness and consequently I have a personal understanding of how something as simple as focusing on the now, and letting your mind be present, can have a significant impact on well-being. It struck me that this was something which might have been impactful for the YP I used to support as well, and when I discovered that very little research has been done with this population I decided I had found the focus for my research. For my systematic literature review I opted to investigate the effects of mindfulness-based interventions on YP in education settings and for my empirical paper, my research aimed to answer the question ‘How do YP attending alternative provision experience a mindfulness intervention?’

### **1.2 Current study**

My overall aim for this research was to consider how YP in secondary alternative provision experience a mindfulness intervention, and to elicit their views on any potential impact they felt as a result of practising mindfulness. Research has found that mindfulness can have positive effects on reducing anxiety (Joyce et al. 2010; Sibinga et al., 2013), decrease levels of depression (Sibinga et al., 2016), and can even result in benefits to physical health (Barnes et al., 2004). Studies have also concluded that mindfulness practice can have a positive effect on participants’ emotional-regulation skills (Himmelstein et al., 2012; Short et al., 2015) which, given the data regarding the high proportion of students attending alternative provision with SEMH needs, could prove to be an invaluable support.

To further consider the experiences of YP in alternative provision, the second chapter of this paper outlines a systematic literature review which aimed to explore the effects of mindfulness-based

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interventions on YP in education. Following a systematic search of four databases using specific search criteria, 16 papers were identified and quality assessed. Following analysis, I was able to consider and discuss implications for future research, as well as strengths and limitations from the review. The systematic literature review was undertaken prior to the empirical study. The intention behind this was to consider whether specific mindfulness- based interventions emerged from the literature as being particularly beneficial within a secondary school context, to employ within my own study. However, no single approach stood out from the review, although key themes such as considering the space and the company with whom the intervention was done were generated.

The third chapter outlines an empirical paper which adopted a qualitative approach to explore the experiences of YP attending an alternative provision setting following completion of a mindfulness intervention designed by myself with the guidance of my supervisory team. Seven participants took part in the intervention over a four-week period alongside a member of school staff. Once the intervention was complete, participants took part in semi- structured interviews. The participants all attended the same alternative provision in England.

These two studies were undertaken to develop knowledge around how YP experience mindfulness, especially in a secondary alternative provision setting. Deepening this understanding could contribute towards provision for these YP and inform strategies to improve mental health and well-being for YP.

### **1.3 Research paradigm**

Ormston et al. (2014) highlight the fact that there is no single, orthodox way to conduct research, and the process is dependent upon the ontological and epistemological standpoints of the researcher, as well as their objectives, the environment, and other factors. Ontology is described as “the study of being” (Crotty, 1998, p. 10) with two principal perspectives stemming from this: reality and relativity. Realist perspectives consider that reality exists outside of the human mind, regardless of personal interpretation or thinking, whereas relativist ontology believes that reality is subjective and a result of human experience (Levers, 2013). As different interpretations vary, so do different

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realities. This research aimed to understand individuals' subjective reality and so a relativist ontology was adopted.

My epistemological standpoint revolved around the understanding that there is never one 'truth' but rather differing perspectives which result in differing subjective 'truths' for individuals. I adopted a social constructionist epistemological position, which considers how social exchanges between individuals contribute towards how they see the world and their reality (Sommers- Flanagan & Sommers- Flanagan, 2018). Burr (2015) explains that social constructionism recommends taking a critical approach to the ways of the world which we take for granted, recognising that the interpretation of reality will vary depending on different experiences and perspectives.

This epistemology emphasises the idea that there is no one objective truth, free from subjective interpretation. I was mindful of this when considering the analysis undertaken in the third chapter of this research. As I have outlined themes which I identified through my analysis, it is important to recognise that the subjective nature of this approach means that others in the same position might have generated differing themes or concepts than I did, dependent as these are upon the individual's interpretation. Given my history working within education, particularly within an AP context, I was aware that my personal lived experience would be coming with me. I was mindful of this personal impact and how it could influence my interpretation of the data. I tried to remain aware of this impact, using supervision to consider and unpick this. I would also ensure to take time away from the data to reflect on the process and my own experiences, questioning my thinking and consideration of themes.

### **1.4 Challenges**

I encountered many barriers whilst conducting this research, which rendered the process more challenging than I had initially anticipated. Firstly, it is unsurprising that the Covid-19 pandemic had a profound and longstanding impact upon not only my ability to conduct research, but also my personal journey with the thesis. The national restrictions imposed in schools meant that I entered my second year of study with conversations around thesis not really knowing what the process would look like or

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how it would impact upon my intended study. Furthermore, I found that the aftermath of the pandemic, with many schools continuing to struggle to contain coronavirus cases and finding staffing levels to be significantly depleted, meant that recruitment was very difficult. I contacted several different settings with no responses which meant that the recruitment process was delayed significantly, and it was unclear whether any setting would be willing to agree to participate.

When it came to collecting data, again there were some unpredictable delays in the process. My interviews were disrupted due to various situations which were out of my control: Covid outbreaks in the setting, a storm which left schools closed nationally, repeated pupil absence. However, thanks largely to the support of the school adults, I was able to complete my interviews with participants in order to continue with analysis.

### **1.5 Dissemination plan**

I have written the two research papers in this thesis with the an intention to pursue publication. As such, the papers have been written in the style required for submission to the journals I am currently considering. The journal I am considering submitting my systematic literature review to is the 'Educational Psychology Review'. This is a peer-reviewed journal which considers new research and research-based advice for educational psychologists, which I feel makes it an appropriate platform for my literature review. The journal I am considering for my empirical paper submission is 'Educational Psychology in Practice', which focuses on publishing research which is relevant to practising educational psychologists, primarily in UK contexts. Articles can be made available through open access which is very appealing to me as I would like the research to be accessible to professionals with ease.

### **1.6 Personal reflections**

The journey I have been on with writing this thesis, and completing the three-year course as a whole, has proven to be challenging. At times I was left wondering whether I had what it takes to finish a course as demanding as this, and to juggle the differing pressures which study at this level can throw at you. My own path which led to the doctorate was unconventional, having completed a

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master's conversion course to meet the prerequisite requirements. In my opinion this has caused me to travel through the course often feeling a sense of self-doubt, questioning whether I had the skills or knowledge to be here. This came to the forefront during the process of writing the thesis. Previously, I had not felt that reporting research was a strength of mine. I find I always carry anxiety that I will not be able to meet expectations, usually set by myself, and therefore will be seen as a disappointment or will have let others down. Writing this thesis has forced me to face these doubts and demons head on and decide whether I believed them or whether I could disprove them. The process has resulted in me reflecting upon which skills and support I leaned on in order to meet demands, namely the support and connection of friends and family.

I also found myself at times criticising myself for the small-scale nature of the study, wishing I had the resources and the time to produce a piece of research that could encompass a larger scope, and collect the views of more YP. However, I think this frustration was borne of a passion to really make sure these voices were heard. Ultimately, despite the challenges that I have encountered, I am proud of the piece of research I have been able to produce and I am hopeful that it can serve to support not only this area of research, but also that I personally can take forward the skills I have learned through this process. I have proven to myself that I am able to contradict the uncertainty I feel, and my actions in completing this thesis and completing this course in spite of the obstacles along the way have shown that I do have what it takes, despite what the voices of self-doubt might say.

## **Chapter 2 A Systematic Review Exploring the Impact of Mindfulness- Based Interventions on Children and Young People in Education Settings**

### **2.1 Introduction**

Consideration of and support for the mental health and emotional well-being of children and young people (CYP) has become an increasingly valid and pertinent topic within education, with the subject attracting increasing attention and investment from settings. In order to provide a well-rounded educational experience which allows YP to succeed, current understanding argues that academic support alone is not enough. (DfE, 2014).

Recent statistics identified two primary reasons for pupils to be permanently excluded from education settings as ‘persistent disruptive behaviour’, and ‘physical assault’ (DfE, 2021). It could be argued that pupils’ anti-social and disruptive behaviours in class and around school can be exacerbated by their struggles to effectively regulate emotions. Self-regulation skills are prerequisite for the ability to manage emotions and adapt behaviour accordingly in order to respond to various situations. These skills or lack thereof can have a profound impact upon a young person’s potential to succeed whilst at school, given their impact on engagement and learning (Esturgo- Deu & Sala-Roca, 2010). Consequently, research which considers and explores ways to support the development of student self-regulation skills provide an important and relevant insight to educational professionals. One approach that focuses on this area is ‘Mindfulness’ which has received growing attention in education settings, with evidence suggesting that it can serve to enhance well-being in the classroom setting (Sapthiang et al., 2019) and support more effective regulation skills and prosocial behaviour (Opalinski & Martinez, 2021).

This literature review aims to critically evaluate the existing evidence regarding mindfulness in education settings with secondary aged students. It is hoped that this will allow research in this field to progress and support educationists in their choices regarding the use of mindfulness interventions in their settings.

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### 2.1.1 Self-regulation

The term 'self-regulation' refers to an individual's ability to manage and adjust their actions, thinking and emotions (Vukman & Licardo, 2010). Some research suggests that self-regulation skills are closely related to the areas of the brain involved executive function skills (Martin & Ochsner, 2016), the cognitive processes located in the prefrontal cortex which are required to plan ahead, concentrate and remember (Dawson & Guare, 2010). Research by Hofmann, Schmeichel & Baddeley (2012) suggests that executive functions such as working memory, inhibition and task shifting are delicately connected to self-regulation skills and two can influence one another. For example, their study argues that self-regulation skills are linked to working memory capacity through the ability to resist distraction during tasks and therefore promotes ability to complete goals through an increased ability to regulate thoughts. Those with increased self-regulation are more likely to resist distraction and therefore have more working memory capacity to focus upon cognitive tasks at hand. Self-regulation is also present in one's ability to recognise and manage behavioural responses to situations, linking this clearly to the executive control of inhibition.

Understood more generally, the emotions elicited from certain situations and the way in which an individual can manage these emotions can impact upon their learning and the cognitive processes necessary to succeed (Martin & Ochsner, 2016). These executive functions are abilities which are frequently put to the test within the academic sphere and required for students to be able to access, engage and progress with learning in a meaningful way.

Despite differing theories, it is widely recognised that emotions and behaviour are intimately connected (Tamir & Bigman, 2018) and the ability to understand emotions correlates with the skill of regulating our behaviour effectively (Vine & Aldao, 2014; Eckland & English, 2019). Therefore, it can be argued that supporting self-regulation can serve to enhance prosocial behaviour and reduce instances of problematic or disruptive behaviours (Woolfolk, 2016).

Furthermore, self-regulation correlates with the emotional and mental well-being of YP, with Frick and Morris (2004) evaluating that they are linked to the development of different forms of psychopathology in YP. Therefore, the skill of regulating one's emotions effectively is not only one



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which can support positive well-being but also can have a deeper impact upon one's life experience and mental health in later life.

### 2.1.2 Mental health in CYP

In the UK, awareness and recognition of the importance of mental health amongst CYP is growing. Schools have a key role in supporting pupils' well-being and resilience, promoting a consistent approach to prioritising good mental health (DfE, 2018). Through research, we understand that many mental health disorders begin during adolescence (De Girolamo et al., 2012) and, with statistics stating that one in four adults in the UK will experience a mental health problem each year (McManus et al., 2009), it seems as though our focus upon supporting good mental health needs to begin during these childhood years. Data from 2017 suggests that one in nine YP aged between five and 16 years identified as having a probable mental disorder (Vizard et al., 2020) and mental health concerns during childhood and adolescence have been shown to have a severe negative impact upon life chances in adulthood (Richard & Abbott, 2009). As YP in the UK spend at least 190 days at school per year (Long, 2021) it seems wise to consider how education settings can promote mental well-being and facilitate good mental health within their provision. This was supported by a recent Green Paper which highlights that all YP should have access to "high-quality mental health and well-being support linked to their school or college" (DfE, 2017).

Nevertheless, whilst it can be argued that schools play a key role in supporting YP's mental health, how this looks in practice can vary. A national survey of school-based mental health programmes found that the vast majority offered YP access to targeted intervention packages out of lessons following a referral and screening process (Atkins et al., 2010). This approach is heavily resource dependent, in terms of the adults or professionals needed to facilitate sessions, and also necessitates YP having to compromise access to certain aspects of their curriculum. Additionally, this 'reactive' approach solely targets those who have already been identified regarding mental health concerns, yet research shows that 70% of YP who experience mental health problems do not receive appropriate support or interventions at an early age (Mental Health Foundation, 2015). This suggests that there are many YP who are currently falling through the cracks and for whom intervention focusing on promoting positive mental health would be beneficial and necessary. It would appear as

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though a more proactive and systematic approach is needed to extend support for positive mental health whilst not limiting the scope of those who can access this and also ensuring said approach is practical for execution during the school day.

### **2.1.3 Mindfulness-based interventions**

One possible alternative approach to supporting mental health is the implementation of mindfulness-based interventions. Mindfulness has garnered a lot of attention in recent years and grown in popularity as a psychological construct. There has been extensive research considering the impact of mindfulness interventions upon the well-being and behaviour of individuals of different ages. Several benefits have been reported, including decreasing feelings of anxiety and depression, increasing self-esteem and improving executive control so as to reduce inhibitive actions (Kuyken et al., 2017). The ability to show control and inhibition over actions is clearly linked to externalised and disruptive behaviours, and therefore it is interesting to consider how adopting mindfulness practice with pupils could have a positive influence upon their conduct within school, particularly when at risk of exclusion as a result of behaviour.

Research has been undertaken in various school settings and concluded that a mindfulness intervention can reduce depressive symptoms, with those who practice regularly experiencing higher levels of well-being and lower stress (Kuyken et al., 2013). Benefits with self-regulation skills have also been noted across differing age groups (Kaunhoven & Dorjee, 2017, Opalinski & Martinez, 2021) and various settings, with a study considering the impact of mindfulness upon participants within a prison environment also demonstrating improved regulation skills, alongside higher levels of self-esteem, decreased levels of hostility and lower levels of mood disturbance (Samuelson et al., 2007).

As a practice, mindfulness is rooted in Eastern and Buddhist traditions. It can be defined as the ability to be present, be intentionally attentive, and consider one's thoughts without judgement (Kabat-Zinn, 2003). Brown and Ryan (2003) describe mindfulness as "inherently a state of consciousness" (p. 824) whereby the emphasis is on allowing attention to remain in the present moment, without wandering to dwell upon past events or potential futures. Whilst interventions and

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approaches based upon mindfulness may differ, the key principles remain the same, with mindfulness practice revolving around three key elements: attention control, emotional regulation and self-awareness (Tang, Hozel & Posner, 2015).

### **2.1.4 Mindfulness and young people**

The majority of research considering mindfulness interventions has been carried out with adult populations, but an emerging literature has begun to consider the experiences of CYP. Self-regulation skills are particularly pertinent when considering CYP, as they experience changes both in themselves and in their wider environment which provide increasing pressures and demands upon emotional well-being (Gestsdóttir & Lerner, 2007). It is widely recognised that adolescence is a period of life where mental health conditions often begin to manifest, with research indicating that approximately 50% mental health conditions begin by the age of 14, though the majority go without detection or treatment (Kessler et al., 2007). This lack of treatment can be the product of poor awareness or importance afforded to mental health. Stigmas and stereotypes surrounding many portraits of mental illness can mean that YP experience shame or guilt around their mental health and thus do not seek out help (Corrigan & Watson, 2002). Cowie et al. (2004) also explain that the lack of suitable resources designed to support younger people with mental health difficulties as opposed to adults perpetuates this challenge and leaves many struggling to find appropriate help. This suggests that difficulties around accessibility and transparency mean that often YP who are struggling with their mental health are not coming forward and not seeking out the support they may need.

Though still in its infancy when compared to the body of literature exploring the impact of mindfulness on adults, recent research has suggested that mindfulness interventions are negatively correlated with psychological distress for YP and linked instead to psychological well-being (Parto & Besharat, 2011; Tan & Martin, 2016). Additionally, as well as the evidence to support the positive impact that mindfulness interventions can have upon this age group, another positive factor could be the efficacy and accessibility of the technique. Indications are that such interventions are very unlikely to cause harm to participants (Wisner & Starzec, 2016) and therefore the possibility for benefit from

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exposure to mindfulness could outweigh concerns for potential risk. This could support the idea of implementing mindfulness interventions to CYP with the intention of supporting positive mental well-being and diminishing psychological distress.

### **2.1.5 Aim of review**

The aim of this review was to conduct a systematic search of available literature to answer the research question is ‘what are the effects of mindfulness-based interventions upon the behaviour of CYP aged 10-19?’

## **2.2 Method**

### **2.2.1 Search Strategy**

Four databases – PSYCinfo, ProQuest, MedLine and ERIC – were systematically searched for titles which were potentially relevant for inclusion in this review. The specific search terms used during final searches can be found in Table 1. When searching databases, synonyms were separated with the command ‘OR’ and the two different areas of search terms were combined with ‘AND’. Where appropriate, terms that could have multiple spellings and suffixes were entered into the database using an asterisk to search all related terms, e.g., mindful\* for mindfulness or mindful. Overall terms were kept broad to include all studies that may reflect elements of this topic and synonyms were used to allow for a greater reach of search. For example, behaviour was searched through terms such as challenging behaviour, externalised behaviour, disruptive etc. Where applicable, filters were used to restrict the age of pupils.

### **2.2.2 Inclusion and Exclusion Criteria**

Inclusion and exclusion criteria were generated prior to initial systematic searching, to ensure that retrieved articles were relevant to the aims. The inclusion and exclusion data are outlined in Table 2.

Term 1	AND Term 2	AND Term 3
adolescen* OR teen* OR "YP" OR "young adult" OR youth	"challenging behavi*" OR "externalised behavi*" OR "unregulated behavi" OR aggress* OR challenging OR disruptive	"meditate*" OR "mindful*"

*Table 1: Final Search Terms*

To assess the eligibility of retrieved articles, they were initially screened by title. Next, the abstracts of the remaining articles were examined against the established inclusion and exclusion criteria. Finally, full articles were retrieved and considered in relation to inclusion and exclusion criteria. Sixteen articles were ultimately taken forward to be involved in this review. Details of this process can be seen in the PRISMA flow diagram (Figure 1).

### 2.2.3 Data Extraction

Key information was extracted from each of the sixteen studies. This information was summarised and presented within a table form used for data extraction (Appendix A).

### 2.2.4 Quality Assessment

Twelve studies included within this review were quantitative studies. These were quality-assessed using the Downs and Black Quality Checklist (Downs & Black, 1998). As this checklist is originally intended for use within clinical settings, some adaptations were made to make the language more appropriate for the educational context of this review. The wording was changed for some items, such as changing the term 'patients' to 'participants' (3) and making an item specific to the educational context (13). A score was given out of 27 to each study, with scores of 20 or above deemed 'good', between 16 and 20 deemed 'fair' and 15 or less deemed 'poor'. Three studies scored 'good', eight studies scored 'fair' and one study scored 'poor'. A full list of the questions used can be found in Appendix B.

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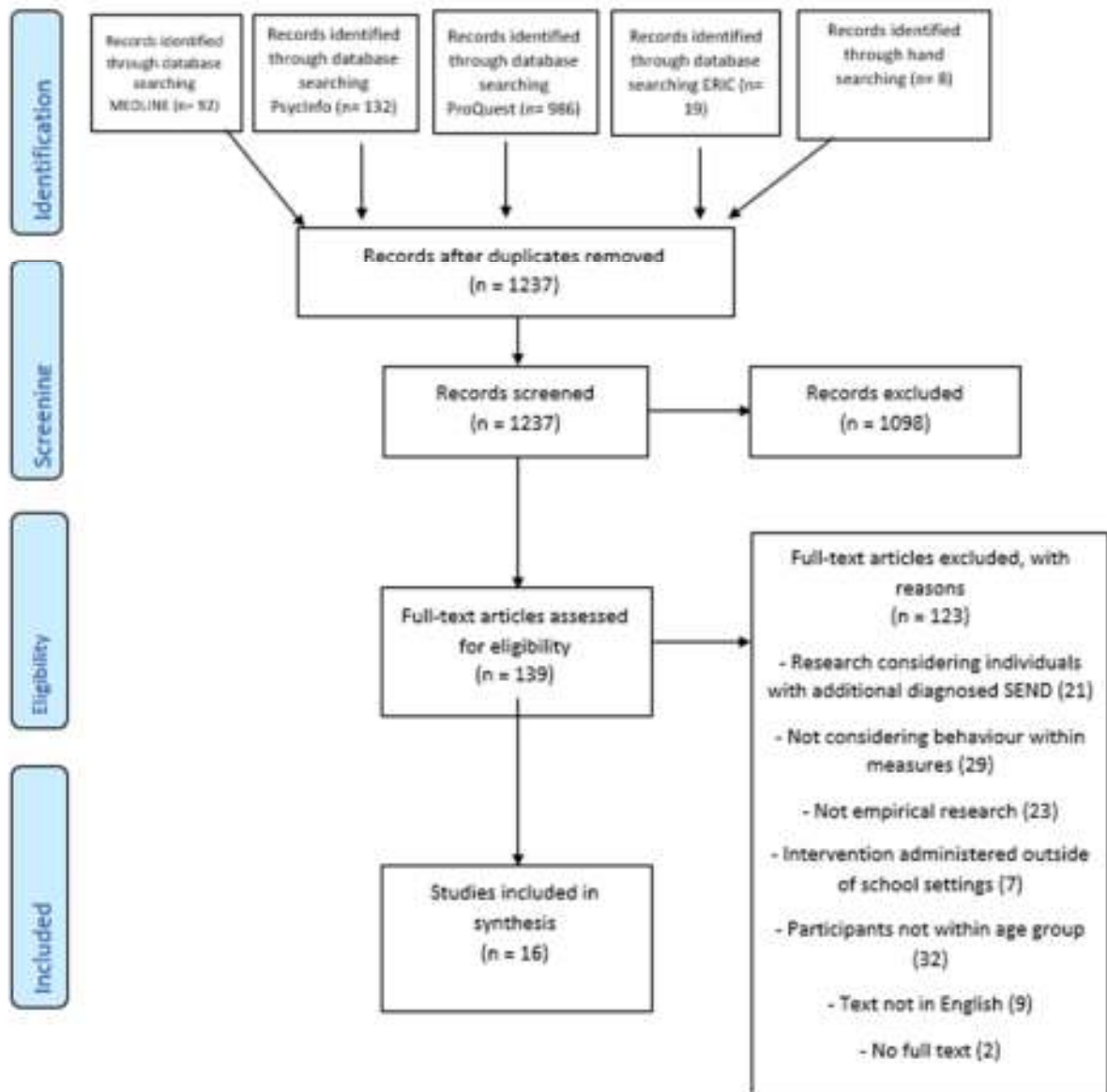


Figure 1- PRISMA flow diagram

The Critical Appraisal Skills Programme (CASP) qualitative assessment checklist was used to assess the quality of the one qualitative study and given a score of 10 out of 10 (Appendix C). The Mixed Methods Appraisal Tool (MMAT), version 2018, produced by Hong et al. (2018) was used to quality assess the three studies which used a mixed methods approach. These were given a score out of 17 (Appendix D). All three studies scored ‘good’ on the MMAT assessment tool.

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Inclusion	Exclusion
Studies available in English language	Studies not available in English language
Participants aged between 10-19 years	Participants aged 0-9 years or over 19 years
Participants with no additional diagnosed SEND	Participants with diagnosed SEND e.g. autism
Studies conducted within an educational setting	Studies conducted in a clinical, criminal or other non-educational setting
Studies reporting interventions involving mindfulness or meditation	Studies not involving an intervention or reporting interventions which do not involve mindfulness or meditation
Measuring at least one characteristic relating to behaviour/ emotional regulation/ self-regulation	Measuring characteristics purely to do with academic outcomes or other areas; not measuring behaviour/ emotional regulation/ self-regulation within outcomes
Studies reporting original research taken from journal articles or theses	Review papers, books, meta-analyses
Studies incorporating qualitative, quantitative or mixed methods approaches	Review papers, books, meta-analyses

*Table 2: Inclusion and Exclusion Criteria*

### 2.3 General Characteristics of Articles Included in the Review

Within the final selection of included studies, the majority of the research took place in the USA, two studies were conducted in Spain and one was conducted in Thailand. 10 studies identified participant sex and nine identified participant ethnicities. As per the inclusion criteria, only studies that reported on participants aged 10 to nineteen years old were included. This age range was chosen in order to consider the impact of mindfulness-based interventions on CYP attending a secondary education setting, recognising the variation of school structures in different countries.

#### 2.3.1 Mindfulness- Based Stress Reduction (MBSR) Interventions

All sixteen studies investigated the impact of adapted programmes based on Kabat-Zinn's (1990) Mindfulness-Based Stress Reduction (MBSR) program. The goal of the MBSR programme is to increase one's awareness of the present in a non-judgmental manner, reducing rumination on the past and anxiety about the future. The original approach takes place over a course of eight weeks, with each session lasting two and a half hours (Niazi & Niazi, 2011). The interventions incorporated within

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the studies considered are Learning To Breathe (Broderick & Metz, 2009; Bluth et al., 2016; Fung et al., 2019; Mai, 2010; Metz et al., 2013), Mindful Schools (Groark, 2019; Vega, 2018), Happy Classrooms (Lombas et al., 2019), and other adaptations of the original MBSR program (Salustri, 2009; Sibinga et al., 2016; Wongtongkam et al., 2013)

Studies varied in their delivery of the interventions, with sessions administered twice daily in two studies (Anderson, 2017; Lombas et al., 2019), daily in two others (Minkos et al., 2018, Wongtongkam et al., 2013), twice a week in five studies (Broderick & Metz, 2009; Groark, 2019; Salustri, 2009; Wisner, 2014; Wisner & Starzec, 2016) and weekly in five studies (Bluth et al., 2016; Franco et al., 2016; Fung et al., 2019; Mai, 2010; Metz et al., 2013). Two studies did not state the frequency of the intervention sessions (Sibinga et al., 2016; Vega, 2018). Intervention duration also varied both in session length (4 to 50 minutes) and intervention period (20 days to 18 weeks).

Seven studies used a within-subjects design (Anderson, 2017; Groark, 2019; Minkos et al., 2018; Salustri, 2009; Wisner, 2014, Wisner and Starzec, 2016; Vega, 2018) with the remaining nine studies utilising a between-subjects design. Three studies incorporated a non-randomised control trial (Broderick & Metz, 2009; Metz et al., 2013; Wongtongkam et al., 2013). Four studies adopted a randomised control trial, allocating participants to either the mindfulness intervention group or a control group (Bluth et al., 2016; Franco et al., 2016; Lombas et al., 2019; Sibinga et al., 2016). Two studies adopted a wait-list control trial (Fung et al., 2019; Mai, 2010).

### **2.3.2 Context of studies**

Participants who were included in the studies were aged between 10 and nineteen years and attended a range of educational settings.

Eight studies recruited students based on their curriculum, where their timetable would encompass the subject within which the mindfulness program would be taking place and therefore all individuals attending that course could be involved within the study (Anderson, 2017; Bluth et al., 2016; Broderick & Metz, 2009; Lombas et al., 2019; Mai, 2010; Metz et al., 2013; Salustri, 2009; Sibinga et al., 2016; Vega, 2018). Three studies recruited potential participants through recommendations from others; either by school staff (Minkos et al., 2018; Wongtongkam et al., 2013),



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or other professionals involved, such as school social workers (Groark, 2019). One study recruited participants through voluntary participation, with a monetary incentive for taking part (Wisner & Starzec, 2016). Finally, three studies used specific criteria to recruit participants, such as referral data for poor behaviour (Franco et al., 2016), or through a screening process whereby depressive symptoms were considered (Fung et al., 2019). One study recruited participants through purposive sampling within an alternative high school setting (Wisner, 2014). Alternative provision is described by the Department for Education as “... for pupils who, because of exclusion, illness or other reasons, would not otherwise receive suitable education; education arranged by schools for pupils on a fixed-period exclusion; and pupils being directed by schools to off-site provision to improve their behaviour” (DfE, 2013, p. 3).

### 2.3.3 Outcome measures

Studies varied in the reported outcomes stemming from the mindfulness interventions implemented. 13 studies considered the impact of mindfulness interventions through an element of self-report (Bluth et al, 2016; Broderick & Metz, 2009; Franco et al., 2016; Fung et al., 2019; Groark, 2019; Lombas et al., 2019; Mai, 2010; Metz et al., 2013; Salustri, 2009; Sibinga et al., 2016; Vega, 2018; Wisner, 2014; Wongtongkam et al., 2013). Five studies incorporated an element of teacher assessment in their analysis of impact (Anderson, 2017; Minkos et al, 2018, Vega, 2018; Salustri, 2009; Groark, 2019). Additionally, four of the studies included in this review completed qualitative analysis within their research (Mai, 2010; Wisner, 2014; Wisner and Starzec, 2016; Wongtongkam et al., 2013).

### 2.3.4 Self-report measures

Seven studies which used self-report measures concluded that following a mindfulness intervention resulted in significant improvements to participants’ externalising and internalising problems (Bluth et al., 2016; Broderick & Metz, 2009; Franco et al., 2016; Fung et al., 2019; Mai, 2010; Metz et al., 2013; Sibinga et al., 2016). Of these, five were rated as high-quality articles overall. Participants reported significant improvements in their ability to manage emotional regulation skills (Broderick and Metz, 2009; Metz et al., 2013). Three studies also concluded through participant self-report measures that there were significant decreases in externalising problems following

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mindfulness, including significantly lower levels of aggression or impulsivity (Franco et al., 2016), and a significant drop in negative affect (Broderick & Metz, 2009; Sibinga et al., 2016). Equally, three studies found that some participants reported lower levels of stress (Fung et al., 2019; Mai, 2010; Metz et al., 2013), two studies reported lower levels of depression (Bluth et al., 2016; Sibinga et al., 2016), one lower levels of anxiety (Bluth et al., 2016) and one study found lower levels of internalising problems (Fung et al., 2019) following the exposure to a mindfulness intervention programme. Interestingly, two studies also found that participants reported significantly lowered levels of somatic complaints such as headaches and stomach pains (Broderick & Metz, 2009; Metz et al., 2013).

However, three studies (Salustri, 2009; Vega, 2018; Wongtongkam et al., 2013) did not report statistically significant impacts following the mindfulness intervention. Salustri (2009) adapted Kabat's (1990) Stress Reduction and Relaxation programme for seven participants aged 16-18 years within an alternative high school setting. Behaviour reports for the participants suggested minimal to no change in positive behaviour during the study, suggesting that the intervention had not significantly impacted upon the participants' externalisation of behaviour within school. Furthermore, their analysis concluded that the participants experienced a minimal impact from the mindfulness programme with regards to their responses on different domains of the Multidimensional Students' Life Satisfaction Scale (MSLSS), with some showing a delayed effect but others demonstrating a negative effect following treatment. This study involved a mindfulness intervention which took place twice weekly over a period of eight weeks, with sessions lasting approximately 45 minutes. Salustri (2009) requested weekly reports from the participants' teachers which detailed behaviour measures: participants were awarded points for being present, being on time and for completing work, and given a score from 1-5 for respect (5= excellent). This style of report was adapted slightly for this study to allow for teachers' weekly reflections of the students' behaviours. As with all self-report, there is a risk of subjectivity and with a system as simplistic as this points system, it is difficult to conclude causality or concrete behaviour changes, as these could vary depending on different variable such as the teacher's mood, the time of day, etc. Equally, the findings considered the impact on specific behaviours of participants such as their attendance and arrival to class, but did not explicitly consider

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their views of the mindfulness and whether they had adopted or continued to use any mindfulness strategies in the future which could have been a helpful consideration.

Vega (2018) implemented their study within an alternative secondary programme, with a total of 29 participants aged between 12 and 14 years. The intervention for participants was delivered during Language Arts classes weekly, with sessions from the Mindful Schools curriculum. The duration of sessions is not clear from the research. Mindfulness and meditation approaches were also incorporated into other lessons and times during the school day. 20 participants completed the self-report part of the analysis, using the Health Self-Regulation scale before and following the intervention period. Results from participants' scoring suggested that exposure to the mindfulness intervention did not have a significant impact upon their perception of their healthy coping skills.

Wongtongkam et al. (2013) considered the impact of an MBSR intervention within a technical college. The 96 participants had an average age of 17.56 years and were assigned to either a treatment or control group. This was not a randomised process, as researchers considered participants' wishes and those who did not want to complete the programme were placed in the control group. Those within the intervention group attended sessions over three consecutive weeks from 9:00- 17:00 daily. Participants completed the State-Trait Anger Expression Inventory (STAXI-2) and the Pittsburgh Youth Study five item self-report measure. The intervention group did not appear to demonstrate any major reductions in self-reported anger or violence.

It is important to consider the limitations of research which uses self-report assessment measures. This includes social desirability bias, which can occur when participants infer that there are socially preferred answers to questions (Larson, 2019). In this instance, it is possible that participants might have enhanced their responses in order to appear more socially acceptable, thus rendering results less accurate due to the subjective nature of this style of assessment.

Equally, within the studies mentioned within this review, participants were aware of their involvement and were not blinded to the intervention. Therefore, results may have been impacted by the 'Hawthorne effect', where participants display behaviour changes as a response to their awareness

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of the study, and the fact that they are being assessed for research (Sedgwick, 2015). Furthermore, it is important not to underestimate the potential challenges for participants of younger ages to complete the self-report measures. Participants' prior exposure to completing forms such as questionnaires may have been limited, rendering the process confusing and therefore there may have been difficulties in understanding which affected how these were completed. Additionally, repeated requirements to complete questionnaires and other assessment tools might have impacted upon participants' motivation, meaning they were less engaged to adhere to guidelines and complete later assessment tools with full engagement, particularly for those who have already been identified as struggling with emotional regulation and concentration levels. It is not clear whether participants were provided with any support to understand and complete self-report measures to help mitigate such potential limitations.

### **2.3.5 Teacher reporting measures**

Five studies incorporated measures of assessment which relied upon teaching staff and other professionals' analyses of participants' behaviours (Anderson, 2017; Minkos et al., 2018; Vega, 2018; Salustri, 2009; Groark, 2019). Of these five studies, none were rated as high-quality articles overall, and Anderson (2017) was rated as being of poor quality.

Two studies used elements of non-standardised assessment measures which had been created specifically for the studies by the researchers (Anderson, 2017; Salustri, 2009). Anderson (2017) created a points system where participants could earn up to 16 points each day for using positive tone and language with their peers and school staff members. When incidents of negative tone and language were used, a point was removed. Points were awarded by the teachers. Anderson concluded that participants showed an average increase of 0.44 points, concluding an increase in verbal reactive behaviours. The study incorporated different mindfulness activities presented online and administered by the classroom teacher and co-investigator of the research. These were completed twice daily for 20 consecutive school days. It is important to note that Anderson's study was ranked as a low-quality article and so results must be regarded within the parameters of an article which has several

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limitations. Salustri (2009) also incorporated a points style system based on weekly reports from participants' teachers. This study involved a mindfulness intervention where 45-minute sessions occurred twice a week over eight weeks. As part of their analysis, researchers asked teachers to give weekly reflections on participants, awarding them points based on attendance, punctuality and work completion, as well as a score out of 5 for respect.

Two studies incorporated standardised assessment measures during their research. Minkos et al. (2018) collected data regarding two participants' academic engagement, respectful behaviour, and disruptive behaviour through teacher completed direct behaviour ratings. This was complimented by systematic direct observation completed by the researcher and two graduate assistants. Academic engagement and behaviour were also measured using Direct Behavioural Ratings (DBR) which involves rating academic engagement, respectful behaviour, and disruptive behaviour after a specified observation period.

Both participants demonstrated an overall increase in academic engagement during the intervention period and afterwards. An immediate and overall decrease in disruptive behaviour was also measured by DBR during the intervention period, but this was only maintained at the follow-up period for one participant. Vega's study (2018) required teaching staff to complete the Kinder Associates Behavioural Rubric (KABR), to analyse participants' behavioural characteristics. Teachers perceived that students' attention levels in the classroom improved when they had completed the mindfulness intervention. Self-control, participation in class, and care for others did not present with significant differences and therefore, overall, the mindfulness programme did not have a significant impact on how teachers perceived students' behaviours. Groark (2019) reported similar results, with attention, engagement, grades, attendance and emotional regulation as observed by teachers not showing consistent significant improvements following the intervention period.

### **2.3.6 Qualitative measures**

Four studies incorporated qualitative assessment tools (Mai, 2010; Wisner, 2014; Wisner and Starzec, 2016; Wongtongkam et al., 2013). Three studies used semi-structured interviews within their

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research, following the completion of the intervention period (Mai, 2010, Wisner & Starzec, 2016; Wongtongkam et al., 2013) and one used the method of concept-mapping (Wisner, 2014). One study conducted interviews at one month and three months post-intervention (Wongtongkam et al., 2013), one spoke to participants eight weeks following the intervention period (Wisner, 2014) and two do not mention the timing of the interviews in relation to the intervention period (Mai, 2010; Wisner & Starzec, 2016). Two studies state that interviews lasted between 30 and 45 minutes (Mai, 2010; Wongtongkam et al., 2013), whereas one states that interviews lasted approximately 15 minutes (Wisner & Starzec, 2016). Two studies also incorporated additional qualitative data into their analysis in the form of field notes (Mai, 2010) and journal entries completed by participants within their English lessons regarding their reflections of mindfulness they had experienced (Wisner & Starzec, 2016).

Analysis of semi-structured interviews identified a variety of themes, which could all be said to fall under the broad category of improved self-regulation skills. Emotional regulation improvements were reported in all studies, and it was found that these increased self-regulation skills contributed to improved concentration and focus on the present (Wisner, 2014; Mai, 2010; Wisner & Starzec, 2016), increased self-awareness (Wisner, 2014; Mai, 2010; Wisner & Starzec, 2016; Wongtongkam et al., 2013), improved school experience and engagement (Wisner, 2014), improved relationships (Wisner & Starzec, 2016), improved coping skills (Wisner, 2014; Wisner & Starzec, 2016), improved sleep (Wisner & Starzec, 2016; Wongtongkam et al., 2013), lower stress levels (Mai, 2010; Wisner, 2014; Wisner & Starzec, 2016) and reduced externalised or aggressive behaviours (Mai, 2010; Wisner & Starzec, 2016; Wongtongkam et al., 2013).

There are various advantages associated with qualitative research. Given the nature of the articles included within this review, where mindfulness practice was explored and considered through the experiences of participants, this style of research provides a very specific and detailed account of individuals' experiences of interventions. Qualitative research can be a useful tool to capture the voices of populations who are more often underrepresented, such as those who attend alternative

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school settings, and allows consideration of unique experiences rather than generalised conclusions of data.

However, there are some limitations to methodology within these studies. Two studies (Mai, 2010; Wisner & Starzec, 2016) do not specify when qualitative data was collected during the study, and therefore it is unclear how much time has passed since participants completed the intervention. This could affect their ability to accurately reflect on their experiences and may have resulted in less clear descriptions of potential impacts of the interventions. Equally, if mindfulness strategies did not become a continued part of participants' routines following the interventions, then it may have been challenging for them to consider any potential effects that they experienced, for example on their behaviour, at the time when mindfulness was a regular activity.

Interestingly, all four studies collected part of their qualitative data through journal entries (Wisner & Starzec, 2016) or feedback and responses to various questionnaires (Mai, 2010; Wisner, 2014; Wisner & Starzec, 2016; Wongtongkam et al., 2013). This approach requires a level of literacy and comprehension from participants. It is unclear within the studies whether participants were given any support or guidance with regards to these tools, and therefore it is a possibility that participants were unsure of how to respond accurately or how to complete the measures, thus potentially affecting the accuracy of the responses given.

Additionally, despite following guidance and methodology of different analysis methods for qualitative data, researchers will struggle to not have a level of their own subjective understanding portrayed onto the findings, with inherent biases contributing to conclusions that are made. It is also worth noting that one study included within this review involved transcribing interviews from Thai into English (Wongtongkam et al., 2013) and so it is possible that this may have resulted in some content from original interviews being compromised through translation.

### **2.4 Behavioural outcomes**

Studies varied in the reported behavioural outcomes considered through their research. Five studies (Anderson, 2017; Franco et al., 2016; Lombas et al., 2019; Sibinga et al., 2016; Wongtongkam et al., 2013) considered changes in aggression or anger through the mindfulness intervention. Nine

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studies considered how a mindfulness intervention affected behaviour through the lens of self-awareness (Bluth et al., 2016; Wisner, 2007; Wisner & Starzec, 2016; Wongtongkam et al., 2013) or self-regulation (Broderick & Metz, 2009; Fung et al., 2019; Groark, 2019; Mai, 2010; Metz et al., 2013; Vega, 2018; Wisner, 2007; Wisner & Starzec, 2016, Wongtongkam et al., 2013). Other studies considered more general observed behaviour changes as a result of a mindfulness intervention, as recorded by teaching staff, such as punctuality to class and engagement with work (Minkos et al., 2018; Salustri, 2009).

### **2.4.1 The impact upon anger and aggression**

Of the five studies which measured the impact of a mindfulness intervention upon aggression or anger, results were mixed. Lombas et al. (2019) utilised the School Aggression Scale (Little et al., 2003), adapted into Spanish. They found the mindfulness intervention had no significant effect upon physical or relational aggressive behaviour. Two studies (Sibinga et al., 2016; Wontongkam et al., 2013) measured anger levels using the State–Trait Anger Expression Inventory (STAXI-2; Spielberger, 1999). Neither study concluded significant changes to anger following a mindfulness intervention.

However, Franco et al. (2016) concluded significant reductions in all aspects of impulsivity and aggression levels measured through the Barratt Impulsivity Scale (BIS-11; Patton et al., 1995) and the Aggression Questionnaire (AQ; Buss and Perry, 1992). Anderson (2017) also concluded positive results when considering reactive verbal behaviours of participants following a mindfulness intervention. However, this study was rated as poor quality and the assessment tool used was a non-standardised measure created for the study. As such the results should be interpreted with caution.

Results are inconclusive as to whether exposure to mindfulness practice has a significant positive impact upon one's aggression or anger levels.



### 2.4.2 Self- awareness and self- regulation

Of the four studies which considered self- awareness (Bluth et al., 2016; Wisner, 2007; Wisner & Starzec, 2016; Wongtongkam et al., 2013), all four concluded increases in this skill following a mindfulness intervention. These findings came from qualitative analysis in three of these studies (Wisner, 2007; Wisner & Starzec, 2016; Wongtongkam et al., 2013) with participants reflecting through interviews, concept mapping or journal entries which were then analysed. Enhanced self- awareness was a theme which was generated in each of these studies. Bluth et al. (2016) found a small to moderate effect size between groups for changes in mindfulness, including awareness.

Several studies considered self- regulation skills. Four studies analysed this skill through the use of the Difficulties in Emotional Regulation Scale (DERS; Gratz & Roemer, 2004), one study used the 10 item Emotion Regulation Questionnaire for Children and Adolescents (Gullone & Taffe 2012), one study used the Healthy Self-Regulation Sub-Scale (HSR; West et al., 2005) and one study used a self-regulatory efficacy scale created by the program developer, alongside the DERS.

Of the studies using quantitative methods, three concluded significant changes in emotional regulation skills, including emotional clarity, cognitive reappraisal, and emotional awareness (Broderick & Metz, 2009; Fung et al., 2019; Metz et al., 2013). Three quantitative studies did not conclude significant changes in emotional regulation following the mindfulness intervention (Groark, 2019; Mai, 2010; Vega, 2018).

In contrast, all studies using qualitative methodology found data which suggested positive changes in emotional regulation. Wisner's (2007) study, which utilised concept mapping with participants, identified clusters such as 'enhanced emotional coping', 'improved stress management', 'improved state of mind' and 'more time spent being calm'. Similarly, Wisner and Starzec (2016) generated themes around enhanced emotional regulation, with participants explaining that they had noticed differences in the way they managed their anger and coped with emotions following mindfulness practice. Interestingly, two studies which incorporated a mixed methods approach (Mai, 2010; Wongtongkam et al., 2013) found that even though their quantitative analyses did not yield

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significant changes to emotional regulation skills, qualitative data found that participants observed differences in themselves.

### **2.4.3 Other perceived changes in behaviour**

Salustri (2009) measured behavioural impact through participants' absences, punctuality to lessons and completion of assignments. Overall, participants showed minimal positive changes to their behaviour within these factors following the intervention.

Minkos et al. (2018) measured disruptive behaviour levels as well as levels of academic engagement. Out of the two participants, both demonstrated a decrease in disruptive behaviour during the intervention period, though these levels remained below the baseline score at the time of follow-up for only one participant. As discussed above, these levels were measured via teacher assessment and are therefore subject to bias, as is discussed later in this review.

## **2.5 The impact of environment**

Whilst the inclusion criteria for this review meant that studies had to have taken place in an educational setting rather than a home or clinical setting, studies included within this review took place within a variety of different settings. Whilst seven studies took place in public school settings (Franco et al., 2016; Fung et al., 2019; Groark, 2019; Lombas et al., 2019; Metz et al., 2013; Sibinga et al., 2016; Wongtongkam et al., 2013), the other nine studies took place in private settings, alternative settings and during specific curriculum programmes.

### **2.5.1 Private school settings**

One study (Broderick & Metz, 2009) took place within a private, Catholic high school setting for girls, located within a suburban area of the USA. All students in the senior class took part in the intervention, with 120 students in total. Participants attended a Learning To Breathe programme twice weekly during their regular health classes. The interventions took place over five weeks, with a total of 42 sessions lasting for approximately 30-45 minutes. The study found that students experiencing the mindfulness intervention displayed statistically significant decreases in negative affect and

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significant increases in feelings of calmness, relaxation and self-acceptance in comparison to participants within the control group. They also demonstrated an increase in emotional regulation skills and a reduction in somatic complaints such as tiredness and aches and pains.

There were key differences in the participants' demographic information compared to other studies. All students were female and 93.3% of the treatment group identified as Caucasian, making this a near homogenous sample, within which experiences and findings would not necessarily be echoed for participants of differing ethnicity, sex or social class. Interestingly, the study found that around two thirds of the participants also practiced mindfulness outside of the school setting. Therefore, it could be considered that they had a good understanding and awareness of the strategies and increased practice. Equally, this could suggest a heightened level of engagement and motivation with the intervention.

### **2.5.2 Specific curriculum programmes**

One study was implemented within an emotional support program within a school setting (Anderson, 2017) and one took place in an afterschool programme within a high school setting (Mai, 2010). Anderson's study involved seven male students aged between 10 and thirteen years attending a middle school, although the data of only six participants was considered due to one student's lack of attendance. These students were presented with different mindfulness activities, administered by their classroom teacher and co-investigator of the research. Activities were supported by the use of videos and online resources, such as YouTube, and were completed twice daily for 20 consecutive school days. Each session lasted approximately three to five minutes. Findings concluded that participants demonstrated improvements in their reactive behaviours, such as verbal aggression, when rated on a non-standardised measure by their teachers.

It is difficult to interpret the level of accuracy and subjectivity involved when requesting teaching staff to assess outcomes for participants in this way, as their impressions and interpretations of behaviour can differ depending on their personal experiences. Equally, it is unclear how much guidance teachers received with regards to understanding how to analyse and assess participant

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behaviour. Consequently, it is difficult to conclude that students objectively improved as the subjective nature of this assessment tool could have impacted upon the accuracy of the outcomes.

It was also mentioned within this study that participants were not given information or explanation about what mindfulness was and this could have contributed to some participants' lack of engagement with the intervention, with one student not completing any sessions until day six of the programme. It is also unclear what the students felt of the intervention and their interpretations and reflection on any impact that mindfulness had had upon them.

Mai (2010) conducted a Learning To Breathe intervention with 12 students aged between 13 and 17 as part of an afterschool programme in an underprivileged urban neighbourhood. Sessions took place over six weeks, for 50 minutes per session. Participants reported a reduction in stress following the intervention (44%) or no change (56%) on a Perceived Stress and Self-Efficacy Questionnaire. Quantitative analysis concluded no evidence of group change through analysis of Five-Factor Mindfulness Questionnaires (FFMQ), Difficulties in Emotion Regulation Scale (DERS), Behaviour Rating Index for Children (BRIC), or the participants' attainment and attendance data. However, qualitative interviews found that participants had a positive response to the program, several reflecting upon improvements in their emotional regulation and behaviour.

This study discovered through interviews that participants found it very difficult to describe emotional experiences. This could have impacted upon their ability to unpick their reflection and consider the impact of the mindfulness intervention. Equally, the researcher felt that participants had generally experienced many stresses within their childhoods, including living within an impoverished urban community, not having both of their parents at home, and living often with much conflict at home. These stressful experiences may have impacted upon participants' ability to engage and reflect upon their experiences of mindfulness, as well as their opportunity to continue the strategies outside of the classroom setting.

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Finally, the data gathered suggested that many of the participants experience significant academic struggles. Consequently, this could have rendered the completion of assessment questionnaires challenging and thus affected the accuracy or detail with which these were completed.

### **2.5.3 Alternative school settings**

Six studies were set in alternative school settings (Bluth et al., 2016; Minkos et al., 2018; Salustri, 2009; Vega, 2018; Wisner, 2014; Wisner & Starzec, 2016). Findings varied, with three studies concluding improvements in participants' behaviour (Bluth et al., 2016; Minkos et al., 2018; Wisner & Starzec, 2016) and three identifying differences in behaviour following intervention (Salustri, 2009; Wisner, 2014; Vega, 2018).

Research that took place in alternative school settings had an average of just under 20 participants over the six studies, with two studies having less than 10 participants (Minkos et al., 2018, with two participants; Salustri, 2009, with seven participants). Contrastingly, studies which took place in mainstream school settings had an average of 136 participants over eight studies. As a result, students who are attending alternative provision settings or who have experienced exclusion are more likely to have special educational needs and have families affected by poor health, trauma and/ or poverty (Riddell and McCluskey 2012). These students can often feel disengaged or alienated from their learning (Bryson, 2010). As a result, it is possible that recruiting participants within these settings met more barriers than in other educational settings, resulting in lower numbers of participants and lower levels of engagement with the intervention. For example, Vega's study (2018) included 29 participants but only 20 completed the self-rating part of the assessment, indicating a potential lack of engagement or motivation. Equally, there is the most obvious barrier to recruitment in alternative provision which is the lower number of students on roll resulting in a smaller pool of students from which to recruit for research in the first place.

Additionally, one study (Bluth et al., 2016) reported a marked difference in participants' engagement within mindfulness sessions following a change in the environment in which the sessions took place. Following the first few sessions which took place in a classroom, the remaining sessions

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were held in the setting's gym which allowed for a more spacious, quiet and private environment. Bluth et al. noted a shift in participants' engagement and motivation within sessions following this environmental adaptation, with less resistance and less disruption taking place.

### **2.6 Other key factors**

#### **2.6.1 The importance of relationships**

One theme identified in this review was the influence of relationships and the impact these seemed to have on the efficacy of the mindfulness interventions used. This is particularly relevant as there was a wide variation between the studies with regards to the delivery of the intervention programmes. Six studies had interventions delivered by classroom teachers (Anderson, 2017; Lombas et al., 2019; Metz et al., 2013; Minkos et al., 2018; Vega, 2018; Wisner, 2014). Eight studies were delivered by individuals not connected to the settings, including the researchers (Bluth et al., 2016; Broderick & Metz, 2009; Fung et al., 2019; Groark, 2019; Mai, 2010; Salustri, 2009), mindfulness instructors (Sibinga et al., 2016), and Buddhist monks (Wongtongkam et al., 2013). In some of these studies the level of experience of the researchers was identified. For example, in one study, the intervention was delivered by a researcher with over 35 years of experience with mindfulness and 18 years of teaching experience (Bluth et al., 2016) and two other studies identified that interventions were delivered by researchers who had undertaken training in MBSR (Broderick & Metz, 2009; Fung et al., 2019; Mai, 2010). In one study, the intervention was delivered by both schoolteachers within the setting and researchers (Wisner & Starzec, 2016). One study did not clarify who delivered the interventions (Franco et al., 2016).

The studies which involved interventions being facilitated by familiar adults, such as school staff, generally showed a positive effect upon the participants' results. Five of the six studies which had interventions delivered by classroom teachers demonstrated improvements in behaviour, including positive language (Anderson, 2017), engagement (Minkos et al., 2018; Vega, 2018) and emotional regulation (Metz et al., 2013, Wisner, 2014).

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Whilst some studies which did not utilise familiar adults to deliver the interventions, it is interesting to note how findings differ between these studies and those using classroom teachers. For example, Fung et al.'s study (2019) utilised two unfamiliar doctoral students to deliver the intervention and did still find significant improvements in internalising problems and perceived stress. However, there were no observed improvements for externalising problems and attention. Wongtongkam et al. (2013) also concluded that although participants felt greater self-awareness, the mindfulness intervention had not led to a reduction in self-reported anger or violence. Equally, Salustri (2009) found that following intervention, participants showed minimal to no positive behavioural changes during the course of the study, with many showing a reduction in scores. Therefore, it seems that the relationship with the person facilitating the intervention could be influential on the outcomes. Whilst some studies concluded improvements in certain areas following interventions, with regards to improvements in self-regulation and externalised behaviours it appears that studies which use classroom teachers or other familiar adults conclude improvement in these areas compared to those using unfamiliar professionals.

The relationships between the participants and the person delivering the intervention appeared to have an effect of the intervention. For example, one study (Bluth et al., 2016) explained that later sessions involved a familiar member of staff within the setting who completed the sessions alongside participants. It was also reported that the researcher spent time with the participants outside of the intervention sessions, to support the development of a positive trusting relationship, for example eating lunch with them and participating in sports lessons. This was a conscious decision which arose out of discussions with school staff before the intervention began as the participants within the study were known to have experienced frequent disappointments and breakdowns in their relationships with adults, resulting in them feeling less willing to engage in new experiences, especially with people with whom they were not familiar. This study concluded statistically significant differences in depression and anxiety in their interventions group, and they also found that the participants' attendance to the mindfulness class was 81.8% which is reported to be higher than other mindfulness interventions with YP. The importance of a trusting relationship between the participants and the intervention leader was

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mentioned in Wisner and Starzec's study (2016), which identified that a lack of trust contributed to participants' experiences with the intervention and therefore, instructors spent time building relationships with the participants. It is clear that the relationship was facilitative of engagement in the interventions and shared emotional investment in the process.

Additionally, two studies commented on the relationships between participants and how this affected the dynamic of the intervention. One study (Salustri, 2009) reported that when certain participants displayed off-task behaviours during mindfulness sessions, other participants reported feeling frustrated and felt distracted, thus affecting the potential impact of the mindfulness. Mai (2010) echoed this sentiment, explaining that relationships between participants in the intervention group impacted upon the efficacy of the intervention itself, with some relationships contributing to higher levels of stress, and others acting as buffers.

### **2.6.2 Frequency of interventions**

Another key difference between studies within this literature review is the duration and frequency of the intervention period. Studies varied in duration of mindfulness interventions from twice daily to weekly and a duration of session from four minutes to 50 minutes.

Both studies which administered mindfulness interventions twice a day (Anderson, 2017; Lombas et al., 2019) did not conclude findings which could be considered significant. Lombas et al. (2019) found that following a mindfulness intervention, there was no significant effect upon autonomy, emotional clarity, involvement, intrinsic motivation, regulation and empathy. Anderson (2017) concluded an improvement in participant behaviours but this study was rated as poor with regards to its quality, due to the non-standardised and subjective analysis used to evaluate the impact of mindfulness.

Two studies administered the intervention programme daily (Minkos et al., 2018, Wongtongkam et al., 2013). Both of these studies concluded mixed results, with participants in the study by Wongtongkam et al. (2013) taking part in daily mindfulness for three consecutive weeks and not leading to any significant reductions in self-reported anger or violence through standardised



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assessment, although qualitative data suggested that participants felt a sense of improved self-awareness and self-regulation. Minkos et al. (2018) concluded improvements in academic engagement and behaviour for the two participants.

Five studies administered the intervention programme twice a week (Broderick & Metz, 2009; Groark, 2019; Salustri, 2009; Wisner, 2014; Wisner & Starzec, 2016). Studies showed varied results, with two studies concluding that improvements in attention, behaviour and engagement were inconsistent (Groark, 2019) or minimal (Salustri, 2009) and three finding improvements in self-awareness, relationships, self-regulation, behaviour and self-acceptance (Broderick & Metz, 2009; Wisner, 2014; Wisner & Starzec, 2016).

All five studies which administered the intervention programme weekly reported improvements in participant behaviour, anxiety, emotional awareness, aggression and anxiety (Bluth et al., 2016; Franco et al., 2016; Fung et al., 2019; Mai, 2010; Metz et al., 2013).

Another key factor to consider is the attendance of interventions. For example, in Minkos et al.'s study (2018) there was inconsistent attendance to intervention. Only two participants took part in the intervention, but the attendance was mixed. One student attended 16 out of 27 sessions, and the other student attended 15 out of 22 sessions. Reasons for absence included teacher absence, student absence, or alternative activities and instruction taking place at the same time. This is an important factor to consider with future interventions as participants will need to have maximum opportunity to take part in interventions and alternatives for when there is absence.

## **2.7 Discussion**

### **2.7.1 Summary and Overview**

The aim of this review was to conduct a systematic search of available literature to investigate the effects of mindfulness-based interventions for CYP within education. The review aimed to answer the research question 'what are the effects of mindfulness-based interventions upon the behaviour of CYP aged 10-19?'

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Of the 16 studies considered within this review, nine did not provide information on effect sizes for their research, making it harder to determine how meaningful the reported findings actually are. Of the seven studies which did provide information on effect sizes, large effect sizes were calculated in four studies for variables such as impulsivity and hostility (Franco et al., 2016), stress (Fung et al., 2019) and affective self-regulatory efficacy (Metz et al., 2013).

The effects of a mindfulness intervention upon CYP behaviour was the main focus of this review. Whilst it can be difficult to ascertain a summary of these findings, given that studies implemented different methods to measure behavioural outcomes, the findings indicated that there were mixed results. When it came to considering changes in aggression and anger, or school-related conduct such as punctuality and attendance, results were inconclusive. Similarly, of the six studies analysing self-regulation skills, three studies which used quantitative methods noted significant positive changes, whereas three did not. However, when considering the factor self-awareness, all four studies assessing this measure concluded improvements following exposure to mindfulness. What is interesting to note is that when qualitative methodology was adopted, participants themselves identified changes in their emotional regulation, noting improvements to their ability to manage and respond to their emotions, even when quantitative data found no such improvement. This is an intriguing finding, as whilst one could be quick to disregard the effect of mindfulness when unable to conclude a significant result, when participants are noticing positive differences in their own experiences of mindfulness and their behaviour, it suggests the need for further exploration. One plausible interpretation of this finding is through reference to the concept of the instructional hierarchy (Haring & Eaton, 1978). The first step in learning a new skill according to this theory is acquisition, whereby the individual learns new information and starts to apply it. However, it is only after repeated practice and exposure to the skill that one becomes fluent in this area. In the context of mindfulness practice, then, it might be the case that these study participants had developed a new awareness of their emotional regulation and could identify moments when they had modified it, but had not yet practised these new skills to an extent that they were demonstrating them fluently in their daily conduct.

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Four important factors in the mindfulness interventions studies were identified and explored within this review. The key factors were; 1) the style of analysis, 2) the impact of the environment, 3) the effect of relationships, and, 4) the frequency of the intervention sessions.

The form of analysis is an interesting element of the research studies to consider, as it will vary depending on what the intentions of the research are in the first place. Whilst thirteen studies utilised self-report (Bluth et al, 2016; Broderick & Metz, 2009; Franco et al., 2016; Fung et al., 2019; Groark, 2019; Lombas et al., 2019; Mai, 2010; Metz et al., 2013; Salustri, 2009; Sibinga et al., 2016; Vega, 2018; Wisner, 2014; Wongtongkam et al., 2013), five studies incorporated an element of teacher assessment (Anderson, 2017; Minkos et al, 2018, Vega, 2018; Salustri, 2009; Groark, 2019). This difference in approach is something which needs to be considered carefully, as it will always be influenced by the subjectivity of the person completing the analysis. As Paulhus and Vazire (2007) explain, self-report measures can lead to questions around credibility in responses and can be affected by the participants' awareness of how they will be perceived or even their memory, which can lead to inaccuracies. Equally, it is interesting to consider what guidance is included to support completion of quantitative report style assessment tools. Most tools will require a level of literary skills and understanding of how to complete such forms, which for many YP will not be a common occurrence. Further, within some of the studies the analysis adopted an unstandardized and highly subjective approach. For example, Anderson's (2017) point system which appeared to be very influenced by individual interpretations of language, bringing into question the validity of results. Such methods make it difficult to conclude findings which could be generalised to other populations as the variation in points could affect the accuracy with which the results are analysed.

Another key factor explored was the environment within which the intervention sessions took place. This review suggests that consideration needs to be taken with regards to allocating appropriate space for mindfulness interventions to be hosted, in order to promote and support higher levels of engagement and involvement from participants. For example, Bluth et al. (2016) reported that they changed the setting of their mindfulness sessions following difficulties with participant engagement when they were originally taking place in a classroom setting. Once the sessions moved to take place in the gym, participants' engagement and motivation improved significantly.

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It would also seem that it is helpful to be mindful of the effect that such an intervention may have upon the participants, depending on their history and current school setting (i.e., individual socio-historical context as part of the environment). For example, within alternative provision settings, it may be that students are more likely to have experienced adversity or trauma which may threaten their willingness to initially commit to a mindfulness intervention. It is important to recognise that the nature and process of mindfulness activities might be both unusual and uncomfortable for some populations in terms of the level of vulnerability and self-awareness required. Any steps which can be taken to minimise self-consciousness and promote an environment which feels safe would seem prudent in promoting participant engagement. This might include mindfulness sessions taking place in 'safe spaces', such as ones which are not associated with specific lessons or areas of the school setting where participants may struggle to be vulnerable.

Relationships proved to be an important element of the interventions with regards to how effective and successful they can be for participants. For participants to get the most effective experience of a mindfulness intervention, it seems that attention has to be given to the group dynamic, considering how different individuals could impact the sense of engagement within the session. For example, requiring participants to be open and vulnerable during mindfulness sessions and to focus their attention will perhaps be more challenging if they are alongside peers or in an area of the setting where they are visible to others and can be easily distracted or feel observed.

Furthermore, there needs to be a focus on the relationship between the person delivering the intervention and the participants. It may be that research which allows participants to complete mindfulness interventions alongside familiar adults, rather than the researchers themselves, can promote an increased sense of trust, allowing participants to relax and engage more in the sessions. As mindfulness requires individuals to be open to their emotions, requiring an increased level of vulnerability, it is important that participants feel they can trust those around them, to provide a sense of safety which facilitates effective mindfulness participation.

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Previous research has also highlighted the importance of relationships. Holyoke et al. (2022) found that within their mindfulness study with university students, participants felt comfortable when practice was student-centred and the environment was co-created, with practitioners alongside students. This role of client- practitioner relationship has been further explored in studies which conclude that the therapeutic alliance between participants and practitioners can positively influence participants' willingness to engage in interventions (Goldberg, David & Hoyt, 2013). These themes can be considered as a manifestation of Edmondson's (1999) definition of psychological safety: 'a team climate characterized by interpersonal trust and mutual respect in which people are comfortable being themselves' (p. 354). This aligns with Lambert's (1992) common factors to increase efficacy in therapeutic programmes, where it is stated that the client-practitioner relationship should be one where the client experiences warmth and empathy, and the programme is collaborative rather than dictated by the practitioner.

Finally, the frequency with which intervention sessions occur is another key theme from this review. Of all the studies considered, the strongest evidence of improvements (in participant behaviour, anxiety, emotional awareness, aggression and anxiety) were found in the five which administered weekly intervention sessions (Bluth et al., 2016; Franco et al., 2016; Fung et al., 2019; Mai, 2010; Metz et al., 2013). This could tentatively support the idea that interventions of mindfulness should adopt a similar frequency for optimal impact.

### **2.7.2 Strengths and limitations**

This systematic review included sixteen varied studies which had incorporated mindfulness interventions.

Limitations include the fact that the studies included within this review predominantly incorporated a quantitative design. Only four studies incorporated qualitative analysis within their design. A further relevant limitation of this review is the variation of assessment measures used to assess the impact of mindfulness across different studies. This lack of a consistent research design makes it difficult to integrate and compare findings. Equally, the large amount of self-report style

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studies mean that it is challenging to collate and compare results from different studies. It is important to consider the limitations of research which relies upon self-report assessment measures. One possible limitation of this style of research is the impact of social desirability bias for participants. Furthermore, as previously discussed, it is important not to underestimate the possible challenges involved with completing self-report measures. Participants' of such a young age may have less experience completing forms such as questionnaires and therefore may struggle with the process, as well as the levels of literacy required to complete these processes accurately.

Additionally, the studies included within this review considered a variety of different factors in relation to mindfulness, including academic engagement, externalised behaviour, anxiety, etc. This made it difficult to synthesise the results in order to conclude specific findings due the variety of variables being considered.

Results from the systematic review included research which spanned across different countries and different educational settings. This could be considered a strength as it allows an understanding of the potential impact of mindfulness interventions to span across different cultural environments. However, none of the studies included in this review took place in the UK and only three studies took place outside of the USA (Franco et al., 2016; Lombas et al., 2019; Wongtongkam et al., 2013). Therefore, the influence of the different socio-economic and cultural make-ups of these countries may mean that it is difficult to generalise findings to a UK education system.

Finally, the PRISMA process adopted during this review was systematic and thorough but relied upon one researcher completing the process independently (though it was discussed in depth with the supervisory team). An independent replication of the search process was not carried out and the quality appraisal of studies was also completed by only one researcher. Therefore, the findings are based upon this alone and are consequently subject to this individual researcher's subjective interpretation of the screening process.

### **2.7.3 Implications for future research**

Following this review, more research is necessary to extend the current understanding of how CYP experience mindfulness within education settings. In particular, research in UK based settings is needed in order to consider the implications of mindfulness interventions within this educational and cultural context. Future studies should also focus on the experiences of YP outside of mainstream education, such as AP.

It would also be beneficial for future research to encapsulate the opinions and views of the YP participating in mindfulness interventions to consider the strengths and benefits alongside the potential challenges of this as an experience. It would be advantageous to gather these views in a way which allows the YP participating to be empowered to discuss their views in a way which is accessible to them. Completing questionnaires or surveys might be a significant literary barrier to some YP, and therefore opportunities to discuss experiences verbally with a trusted adult may be preferable. Furthermore, it would be helpful to consider the impact of mindfulness within both education settings and in participants' general lives, and so gathering information about potential impacts and effects of interventions would be helpful to consider how to structure future mindfulness interventions in a way which is most beneficial to YP.

Further, there is a need to better understand the link between mindfulness interventions in alternative provision and the impact upon participants' externalised behaviours. The results from the review were not conclusive and not all studies considered this factor within their analysis. However, given the fact that the number of exclusions within UK education settings continues to increase (DfE, 2017), there is reason to suppose that challenging pupil behaviour in schools remains an area of concern.

### **2.7.4 Conclusion**

To conclude, research from this systematic review suggests that mindfulness interventions can serve as a positive strategy to support YP with their self-regulation, well-being and other behaviour. A very tentative suggestion can be drawn to suggest that interventions are most effective

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when delivered once weekly and someone the young person has formed a positive and trusting relationship with'. Nevertheless, it is not possible to claim causality with these studies as they utilise correlational data and therefore more research in the future considering the effect of mindfulness will be needed. Future research should consider the limitations discussed and seek to extend the literature base to further consider the views of students in the UK attending alternative provision settings. Those working alongside YP should consider the possibility of incorporating mindfulness interventions and techniques within curriculum to support YP, especially those struggling to effectively self-regulate and manage their behaviours.



### **Chapter 3 “*It’s really hard being at school and being calm as well*”: The Experience of a Mindfulness Intervention for young people attending a Secondary Alternative Provision Setting**

#### **3.1 Introduction**

##### **3.1.1 Mental health for YP**

The UK government’s recent green paper (DH & DfE, 2017) highlights the challenges which YP with mental health problems face, associating these with a higher chance of exclusion, school absence and issues with later employment. Consequently, it calls on schools to prioritise student mental health, providing funding for specialist support such as Mental Health Support Teams (MHST) to provide extra capacity for early intervention (DHSC & DfE, 2018). The UK government now encourages settings to focus on promoting student well-being, understanding this to be a prerequisite to supporting cognitive ability, as well as mental health and life skills for adulthood (PHE, 2021).

The existing literature base repeatedly informs us that youth is the most common time in life when mental health disorders begin to manifest, with 50% of mental health problems which last into adulthood established by age 14 (Kessler et al., 2005). In an NHS Digital survey (2021), one in six YP were identified as having a probable mental disorder, compared to one in eight in 2017 (Sadler et al., 2018). It is thought that 70% of YP who experience mental health problems do not receive effective support or interventions early enough (Mental Health Foundation, 2015).

Moreover, these worrying figures are only indicative for those assessed as having a need severe enough to meet the threshold for professional involvement, such as the Child and Adolescent Mental Health Service (CAMHS). It is probable that a greater proportion of YP experience mental ill health without reaching the clinical levels which give access to specialist intervention.

Evidence indicates that early interventions can prevent or delay negative outcomes associated with mental health disorders in an accessible and cost-effective manner (McGorry & Mei, 2018). Early intervention should aim to thwart the inception of comorbid disorders and stem the development of primary difficulties (Patel et al., 2007). This approach has become a more widely accepted within

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the field of mental health, with promising results. For example, an initiative funded by the Australian government, Headspace, provides early support for YP experiencing mental health issues, resulting in significantly reduced suicide ideation and self-harm, and reduced school absence days (Hilferty et al., 2016).

### **3.1.2 The current situation and impact of Covid-19**

The topic of mental well-being has been at the forefront of consciousness more recently, following the impact of the Covid 19 pandemic. A survey commissioned by UK mental health charity, Young Minds (2021) found that in January 2021 67% of YP surveyed believe that the pandemic would negatively affect their mental health in the long-term. Furthermore, the amount of identified mental health conditions rose from 2017 to 2020 across all age, sex, and ethnic groups according to a survey by England's Mental Health of YP (Ford et al., 2021). Whilst not representative of the entire population, this reported downward trend in mental health remains concerning.

### **3.1.3 Accessing support**

Despite the understanding that early intervention is key, accessing this often proves challenging for YP. The number of individuals experiencing mental health problems continues to rise, putting increasing strain on underfunded services. Research by the Royal College of Psychiatrists (2020) found that two thirds of surveyed British adults were waiting for over four weeks between appointments, with some waiting up to two years for treatment and 38% reporting that the wait resulted in them contacting emergency services.

PHE (2021) has identified education settings as a key component to promoting good mental health amongst YP. However, much of the current mental health provision in schools consists of targeted services for YP identified through screening (Atkins et al., 2010). Through this approach, not only do students have to compromise aspects of their curriculum, missing lessons to attend interventions, but those not identified as experiencing significant mental health concerns are overlooked. Given statistics which identify that most YP who experience mental health problems do not receive appropriate interventions at an early enough age (Mental Health Foundation, 2015), the

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implication is that the vast majority of those needing support are not meeting the threshold to access this.

It is crucial that we explore responses which support more YP in a way which is easier to implement. The UK now expects education settings to discuss mental health within the curriculum (DfE, 2018). This may help YP to see the school environment as one where they can begin to seek help regarding mental health difficulties. Educational settings are an ideal context to incorporate proactive mental health interventions, where whole classes can be supported within the curriculum. Understanding about well-being can also be promoted in schools through the role of a Designated Mental Health Lead, a role proposed by the UK government following research (DHSC & DfE, 2018).

Nevertheless, suggestions for work at a systems level proffered by PHE often rely upon the involvement of additional professional teams visiting schools such as Education Mental Health Practitioners. This approach, whilst desirable, is heavily dependent upon the resources, accessibility and availability of such services. Given the high demand and waitlist approach which often leaves YP having to wait for appointments (Care Quality Commission, 2017; 2018), it could be argued that it would be beneficial to develop classroom-based strategies which promote positive mental health to all students, regardless of level of need, whilst simultaneously being practical and plausible to be delivered by school staff.

### **3.1.4 Mindfulness-based interventions and adolescents**

Based upon Buddhist traditions and Eastern philosophy, mindfulness is described as “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (Kabat-Zinn, 2003, p. 4). The intention with mindfulness is to focus attention contemporaneously, increasing self-awareness of internal emotions and feelings (Tang et al., 2015).

Given the challenges with accessing mental health support, mindfulness-based interventions can offer opportunities to promote well-being with a larger cohort, without relying upon external professionals or expensive resources. Studies conclude that mindfulness is not only an effective way to support good mental health (Tan & Martin, 2014), but is also affordable (Kuyken et al., 2017).

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Research finds various mental health benefits to practising mindfulness, including reduced stress and anxiety, increased self-esteem, improved self-regulation and better physical health (Renshaw et al., 2021; Roeser et al., 2020; Kuyken et al., 2013).

Whilst most studies exploring mindfulness interventions consider adult populations, a growing body of research includes YP. Studies have found that mindfulness-based interventions delivered to adolescents lead to reduced reactivity (Franco et al., 2016; Kaye, 2021), increased optimism (Schonert- Reichl & Lawlor, 2010), decreased depression, anxiety and stress (Kuyken et al., 2013; Kallapiran et al., 2015) and improved attention and self-regulation (Zylowska et al., 2008; Kasson & Wilson, 2017).

The efficacy of mindfulness programmes in schools varies, with Tan's (2016) review finding many schools do not use suitable or measurable strategies. However, the nascent body of literature focusing upon the impact for YP is promising when appropriate mindfulness techniques are employed.

### **3.1.5 Alternative provision (AP)**

AP is defined as:

“education for pupils who, because of exclusion, illness or other reasons, would not otherwise receive suitable education...” (DfE, 2013, p. 6)

At the time of writing, there is limited published research considering the views of YP attending AP settings (Jalali & Morgan, 2018). Yet, most recent published figures in England show that 58.7% of YP in pupil referral units have SEN support, compared to 11.5% in secondary mainstream settings (DfE, 2021). SEMH is one of four areas of need identified within the Special Educational Needs and Disability Code of Practice (DH & DfE, 2015) but those experiencing SEMH needs are even less represented within research (Michael & Frederickson, 2013). This is a notable gap in the literature which needs to be addressed in order to successfully support this population of vulnerable pupils. As research finds that students with SEMH needs are the most likely to be attending AP or be excluded (Jalali & Morgan, 2018), it is likely that this represents a large proportion of this percentage. Furthermore, Ford et al. (2018) found that YP at risk of exclusion tend to exhibit

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poor mental health, which not only contributes to their exclusion, but also is exacerbated by the experience itself. Therefore, the evidence suggests that it is important to consider mindfulness in an AP context.

### 3.1.6 Current study

The present study aimed to address a gap within the existing literature base by considering the experiences of a mindfulness study for YP attending an AP setting on a full-time placement. There is a paucity of research considering this population, and furthermore very little published research at the time of writing has considered the views of YP in these education settings.

The principal research question was:

- How do YP attending AP experience a mindfulness intervention?

And there were two sub- questions:

- In what way do YP attending AP perceive that a mindfulness-based intervention has impacted on their behaviours?
- In what way do YP attending AP perceive that a mindfulness-based intervention has impacted on their self-esteem and pro-social behaviours?

## 3.2 Materials and Method

### 3.2.1 Epistemological Position

A researcher's epistemological stance is linked to their beliefs and influences what they determine to be valid knowledge. In the present study, a social constructionist epistemology was adopted, which endorses a subjective understanding of knowledge and reality. Social constructionism is a branch of constructivism which considers knowledge as constructed within the domain of social interaction, as exchanges between individuals contribute towards their reality and understanding of knowledge (Sommers- Flanagan & Sommers- Flanagan, 2018). Within constructivism, researchers strive to interpret the understanding others have about the world around them (Creswell, 2009). The researcher also considers how their own experiences and interactions shape how they interpret the data. A social constructionist approach recognises that individuals may interpret data differently depending on their lived experiences, as there is not one objective reality.

### 3.2.2 Design

The researcher initially approached four different AP settings in the South of England, seeking participants who were attending a full-time placement. One setting agreed to participate, and consent forms and information were distributed.

The research design was informed by the researcher's social constructionist position and intended to gather insight into the experiences of adolescents attending AP upon completing a mindfulness intervention from a purposive sample. Participants completed a four-week mindfulness intervention consisting of four video prompts created by the researcher. A consistent, designated staff member completed the intervention alongside individual participants. The researcher met with staff members to provide training on the intervention, including being shown a short video extract to familiarise them with the session format, being provided with a guide for each session and having an opportunity to ask any questions they may have. The aim of having an adult complete the sessions alongside the participant was to allow the process to be experienced as collaborative and novel for both adult and participant, creating an environment which offered both high levels of support as well as high expectations, similar to the Social Discipline Window approach within restorative practice (Wachtel, 2001).

A qualitative methodology was adopted. Upon completion of the four-week mindfulness programme, semi-structured interviews were conducted with seven student participants. The semi-structured format allowed flexibility for the researcher to adapt to participants' individual reflections, considering their personal views through open questions (see topic guide in appendix G). Interviews were carried out with individuals face-to-face to allow participants to share openly and honestly. Participants were also given the option of having a trusted familiar school adult in the interview with them if this made them feel more comfortable. During the interview, the researcher followed the topic guide, whilst also adapting questions based on responses and the natural flow of the discussion. Questions that appeared to not be well understood or which elicited minimal response were reworded or explained with possible examples. Interviews were audio recorded and the researcher made contemporaneous notes about body language so that these could be added to the eventual transcript.

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Interview recordings were transcribed and fully anonymised by the researcher (and the recordings were destroyed once this process was complete). Transcription data was analysed using Reflexive Thematic Analysis (RTA; Braun & Clarke, 2006; Braun and Clarke, 2019). RTA, described as “a method for identifying and analysing patterns in qualitative data” (Clarke & Braun, 2013, para. 2), is considered a very flexible approach which can be incorporated with a range of epistemological standpoints, research questions, and sample sizes (Kiger & Varpio, 2020). RTA is suggested to be a suitable method when the intention of research is to identify themes across an entire data set rather than with individual cases, and when the interest is in considering experiences with regard to social and cultural contexts, with outcomes having implications for future practice (Braun & Clarke, 2021). This suited this research well, as the intention was to consider themes across this population, within the context of AP and considering future directions for EPs working within these settings.

For this study, the RTA adopted an inductive approach, meaning that the researcher went into the process without preconceived ideas on what might be identified from the process, a data-driven approach where themes are strongly linked to the data and are not guided by the researcher (Braun & Clarke, 2006). The analysis process followed the six-part structure described by Braun and Clarke (2006) although this was not necessarily followed in a strictly linear manner, with steps being revisited if necessary:

- 1) The researcher familiarises themselves with the data, reading and re-reading transcripts until they feel familiar and “immersed” in the information, as well as noting any initial features they observe.
- 2) The researcher codes each item of data, creating labels for key features within the data which relate back to the initial research question(s). The codes are then organised, matched to specific and relevant data extracts.
- 3) The researcher actively constructs themes by observing patterns and similarities within the data.
- 4) The researcher reviews the themes constructed, ensuring that they successfully work with the coded extracts and data as a whole. At this point the researcher may choose to merge two themes together or

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divide one theme into two separate themes. This process may be revisited or restarted by the researcher, for example if they decide to disregard certain themes once these are reviewed.

5) The researcher conducts and writes an analysis of each theme. At this point, the researcher should be asking “what story does this theme tell?” and “how does this fit in with the overall story of the data?” in order to create an appropriate label for each theme.

6) The researcher writes up the process, telling the story of the data and pinning this within the context of the existing literature.

### **3.2.3 Participants**

Parental consent forms were sent home with pupils in years seven to 11 attending one AP setting in the South of England. Parental consent was obtained for nine participants and all nine participants assented to participate in the study. However, one participant did not complete the four-week intervention and one participant was absent during all interview sessions. In total, seven participants, completed the full four-week intervention and took part in a semi-structured interview with the researcher. Research considering appropriate sample sizes within qualitative methodology address the lack of an objective ‘minimum’ number but does assert that a sample size must be small enough to be manageable whilst large enough to provide an understanding of the novel experience being explored (Sandelowski, 1995). Braun and Clarke’s (2013) guidelines on sample sizes for RTA offer some suggestions of appropriate sample sizes according to the type of data collection and the size of the project. Their guidelines suggest that for a ‘small’ project as this would be considered, where interviews were used to collect data, 6- 10 participants are recommended. Fugard and Potts (2015) explain that the justification for sample size guidance is gathering enough data to demonstrate patterns but not having so much data that it becomes unmanageable. Pseudonyms were assigned to each participant to ensure anonymity. Other personal information, such as age, was not collected as the researcher did not feel that this information would contribute toward the analysis of the data. The seven participants were Cameron, Mike, Finn, Blake, Johnny, Nick and Luna.

### **3.2.4 Intervention**



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The researcher created four videos, each focusing on a different point of attention using various environmental stimuli (waves on the beach, a sleeping cat, leaves in a breeze, a babbling brook). The format of these videos was based on the core principles of mindfulness meditation, where one is encouraged to focus attention, often through objects such as the breath or imagery (Kristeller, 2007). This style of intervention is based upon Mindfulness- Based Stress Reduction programmes, with the objective to be non-judgmentally and intentionally present (Kabat-Zinn, 2003). In this study, the researcher designed the intervention around focal points in the form of video footage.

Each video was approximately ten minutes in length, and followed a similar structure: a narrated introduction encouraging participants to prepare for the session and explaining the overview (one minute); the main video stimulus, with prompts to participants to focus their attention and consider the subtle changes that they see in what they are watching and other feelings that they may experience if they were there (two minutes); the main video stimulus without narration (three to four minutes); and a discussion section (three minutes). Each video was followed by three discussion prompts: What did you notice? What thoughts came into your mind during the video? How did the video make you feel? (example video script can be seen in appendix K). These questions were discussed between the young person participant and the professional participant together, alongside any additional comments or thoughts they chose to share.

### **3.2.5 Ethical considerations**

Ethics approval for the proposed project was received from the University of Southampton Ethics Committee and Research Governance Office before the project went ahead (ethical approval reference number is 66518). Parents were provided with an information sheet explaining the study. Every potential participant was also given an information sheet and assent form prior to the intervention to give an informed understanding of the study. Both forms explained that participants could withdraw from the research up to two weeks after their interviews without consequence. Signed consent from parents and signed assent from participants was required before participants could take part in the study. Finally, professionals at school were provided with an information sheet and a consent form to sign should they consent to taking part in the study alongside participants. They were

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also informed on these documents that they could choose to withdraw at any point without any reason being given. In order to ensure that information provided by participants remained anonymous, the researcher asked each participant to choose a pseudonym to be used when transcripts of their interviews were created. If they did not wish to do this, the researcher assigned a pseudonym.

To try to reduce any anxiety or discomfort participants might feel in speaking to the researcher, they were given the choice of a member of school staff staying in the room with them during the interview. Only one participant opted for this. In addition, all participants were informed that they could pause or stop the conversation at any time.

All participants were provided with a debrief statement at the end of the research, where the researcher explained the next steps, how the information would be used and information for further support if needed. See appendices for ethical information including example information sheets, a parental consent form, a pupil assent form and a debrief statement.

### **3.3 Results**

The Thematic Analysis process produced four over-arching themes: ‘Understanding and experience’, ‘Experience of the mindfulness sessions’, ‘Individual impact’, and ‘Features of a good mindfulness session’. Each theme comprised several sub-themes (see Figure 2). Each theme will be explored in further detail.

#### **3.3.1 Theme One: Understanding and Experience**

The theme ‘Understanding and experience’ was established through participants’ accounts of mindfulness practice, their experience of similar interventions in the past and how they understood the concept. Two sub-themes were generated. Whilst the research was not focused on how much experience participants had previously garnered in terms of mindfulness practice, and this was not a prerequisite for the study, it is understandable that the way in which participants comprehend the concept of mindfulness could impact upon their expectations of the intervention. Therefore, the information within this theme was deemed important to demonstrate how participants constructed their thoughts about mindfulness.

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Figure 2: Final Thematic Map

### 3.3.1.1 Participants held varying views on what 'mindfulness' means

Discussions with participants about mindfulness led to them considering their personal definitions of mindfulness and what they understood by the term. Two participants found it difficult to explain mindfulness beyond the literal description of the sessions undertaken or the construction of the word itself. Blake defined mindfulness as “You sit in a room. Relax. Watch a video. Yeah...” and Cameron described it as “it’s about minds...fullness...”. Contrastingly, Johnny constructed mindfulness as an emotion: “calm and relaxing”.

Other participants defined mindfulness in terms of the effect it can have on individuals. Luna, Finn and Mike understood mindfulness as a concept which resulted in feeling calmer. Contrastingly, Nick described mindfulness in terms of the cognitive impact he felt it could have.

*Researcher- What does mindfulness mean to you?*

*Luna- Erm... a way to calm down and clear your mind.*

*Finn- It’s supposed to help people... if they’re like feeling sad.*

*Researcher- Supposed to help people if they’re feeling sad. What does it mean to you the word mindfulness? What does it make you think of?*

*Finn- Dunno... like, being calm.*

*Nick- Err, pretty much like helps your mind, I think. I don’t know...*

### 3.3.1.2 Most participants had not previously experienced a mindfulness activity

This discussion about mindfulness led to consideration of previous experience. Five of the participants interviewed had not practised mindfulness in the past. However, two students were unsure, describing previous programmes they had taken part in at school without being certain these were mindfulness sessions. Nick explained “I can’t remember. I know I seen someone but not about mindfulness, I know that.”. Johnny was also reflecting on previous sessions he had which he thought might have been for a mindfulness programme.

*Researcher- Had you ever done any mindfulness before?*

*Johnny- Err...yeah I think I did.*

*Researcher- Yeah?*

*Johnny- Me and [pupil's name] together.*

*Researcher- And what was that like? Was it at school?*

*Johnny- At school*

*Researcher- Similar or...*

*Johnny- I can't remember if it was similar or not...*

To summarise, this overarching theme provided an overview of participants' experiences of mindfulness prior to this study and subsequently how they understood the term. Participants gave differing definitions of mindfulness, demonstrating a range of understanding. These varying accounts evidenced a lack of clarity that exists with regards to mindfulness, with many interpretations revolving around the emotional impact that is possible as a result of mindfulness, rather than the action of being mindful itself. Equally, conversations suggest that some of the participants had been involved in previous interventions or programmes within school, which perhaps mirrored some of the features of this programme. Again, this suggests that there is perhaps a lack of understanding around what mindfulness is and the objectives around such interventions, which can result in participants misconstruing the intentions or confusing mindfulness sessions for other targeted interventions within school.

### **3.3.2 Theme Two: Experience of the mindfulness sessions**

The theme 'experience of the mindfulness sessions' was generated. A range of factors and features were considered with participants, and consequently this theme was further divided into two sub-themes.

#### **3.3.2.1 Participants' experience of the videos was greatly impacted by their specific content**

Participants' experiences of the mindfulness intervention sessions were greatly impacted by individual preferences for the content within the videos, such that they reported feeling more engaged

or motivated to watch certain videos depending upon their interests. For example, Cameron and Mike did not enjoy one video, quoting personal preferences for this aversion.

*Cameron- I didn't really like the cat one.*

*Researcher- The cat one.*

*Cameron- Cause I don't like cats.*

*Mike- The cat one...it's not really like calming. You just sat there watching a cat sleep.*

*[Researcher laughs]*

*Mike- The whole time.*

*Researcher- It wasn't calming?*

*Mike- No, it's a cat sleeping. You're not just gonna go 'ahh, very calming, relaxing' watching a cat sleep!*

Additionally, Blake reflected on how one video left him feeling frustrated as the footage did not turn out as he anticipated.

*Blake- ...and with the bird feeder it was tempting because there was...in the tree there was a bird feeder and it was tempting because I was waiting for a bird to land on it...*

*Researcher- And it didn't? Oh. Ok, so you were waiting for something to happen?*

*Blake- Yeah.*

*Researcher- How did it make you feel that nothing happened?*

*Blake- Bored.*

As well as the visual focus of the videos, other sensory elements of their content appeared to have an impact upon participants' enjoyment and engagement. Finn and Mike both found the auditory focus of the water-based videos to have a positive impact. Finn explained that "the noise of the like

the water was like relaxing” and similarly Mike enjoyed the videos which revolved around water “because the sound of it is really calming”. Cameron also reflected on how certain sounds would remind him of experiences he had lived in the past.

*Cameron- Probably the waves. Because I just like the sound of water. Like when I go camping the sound of rain just helps me sleep better.*

Participants were able to discuss what kind of content they would find more engaging for sessions, and as such more enjoyable. Some of these personal preferences were to do with the style of the videos, such as Blake’s preference for movement. Contrastingly, Mike’s preference revolved around the focus point of the video, explaining that he would find watching a dog running more ‘relaxing’ than watching a cat sleeping.

*Researcher- So, you think if it was something like animals at the zoo you would find it more exciting?*

*Blake- Yeah or even like a camera under the water on like crabs or something.*

*Researcher- So, it sounds like you like videos where there’s things moving and you’ve got to watch things happening?*

*Blake- Yeah, I don’t...you just don’t stay in one place watching one thing like the cat video just standing there watching it sleep...there was one cool bit where it lifted it’s paw up like [mimes movement].*

*Researcher- What else do you think would be good?*

*Mike- Erm... summin actually relaxing like not a sleeping cat.*

*Researcher- What’s relaxing though? It’s different isn’t it, for everybody?*

*Mike- Erm...a dog running around.*

These conversations indicate that individuals will interpret video content in various ways, which in turn can impact upon how willing they might be to engage with the session itself.

### 3.3.2.2 Participants varied in terms of how helpful they found the structure and expectations of sessions to be.

The second sub-theme was generated through participants' reflections on how they found the format, particularly the discussion prompts that followed each video. Cameron explained that he found it difficult to express himself, unsure about what he should say. Additionally, Nick found the expectation to discuss and reflect immediately to be challenging.

*Nick- I'm the person that like thinks about it but never can g- it's like I think about it and my mouth never says it. Until like probably the end of the day I think about it and my mouth says it.*

Luna, however, found the opportunity to reflect enabled her to identify her feelings.

*Luna- Erm, I think it's quite helpful 'cause it made you realise how it made you feel and...yeah.*

Participants also described the impact of certain expectations around the mindfulness sessions and how these could be a potential barrier for engaging with the sessions. Blake explained that the expectation to sit still and be quiet during the video could prove challenging for some individuals.

*Researcher- Do you think there's anything that would make some people find it hard to do the mindfulness?*

*Blake- Umm, maybe sitting still and like sitting there just watching it without talking or anything.*

*Researcher- Mm, so do you think it might be better if people knew maybe they could move around?*

*Blake- Yeah, maybe they could just like...the laptop be like there, but they don't have to just sit down and just watch it, they could stand up or whatever.*



Additionally, Johnny described how his sessions were adapted slightly to allow him to discuss during the video, as he found it difficult to try to stay quiet during the sessions itself.

*Johnny- I usually start talking to her anyway.*

*Researcher- Oh, ok so did you talk during it?*

*Johnny- Yeah.*

*Researcher- Did you find it hard to not talk during it?*

*Johnny- Yeah.*

*Researcher- Yeah. At the end you know when it came up with questions and you had a chat...*

*Johnny- No!*

*Researcher- What do you mean no? You don't remember it?*

*Johnny- No I didn't wanna.*

*Researcher- You didn't want to talk about it?*

*Johnny- No.*

*Researcher- Ok, so what did you do? Just...*

*Johnny- No, we talked about it in the middle of it.*

In summary, this theme revealed how the content of the mindfulness videos and the expectations around structure had a significant impact upon participants' ability to engage, as well as how much they enjoyed the sessions. Participants described different preferences for mindfulness videos, with some preferring to have a static focus offering a sensory element, whilst others preferred content which offered more movement and different focal points of interest. Equally, the element of discussion proved challenging for some individuals, whilst Luna found this to be a helpful reflection aide. Finally, participants found certain expectations around the sessions difficult, such as the fact they were encouraged to sit during the video or to hold discussion until the end.

### **3.3.3 Theme three: Individual impact**

A third theme of 'individual impact' was generated. This theme was further divided into three sub-themes.

### 3.3.3.1 Some participants reported feeling more focused and calmer after watching the videos

During the interviews, participants were asked to consider how the mindfulness practice had made them feel, or whether they could recall any thoughts they had experienced during the sessions. Some participants noticed that mindfulness left them feeling calmer and more relaxed.

*Researcher- No? Did you feel differently at the end compared to at the start?*

*Blake- Yeah.*

*Researcher- Yeah?*

*Blake- More relaxed.*

Other participants reflected on what the videos caused them to think about. For Nick, the videos left him thinking about similar experiences he had had in his own life. Interestingly, several participants commented on how the sessions had led them to focus on the scenes they were watching, showing a good fit with the objective of mindfulness as encouraging focus on the present moment. This also impacted upon their emotional state at the time of watching.

*Researcher- Ok. What did watching the videos make you think about?*

*Blake- Like where it, where it was. I tried to guess where it was, in the country or wherever.*

*Cameron- It made me feel about like being there... and like being away from everyone...*

*Researcher- Did that make you feel anything?*

*Cameron- Umm, it made me feel like relaxed and calm.*

For Luna, the mindfulness sessions also helped her to stop thinking about unhelpful or distracting things, focusing exclusively on what she was seeing.

*Luna- I thought they were really good 'cause they were quite calming and just kind of made you think about a lot of stuff and just...stopped you thinking, randomly thinking*

*about everything and just...stopped that for like, even just ten minutes.*

...

*Researcher- Ok. Did they make you... how did they make you feel when you were doing the mindfulness sessions?*

*Luna- Erm... quite calm... tired.*

### **3.3.3.2 Some (but not all) participants reported that the sessions helped them in their subsequent behaviour**

When participants were asked about whether they felt mindfulness had helped them in any way, some described how their behaviours had changed as a result of the calmer state of mind they experienced. For example, Mike and Finn described how the sessions made them feel less angry. For Mike, this even resulted in less physical behaviours towards others.

*Finn- Just felt a bit calmer. I was like...I wasn't...so one of the ones I was angry before because like someone in my class was really annoying me and I just like, it just like relaxed me.*

*Researcher- Do you think the videos helped you in any way?*

*Mike- Maybe I don't know.*

*Researcher- What do you think they might have helped with?*

*Mike- Me not punching my brothers.*

*Researcher- What do you mean?*

*Mike- I have four. I go home and punch them just to be annoying.*

*Researcher- Just to be annoying...Why do you think the videos might have helped with that?*

*Mike- Because they calm you down.*

Other participants felt it had impacted upon the way they were at school. Blake explained that the mindfulness “relaxed me and made me not as much hyper”. Luna felt that the sessions helped her

to feel calmer for the day ahead and found the impact of sessions to last during the rest of the school day.

*Luna- ... we did them in the morning so it was always like it just calmed you for the day ahead in a way...just in the morning.*

However, Cameron, whilst experiencing similar calming effects, found that these evaporated as he left the sessions to return to his usual classes.

*Cameron- It helps me but then when I walk out that classroom where we do the mindfulness it goes all out the window. They all just start shouting and screaming.*

### **3.3.3.3 All participants expressed a desire to do more mindfulness activities**

Participants were asked if they would like to do mindfulness again in the future as well as what they thought about practising mindfulness in school. All participants said that they would like to do mindfulness in the future. Some felt that this would be a good idea to do in schools as it would improve pupils' experiences of school. For example, Blake described how he felt mindfulness could help individuals in the classroom.

*Researcher- What do you think about the idea of doing mindfulness in schools?*

*Blake- Good idea.*

*Researcher- Mm? Why do you think it's a good idea?*

*Blake- Relaxes you.*

*Researcher- Why do you think it's good to be relaxed at school.?*

*Blake- Because so you're not a hyper so you don't get told off or anything.*

Some pupils reflected on the idea that mindfulness could help pupils who might feel anxious at school. Cameron felt that mindfulness in schools would be a good idea because "it's really hard being at school and being calm as well." Luna felt that practising mindfulness could ease anxieties and

added that it was a skill that could be used more spontaneously, empowering individuals to be able to calm themselves whenever they need.

*Luna- Because it could probably help a lot of people to feel calm and relaxed if maybe they worry or struggle at school.*

*Researcher- Mm. Do you think it's important to feel calm at school?*

*[Luna nods]*

*Researcher- Yeah? Why, why do you think that's important?*

*Luna- Because if you're feeling really worried about stuff it's hard to focus on stuff, learning and if you can't focus then it's, it's, not really, cause there's not really much point is there?*

...

*Researcher- Ok, cool. And how do you think it would help you if you got to do these sessions or you got to design them exactly like we just said? Do you think they'd help you in the future and in what way?*

*Luna- I think it would help because if there's ever a situation where you're just feeling a bit worried or anxious about something you know that you can just do some mindfulness and just get rid of some of those worries.*

In summary, this theme provided an overview of the impact that participants felt the mindfulness sessions had had upon them individually. Some were able to identify changes in feelings or thoughts as a result of the mindfulness programme. Others noticed observable changes in their behaviours, both at school and at home. A key observation was that the mindfulness made many participants feel calmer and more relaxed, with many describing how this then made school more positive or helped them to feel less worried, though the longevity of these effects varied according to different perspectives. All participants felt that mindfulness practice in schools was a good idea, suggesting different ways it could benefit school pupils, including by helping them to more effectively

regulate their emotions in order to concentrate more in lessons, and to feel less anxious in certain situations.

### **3.3.4 Theme four: Features of a good mindfulness session**

Participants discussed the features which they felt would improve the mindfulness programme and make the impact more beneficial for those practicing. This theme was further divided into the four sub-themes.

#### **3.3.4.1 Privacy is important**

When asked what could improve the participants' experience of the mindfulness programme, many explored the idea of privacy, and the importance of feeling you were not going to be interrupted during the sessions. Johnny referred to the "distractions" when "people just walk past" in the corridor outside of the room where his mindfulness sessions took place, which he found difficult. Cameron expressed that having other people knowing you were in the room and trying to distract you by making noises was difficult to manage and affected his focus.

*Researcher- What do you think would make it better for you?*

*Cameron- I don't know. Probably stopping the people from constantly banging on the door to see what's going on in the room. It's just annoying.*

*Researcher- Did that happen during some of your videos?*

*Cameron- Yeah...why?!*

*Researcher- So, you'd like to have it in a space where you know you're not going to be interrupted?*

*Cameron- Yeah. There's not going to be people banging on the door.*

*Researcher- What did that... how did that effect your...you doing the videos, having people banging on the door?*

*Cameron- So, I'd be like fully focused and then they'd bang on the door and I'd just lose all focus.*

Nick expressed that he would prefer to practice at home as this way he would have more privacy.

*Nick- I don't like...like...it's just the like just the privacy and all that...and pressure and all that...I just wanna be at home, chilled, relaxed.*

### **3.3.4.2 Physical comfort helped**

This sub-theme developed from participants' reflections on what kind of environment they needed to fully engage and get the most benefit from the sessions. Nick felt that having to wear school uniform meant that he would already struggle to feel comfortable during the sessions. Finn commented that the comfort of the physical environment also impacted upon how he experienced the sessions. Finn's interview took place in a small room which was equipped with a sensory tent full of cushions, where he sat during our conversation.

*Researcher- ...if, if I said to you right Finn I'm gonna change it to make it as good for you as I can, what would make it better?*

*Finn- Being in here probably.*

*Researcher- Being in here? Why is that do you think?*

*Finn- Because it's more like comfy and that.*

...

*Researcher- What do you think made it tricky sitting on the chair?*

*Finn- It was just like it was more like you didn't have like anywhere to...like you couldn't fully like stretch out and that.*

*Researcher- Right.*

*Finn- It felt a bit annoying 'cause you couldn't do anything.*

### **3.3.4.3 Most participants preferred the idea of practising mindfulness at school than at home**

Participants considered where they would prefer to practice mindfulness, exploring the differences between home and school as a base. Many participants expressed the view that school was a better location than home.

*Researcher- So, if you were able to do mindfulness do you think that's something you might like to do at home at all?*

*Cameron- Probably not cos I'm always kind of more calm at home cause I'm away from everyone that's loud...except my four year old brother. He's annoying.*

...

*Researcher- That's fine. If you would umm if you did it more or like moving forward if you were to keep doing mindfulness what do you think you'd like that to be like? Would you like it to be at school would you like it to be something like on your phone that you can go on when you want...?*

*Cameron- Probably at school. Cause it's really hard being at school and being calm as well. It's hard. Especially when everyone is like hyper around you. It's so annoying.*

*Mike- It would better to do it at school because it helps 'em with at school. Not...if they're at home it would just not really help them and they probably just won't do it.*

*Researcher- Why do you think it helps at school?*

*Mike- Because a load of people go around erm like playfighting and that and it turns into an actual fight.*

*Researcher- So, do you think mindfulness would help with that?*

*Mike- Yeah.*

*Researcher- Why?*

*Mike- Cos it'll help 'em calm down.*

Other participants felt that they would not feel motivated to practice mindfulness at home as they have other activities they would prefer to be doing. For example, Johnny explained that when he is at home he wants to “go out” rather than practice mindfulness and Luna felt the home environment did not make it very easy.



*Luna- Erm...probably no just 'cause I can get distracted when I'm at home cause there's a lot more going on...[inaudible]*

Additionally, some participants mentioned the features of the room itself. For example, Luna completed her mindfulness intervention in a meeting room within the school, where there was a busy corridor outside accessed through an electronic door.

*Researcher- Ok, is there anything that you think would make doing mindfulness at school tricky or something that might make it more difficult than if you were to do it say at home?*

*Luna- Maybe with like lots of people coming past, especially here cause there's the door banging loud...*

*Researcher- Right, so sometimes when you're watching the video there'd be people?*

*Luna- Yeah...the door it's quite distracting when you're trying to really focus.*

However, Finn and Nick shared that the lack of privacy in school resulted in home being the preferred location to practice mindfulness.

#### **3.3.4.4 Who the mindfulness videos are experienced with is important**

Participants completed the intervention alongside a familiar school adult. During interviews, some participants felt this was a positive feature. Johnny explained that with an adult “you focus more” and Cameron and Mike explained that without an adult supporting them they may have engaged in other off-task behaviours.

*Researcher- Mm. Do you think it was better having an adult there or would you prefer to have done it...*

*Cameron- ...probably better because I'd probably just get side-tracked.*

*Mike- I think it was good having an adult there. Cos if there wasn't I'd probably just watch something else.*

Participants also considered the idea of doing the intervention alongside other pupils at school. Johnny initially felt it would be better to do the programme alongside his “BFF” before then adding that this would probably be a “distraction”. Most participants felt they would not like to do the intervention alongside other pupils. Mike felt that others’ reactions might impact upon his experience.

*Mike- Because if you're doing it in a group they'll probably just moan and that. And probably better to do it by yourself.*

Some participants felt that having others there might result in them feeling uncomfortable. Cameron explained that he gets “really nervous around people” but would be happy to do the mindfulness alongside an adult. Luna felt she would be more self-conscious if other peers were there.

*Luna- Probably just me 'cause otherwise I'd feel like people might be watching you in a way, kind of...*

Some participants felt that they would prefer to complete the programme without a school adult supporting them. Blake explained that he would rather do the sessions “by myself” because the adult was “loud”. Finn also expressed a preference for doing the sessions by himself. Nick felt he would prefer to do the session with his mother rather than a school adult.

In summary, this theme provided a better understanding of the factors which make a mindfulness session a positive experience for the participants. The concept of privacy was important, with several participants finding the idea of others seeing them or disrupting their session off-putting. Others felt that it was important to feel comfortable in order to fully relax and immerse themselves in the intervention. The idea of location was also explored, with the concept of home versus school. Some participants felt the benefits of mindfulness were more suitable to a school environment, whereas others felt that they would engage more with the sessions if they were in the familiar

surroundings of their homes. The majority of participants found it helpful to have a school adult supporting with the sessions to keep them focussed. However, some participants emphasised a preference for doing this alone or with a family member. A key narrative was that it would not be as enjoyable or helpful to complete mindfulness sessions alongside other peers, as it would be potentially distracting as well as cause some individuals to feel anxious or concerned about how they were being perceived.

### **3.4 Discussion**

This study aimed to explore how YP attending an AP setting experienced a mindfulness intervention. Seven participants were interviewed, and data was analysed through TA (Braun & Clarke, 2006). Four overarching themes were generated from the data: *Understanding and experience*, *Experience of the mindfulness sessions*, *Individual impact* and *Features of a good mindfulness session*.

#### **3.4.1 Impact**

##### **3.4.1.1 Sub- question 1: *In what way do YP attending AP perceive that a mindfulness-based intervention has impacted on their behaviours?***

When considering sub-question 1, the findings suggest that most participants in this study perceived that taking part in the intervention had impacted upon their behaviour. Almost all participants referred to changes in their emotional state following their exposure to mindfulness, with many referring to feeling calmer or more relaxed. Similar findings have been concluded in previous research considering the experience of mindfulness- based interventions with children in education settings. Broderick & Metz's study (2009) found that participants who had attended a mindfulness programme experienced significantly increased feelings of calm and self- acceptance compared to a control group. In this study, some participants reflected on how mindfulness had impacted their behaviour, with Blake finding it made him less "hyper" which he felt would mean he got told off less in lessons, and Finn finding that mindfulness helped him to feel less angry. These reflections tie in with previous research which suggests that mindfulness- based interventions can help to decrease

school aged children's rule-breaking and aggressive behaviours when compared to a control group (Heidary et al., 2021).

**3.4.1.2 Sub- question 2: *'In what way do YP attending AP perceive that a mindfulness-based intervention has impacted on their self-esteem and pro-social behaviours?'***

When considering sub- question 2, findings did not indicate whether the intervention had impacted upon the self- esteem of participants. It is possible that a different style of questioning might have resulted in greater clarity on this specific element, however more direct questioning would not be consistent with the inductive style of approach adopted for this study. Luna felt that the programme resulted in less ruminative thinking for her personally, and she believed that the calming impact of focusing on the present moment is one which could support students who find school overwhelming. Some participants reported that they showed improved pro-social behaviours or reacted less impulsively to situations as a result of their mindfulness exposure. This aligns with previous research considering mindfulness- interventions for YP in school settings which also noted reduced levels of reactivity and aggressive or impulsive behaviour (Franco et al., 2016; Kaye, 2021). Having to focus on the present and not ruminating on past events has been found to reduce anger and hostile behaviour. Borders et al. (2010) undertook a study with university undergraduates and found that mindfulness was associated with decreased aggression as a result of its positive effect on reducing ruminative thinking. More generally, studies considering emotions and behaviour generally agree that the two concepts are closely intertwined, with emotional awareness impacting upon behaviour regulation (Vine & Aldao, 2014; Eckland & English, 2019). Consequently, work which targets improving self-regulation skills and self-awareness can subsequently promote prosocial behaviour (Woolfolk, 2016), as is suggested through some of the participants' reflections in this study.

**3.4.2 Contextual factors**

Another key theme which was generated in this study was the features of a good mindfulness sessions. Many participants shared that having an adult complete the sessions alongside them helped them to focus and none of the participants said they would prefer sessions alongside peers. This appeared to be due to concerns that peer pressure or self- consciousness would not only detract from

the mindfulness practice but would also potentially provoke uncomfortable feelings for the participants. The practice of mindfulness requires individuals to be present, submitting themselves to their own feelings and thoughts without judgement. This requires a level of vulnerability which means it is paramount that the environment is one of safety and trust. One understanding suggested by research is that the relationships we have with those around us serve to foster a sense of belonging and safety (Porter et al., 2021). In this study, the participants perhaps did not feel that their peers could provide an environment of trust and respect in which they could feel secure enough to be vulnerable. As Kelly et al. (2020) explain, “children and YP do not differentiate who they feel safe with by role or hierarchy, but rather by the quality of the inter-personal relationship” (p. 345).

Ryan and Deci (2000) propose that in order to experience self-motivation and well-being, individuals require three psychological needs to be satisfied: competence, autonomy, and relatedness. The researcher attempted to promote a sense of relatedness and positive relationship through participants completing the interventions alongside a trusted and familiar adult. However, concerns about privacy and what thoughts peers might have about their involvement in the intervention might have undermined this. Given their limited exposure to mindfulness in the past, and varied interpretations of what mindfulness means, it is possible that participants experienced a sense of uncertainty around the intervention, not sure whether they would be able to understand and achieve what was required of them, thereby potentially reducing their sense of competence. Additional factors, such as the physical requirement to sit for the intervention and distractions from outside the room, may have made this more challenging still. It is possible that this concept would require greater differentiation to meet individuals’ needs, so that they are able to embrace the culture of mindfulness, focusing their minds, without struggling with this to the point where it is distracting. One possible alteration could be support individuals to develop their tolerance for actively observing without discussion through initially using much shorter stimulus videos. Essentially, whilst it is helpful to know that the challenge of sitting still and being quiet can negatively impact how individuals experience mindfulness, it is also essential that this concept is protected, in order to avoid mutations of mindfulness which cannot be monitored and do not have evidential support for their benefits.

Furthermore, the findings in this research indicate that some participants found their motivation faltered as a result of the content of the videos. It was interesting to consider how participants' opinions on the mindfulness content impacted upon their engagement and ability to be 'mindful'. Videos which some participants found calming, others found boring. Comments from Blake suggested that he was waiting for something to happen, such as the bird to appear on the feeder or for the cat to move. This lack of a perceived highpoint within his anticipated plotline of the video led to negative responses to the video itself and a lack of engagement. This could be considered within the model of delay aversion theory (DAT). Research describes delay aversion as "a negative emotional reaction to the imposition of delay" (Sonuga-Barke, 2005, p. 1234), and is thought to occur when young people fail to meaningfully engage with an environment which features delayed rewards or actions. The theory asserts that certain individual differences render some people to develop a negative affect when faced with delay (Paloyelis et al., 2009). When faced with a situation where a delay cannot be altered or avoided, the theory suggests that individuals will try to reduce their perception of the delay by focusing on particular aspects of the environment to render the experience more interesting (Sonuga-Barke, 2005). In this case, Blake focuses in on the bird feeder, and is absorbed by the fact that a bird could arrive, ultimately feeling disappointed when this delay scenario is not rectified. Thus, it is helpful to consider that some young people may find certain content more distracting, as their attentional control means that they find it challenging to focus on the stimulus itself, but rather home in on an anticipatory event, which could lead to frustration. These findings suggest that there is power in not only offering participants the option to choose content, but also in establishing an understanding of individual preferences and interests in advance. Consideration could also be given to the order in which certain videos are used, with preferred content being shown first so that participants are more likely to develop their attentional skills ahead of sessions which they may find more distracting. It may be helpful to provide context to the videos, such as a narration advising that there will not be a lot of change within the video itself, to encourage participants to focus on settling their mind upon the scene, rather than predicting what could happen next.

In summary, this research provided a meaningful account of how YP attending an AP setting experience a mindfulness intervention. The study builds upon the emerging body of research regarding the potential benefits of mindfulness, particularly for YP who struggle with self-regulation or maintaining psychological well-being. Many participants noticed an impact upon their pro-social behaviour and their emotional well-being, which, despite this research being a small- scale study, suggests some promising outcomes which can be further explored in future research. In answer to the principal research question, participants' experiences of the mindfulness intervention varied, although all said they would like to take part in future sessions if these were offered. Many felt that the impacts they had experienced as a result of the intervention had made their school experience more positive, such as helping Blake to feel calm in lessons or helping Luna to ruminate less on unhelpful thoughts. Equally, some noticed a shift in their feelings and behaviours, such as Mike showing less aggression to his brothers, or Finn who felt less angry. It would be helpful to continue to develop an understanding of what content within mindfulness sessions results in the most profound impact for participants, as individual preferences affect engagement, as well as individual needs regarding sensory processing and cognition.

### **3.4.3 Strengths and limitations**

Whilst this study was able to elicit the voices of an oft underrepresented population, giving an insight into the potential benefits of regular mindfulness practice, it also has limitations. Firstly, this research was based upon findings from a small sample size, with all participants attending the same AP setting. Future research could consider adopting a mixed methods approach and recruiting a larger number of participants from across the UK attending different settings. A possible bias exists due to participants being recruited via the education setting, who were familiar with the YP and their needs.

Furthermore, the demographic for the setting where the research was held meant that the background and certain characteristics, such as race, was homogenous, and not representative of the diverse picture of the UK population. Therefore, it would be useful for future research to consider similar work across different populations.

The current study did not collect or explore participants' personal information or other factors such as age or sex. Additionally, no cognitive or academic data was shared. As a result, it is possible that some participants had additional needs which could have impacted upon how they experienced the intervention or indeed how they managed with the demands of the interview process. Some of the participants appeared to find the interviews more difficult to engage with. Johnny, in particular, would often reply with one-word answers, echoing the vocabulary used in the researcher's questions, or responding with, 'I don't know'. Other participants appeared to struggle with their attention, getting distracted by other things or topics. It may be that participants' understanding and the time given to think about the questions they were asked could have impeded their ability to reflect honestly and thoroughly. Additionally, some participants appeared to be more apprehensive about speaking to the researcher. Informal discussions with staff members suggested that certain participants struggled with anxiety or had been diagnosed with needs that could render a situation such as the interviews quite nerve-wracking. Consequently, this may have made the experience of interview more challenging. If the researcher were to repeat the process in the future, it would be helpful to have an opportunity to meet the participants ahead of the interview, to familiarise them with the researcher and hopefully reduce any anxiety. Equally, it may be advantageous for future research to gather information regarding participants' special educational needs and to elicit participants' preference for data collection in advance, so that data is collected in a manner which is accessible and comfortable, either verbally, through written responses, or through recordings. It would also be helpful for future research to collect data from a wider range of sources, including school staff or parents, to confirm themes and clarify interpretations.

In addition, participants only attended four sessions of the intervention in total. Informal discussions with staff members suggested that this was not long enough for some participants to feel any potential benefits, and also meant that some were only just acclimatising to the expectations of the sessions when they came to an end. It would be helpful to extend interventions in any future research to consider the impact that a more prolonged exposure to mindfulness could have.



It was suggested that finding appropriate spaces was a challenge, given the lack of private areas within the school. A lack of privacy is something that participants felt had impacted upon their experiences. Whilst the sessions took place in a consistent private location, away from other students, participants shared in the interviews their discomfort with the external noises of other students, explaining how this diminished the effects of the sessions. Some participants felt that they could not fully embrace the programme as they were hampered by other students knowing they were in the room or trying to distract them from outside. Other studies have noted the importance of location with regards to mindfulness practice. Bluth et al. (2016) found that their school aged participants were more engaged and focused when mindfulness sessions took place in a larger room, with more space and privacy from one another. Future research should aim to base mindfulness work with students in areas where they cannot be seen by other people or cannot be disturbed by external noises and distractions.

This research utilised a mindfulness intervention created by the researcher using a series of recorded sessions. The objective of this research was to consider what the experience of a mindfulness intervention was like for YP attending AP, rather than to assess potential behavioural changes or impact. However, there are some elements which could have improved the study. On reflection, given that this intervention utilised an untested approach, conducting a pre and post measurements of certain factors, such as self-regulation or participants' engagement with mindfulness, would have provided some justification for the novel intervention format and gathered data on the effectiveness of the approach.

There was no assessment of fidelity for this intervention. The researcher took steps to reduce the likelihood of infidelity by providing recordings of each mindfulness session of the intervention, to ensure that all participants were exposed to the same content and to reduce variation in administration. There was however a possibility for variation during the discussion sections of the sessions. One option could be for the researcher to observe a number of these sections within the study to ascertain that they were being delivered in the way instructed during the initial training. Nevertheless, as

previously mentioned the research relies upon participants feeling comfortable to discuss their feelings, which is supported by doing the intervention alongside a familiar adult. Therefore, the added presence of the researcher, or even a video recording device, to enable verification could have had a detrimental impact upon the openness of the discussion itself. Furthermore, there were additional aspects of fidelity which became clear only after the data had been analysed which the researcher had not anticipated and will have an impact upon future studies. For example, whilst having a private space for the sessions was recommended to school staff at the start of the study, many participants during their interviews alluded to how off-putting it was for them to practice mindfulness in a location where there were others outside of the private room who knew that they were in it. Going forward, this would become a new and important aspect of fidelity for future studies.

Finally, it is necessary to recognise the subjective nature of qualitative research and consequently how the researcher's own biases or lived experiences could have impacted upon the analysis. RTA is said to be a useful methodology to gain a breadth of understanding of a certain population, but can be lacking in depth as it does not offer the same depth of analysis for individual participants as other methodologies, such as interpretative phenomenological analysis (IPA) (Braun & Clarke, 2021). Whilst it could be argued that RTA was a suitable approach for the research intentions of this study, to gain an understanding of the experience of YP in AP, an alternative methodology might have concluded more specific themes for individual participants.

The limitations of RTA relate back to the epistemological standpoint of the researcher. The social constructionist epistemology considers that there is no objective truth, and as the researcher completed the data collection and analysis without any additional researchers, it is important to consider how this could have influenced the findings. The researcher previously worked in a Pupil Referral Unit, and so their personal experiences of working with YP in a similar AP setting could have affected their interpretation of the data collected. Braun and Clarke (2020) assert that "themes cannot exist separately from the researcher" (p. 39), explaining that the act of coding is implicitly subjective. The researcher could have developed themes in conjunction with another researcher, with the aim of reducing their own personal 'presence' within them, however any themes thus generated

would still have been influenced by the joint thinking of the research team, given the unavoidably subjective nature of RTA. Whilst the researcher did not share the coding process with another researcher, their thinking was regularly reviewed by the supervisory team in order to ensure that the themes generated were comprehensible and clear. Indeed, in a recent interview (Braun, Clarke & Hayfield, 2022) Braun and Clarke state the importance of recognising qualitative research as interpretative, always moulded and positioned to a certain extent by the researcher. Consequently, they explain that measures which seek to evaluate coding reliability do not align with the intentions and epistemological standpoint of RTA.

#### **3.4.4 Implications for practice**

This study aimed to elicit the voice of YP attending AP and explore their perceptions of a mindfulness intervention. Research suggests that interventions which promote self-regulation and attention skills, such as mindfulness, can lead to improved pro-social and learning behaviours at school. Therefore, it is important that adults and Educational Psychologists (EPs) working with YP within this population consider how these can be supported.

The findings indicate that having an awareness of relationships is very important. It could be argued that this population of students have experienced breakdowns or rejection from school relationships in the past, which has led to them attending an AP setting. Consequently, it will be useful for EPs and adults working with them to consider how they can facilitate interactions, making the environment safe and comfortable, and ensuring time is spent building rapport before leading assessment or intervention sessions. This research has shown that YP in AP can evaluate their own experiences of interventions and consider adaptations which they feel would make the impact more substantial. It could be argued that involving YP within the creation of interventions and curriculum design could serve to ensure that objectives are clearly understood, and that YP have a say in what they feel would be most beneficial for them.

Research has identified that YP who are excluded or at risk of exclusion often experience poor mental health, contributing to a lack of progress and more disruptive behaviour. This suggests that targeted interventions and support to promote mental health would be beneficial to not only improve

outcomes for students in AP but also as a preventative measure to support those at risk of exclusion in mainstream settings. As the UK government identifies that schools play a major role in supporting mental health, it would be helpful if schools considered implementing cost-effective and evidence-based support such as mindfulness-based interventions, promoting well-being in a preventative and collaborative way, with the ethos embedded in the school environment. Having a key adult who champions mental health could serve to provide the much-needed support to students who are experiencing poor school engagement or behaviour that challenges.

### **3.4.5 Conclusion**

This research has highlighted the varied nature of some of the experiences of YP in AP with regards to a novel mindfulness intervention, with perceived benefits as well as possible barriers being identified. This population of youth often experiences co-morbid difficulties due to disrupted education, such as a lower rate of post-16 education or training compared to mainstream peers (House of Commons Education Committee, 2018). As such, this study strived to consider how an inexpensive and evidence-based intervention such as mindfulness may be experienced by YP in such a setting. Key themes were generated, and analysis concluded that there are several elements which render an intervention positive and supportive to YP, including privacy, company and location. It is vital that future research strives to address the lack of pupil voice in the literature, to truly consider meaningful ways to improve outcomes for this overlooked and disadvantaged group. Given the heterogeneous nature of this population, it is essential that the YP's voice is heard when considering ways to support, with collaboration and autonomy being at the heart of any provision, so that opportunities to flourish despite historical challenges are abundant.

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Table 1- Final search terms

Term 1	AND Term 2	AND Term 3
adolescen* OR teen* OR "YP" OR "young adult" OR youth	"challenging behavi*" OR "externalised behavi*" OR "unregulated behavi" OR aggress* OR challenging OR disruptive	"meditate*" OR "mindful*"

Table 2: Inclusion and Exclusion Criteria

<b>Inclusion</b>	<b>Exclusion</b>
Studies available in English language	Studies not available in English language
Participants aged between 10-19 years	Participants aged 0-9 years or over 19 years
Participants with no additional diagnosed SEND	Participants with diagnosed SEND e.g. autism
Studies conducted within an educational setting	Studies conducted in a clinical, criminal or other non-educational setting
Studies reporting interventions involving mindfulness or meditation	Studies not involving an intervention or reporting interventions which do not involve mindfulness or meditation
Measuring at least one characteristic relating to behaviour/ emotional regulation/ self-regulation	Measuring characteristics purely to do with academic outcomes or other areas; not measuring behaviour/ emotional regulation/ self-regulation within outcomes
Studies reporting original research taken from journal articles or theses	Review papers, books, meta-analyses

Figure 1- PRISMA flow diagram

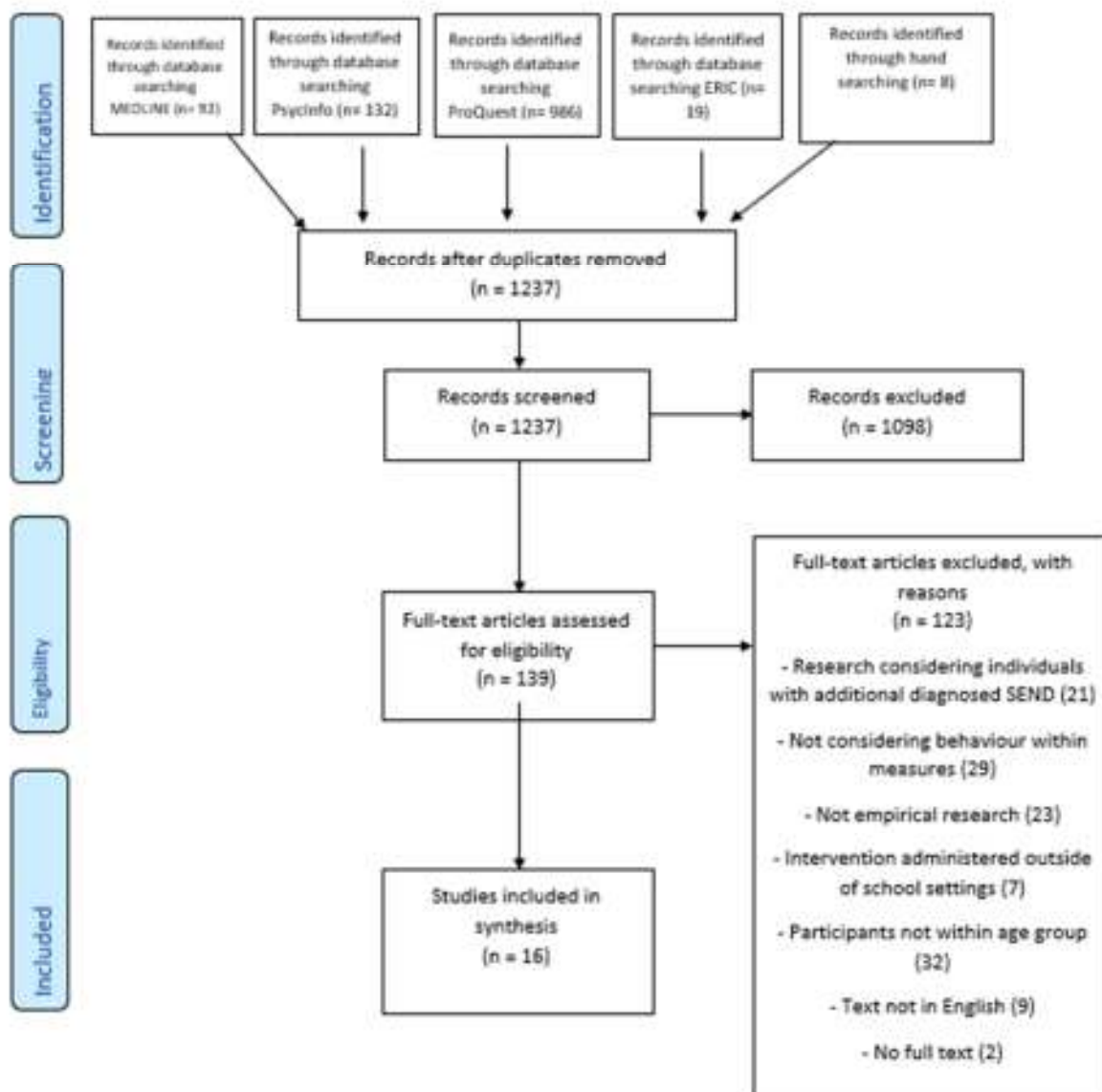




Figure 2- Final thematic map



Appendix A- Data Extraction Table

Authors/ Date of publication/ Country	Aims of study	Participants and setting	Design	Outcome Measures used	Main Findings	Quality Assessment Score
Anderson (2017) USA	<p>To decrease reactions to negative stimuli in the students with potential increases in attention, focus and academic achievement</p> <p>Considering impact of intervention on students' reactive verbal behaviours when encountering negative stimuli</p>	<p>7 Male (100%)</p> <p>Age: 5<sup>th</sup>- 7<sup>th</sup> grade (10-13)</p> <p>Ethnicity: 5 African American 1 Caucasian 1 Hispanic 1 middle school</p>	<p>Cohort study</p> <p>Variety of exercises, with video assistance from online resources such as YouTube and GoNoodle.</p> <p>Administered by classroom teacher/ co-investigator</p> <p>Including breath focus, body scan.</p> <p>2x daily for 20</p>	<p>Non-standardised measure created for this study: The students could earn up to 16 points each day for using positive tone and language with peers and staff. When incidents of negative tone and language were used, a point was removed.</p> <p>Baseline: 12.51 (range 9-14.38)</p> <p>During intervention: 12.95 (range 9.07- 14.67)</p> <p>Post-intervention: 13.71 (range 10-15.75)</p> <p>As a whole group, the participants showed an average increase of 0.44 points earned for positive tone and language which is the measure of verbal reactive behaviours used in this study. This is an increase of 2.75%.</p>	<p>These results show that mindful exercises such as breathing and counting do have a positive impact on the reactive behaviours, such as verbal aggression, of students with identified emotional and behavioural difficulties.</p> <p>No standardised effect sizes listed.</p>	<b>15/27</b>

			consecutive school days			
<b>Bluth et al.</b> (2016) USA	Consider whether conducting a mindfulness class with ethnically diverse, at-risk adolescents is feasible and to explore the effects of the intervention on psychosocial outcomes.	27 73% Male 27% Female Age: 9 <sup>th</sup> - 12 <sup>th</sup> grade (14-18) Ethnicity: 54% Hispanic, 24% African American, 18% Caucasian, 3% other 1 alternative high school	<u>Randomised control trial</u>  <u>Learning to BREATHE (L2B)</u>  curriculum was modified to accommodate the logistical demands of the school and the unique needs of the population: body scan or restorative yoga (once instructed how to do this).  Over 11 classes.  Administered by	BASELINE: Mindfulness (CAMM) Intervention: 27.14 Control: 27.00  Self-compassion scale (SCS) Intervention: 3.08 Control: 3.06  Social Connectedness (SOC) Intervention: 35.43 Control: 33.69  Perceived Stress Intervention: 20.36 Control: 18.62  Anxiety (STAI) Intervention: 43.61 Control: 42.31  Depression (SMFQ) Intervention: 7.36 Control: 5.23  POST-INTERVENTION: Mindfulness (CAMM) Intervention: 37.63 Control: 23.75	The attendance rate for the mindfulness class (students who attended more than 8 classes) was 81.8%, which is greater than that of other reported mindfulness interventions with adolescents.  Results: statistically significant difference in depression between the intervention and control groups. Anxiety suggested that the intervention group decreased in anxiety, whereas the control group increased. Interestingly, in both cases the control group worsened to a greater degree than L2B group improved.  Contrary to expectations, both groups indicated experiencing slightly <i>less</i> stress at the time of the final assessment. Although we found no effect size difference in self-compassion between the L2B and control classes, it is worthy to note that self-compassion improved in both classes  Effect sizes (Hedges g): Social connectedness -0.23 Anxiety -0.29 Perceived stress 0.46 Self compassion: no effect size difference Mindfulness 0.51	<b>20/27</b>

			researcher (Bluth)	<p>Self-compassion scale (SCS) Intervention: 3.23 Control: 3.33</p> <p>Social Connectedness (SOC) Intervention: 36.64 Control: 38.00</p> <p>Perceived Stress Intervention: 18.72 Control: 14.87</p> <p>Anxiety (STAI) Intervention: 44.58 Control: 42.00</p> <p>Depression (SMFQ) Intervention: 5.09 Control: 8.87</p>	<p>Depression -1.31</p> <p>small = 0.20, medium = 0.50, large = 0.80. ‘These effect sizes should be interpreted with caution because the 95% confidence intervals were of wide range, thus indicating poor precision.’</p>	
<b>Broderick &amp; Metz (2009)</b> USA	To evaluate a pilot trial of Learning to BREATHE, designed to support the development of emotion regulation skills through the practice of mindfulness	120  Average age: 17.4 years Treatment: Caucasian (93.3%) Control: Caucasian (88.2%) Entire senior class in a private Catholic	Non-randomized pre-test/post-test control group design  <u>Learning To Breathe program</u>	<p>Positive and Negative Affect Schedule (PANAS)</p> <p>Difficulties in Emotion Regulation Scale (DERS)</p> <p>Ruminative Response Scale (RRS)</p> <p>Somatization Index of the Child Behavior Checklist (SICBC)</p>	<p>PANAS: participants displayed a statistically significant decline from pre-test to post-test in negative affect, and a significant increase in feeling calm/relaxed/self-accepting.</p> <p>DERS: Program participants demonstrated a significant decline from pre-test to post-test in the total difficulty in emotion regulation (DERS) score, lack of emotional awareness DERS subscale, and the lack of emotional clarity DERS subscale.</p>	<b>17/27</b>

		high school, all participants previously lunch time and study hall classes on mindfulness	Approximately 2x a week during regular health classes, over approximately 5 weeks, 32-43 minutes. Total of 42 sessions  Primary Researcher		RRS: No significant mean differences  SICBC: program participants demonstrated a significant reduction from pre-test to post-test in feeling over-tired and complaints of aches/pains (not headaches or stomach aches).  Cohen's d is commonly interpreted as: 0.2 small, 0.5 medium, and 0.8 large  PANAS Positive affect 0.41 (small) Negative affect 0.57 (medium) Calm/ relaxed, self- accepting 0.53 (medium)  DERS Total 0.28 (small)  RRS Reflective pondering 0.10 Moody pondering 0.27 (small)	
<b>Franco et al.</b> (2016) Spain	To reduce impulsivity and aggression levels	27  59% Male 41% Female Age: 12-19 Ethnicity: Not mentioned	Randomised Control Trial  Learning and daily practice of a mindfulness	Barratt Impulsivity Scale (BIS-11): Cognitive impulsivity (8 items): tendency to make quick decisions. Motor impulsivity (10 items): propensity to act solely on the	Significant reductions in all the dimensions of impulsivity and aggressiveness levels occurred in the experimental group.  Cohen's d and pretest-post-test percentage change in the experimental group for the	<b>19/27</b>

		<p>1 public high school</p>	<p>technique named <i>Meditación Fluir</i> for 15 min (Franco et al., 2011, 2014). The principal goal of this practice is attempting neither to control thoughts, sensations or feelings nor alter or change them. Also, Kabat-Zinn's body scan exercise was used in each session.</p> <p>10 weekly sessions, duration unclear</p>	<p>spur of the moment, without thinking of the consequences.</p> <p>Non-planned impulsivity (12 items): indicates lack of planning of future actions.</p> <p>Aggression Questionnaire (AQ): This instrument is used to measure aggressiveness. In this study, the Spanish version created by Rodríguez et al. (2002) was used. The questionnaire is composed of 29 items with 5 Likert-type answer options (1 D <i>very few times</i>, 5 D <i>lots of times</i>) that form the following scales:</p> <p>Physical aggressiveness (9 items): it refers to physical behaviours that hurt or harm other people.</p> <p>Verbal aggressiveness (5 items): it is related to verbal behaviours that hurt or harm other people.</p> <p>Hostility (8 items): assesses the cognitive aspects of aggression.</p> <p>Anger (7 items): assesses the emotional and affective aspects of aggression.</p>	<p>different dimensions of impulsivity and aggressiveness.</p> <p><b>Impulsivity</b> Cognitive 1.04 –19.38 % Motor 0.753 –12.81% Non-planned 0.514 –10.17% Total 1.16 –13.69%</p> <p><b>Aggressiveness</b> Physical 0.803 –13.91% Verbal 0.995 –24.44% Hostility 1.03 –19.17% Anger 0.679 –16.16%</p> <p>with values above 1.5, between 1.5 and 1, and between 1 and 0.5 indicating very important, important and medium changes, respectively. Cohen's d showed the existence of very important changes in the cognitive impulsivity, total impulsivity and hostility dimensions, and medium to high changes in the other dimensions of impulsivity and aggressiveness</p>	
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<p><b>Fung et al.</b> (2019) USA</p>	<p>To examine the efficacy of a school-based mindfulness intervention on mental health and emotion regulation outcomes among adolescents in a wait-list controlled trial.</p>	<p>145 (2 cohorts from 2013-2015)  34.2% Male 65.8% Female Age: 13-15 M- 13.99 Ethnicity: Asian American (42.8%) Latino (42.8%) 3 high schools in one local district</p>	<p>Wait-list Controlled Trial Mindfulness-based stress reduction (MBSR) program based on a curriculum called <u>Learning to BREATHE (L2B)</u>  12 sessions  Administered by 2 advanced doctoral psychology students</p>	<p>- 112 item Youth Self Report (YSR) self-completed - 9 item Perceived Stress Scale (PSS) - 10 item Emotion Regulation Questionnaire for Children and Adolescents - 8-item Emotional Approach Coping Scale - 8-item short form of the Avoidance and Fusion Questionnaire for Youth (AFQ-Y8) - 13-item rumination subscale of the Children's Response Styles Questionnaire - 3-item heritage language fluency</p>	<p>Immediate treatment was significantly associated with reduction in internalizing problems (<math>F(1, 137) = 6.08, p = 0.015</math>), perceived stress (<math>F(1, 140) = 11.86, p &lt; 0.001</math>). Immediate treatment was not associated with changes in externalizing problems and attention problems.</p> <p>Effect sizes Primary outcomes Internalising problems 0.51 Externalising problems 0.56 Attention problems 0.39 Stress 0.88</p> <p>Potential mediators Cognitive reappraisal 0.31 Expressive suppression 0.68 Emotional processing 0.58 Emotional expression 0.61 Avoidance fusion 0.90 Rumination 0.61</p> <p>Pooled pre-to-post treatment analyses of the entire sample revealed a small effect size for attention problems, medium for internalizing and externalizing problems, and large for perceived stress. We also found a small effect size for cognitive reappraisal, medium</p>	<p><b>18/27</b></p>
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					for expressive suppression, emotional processing, emotional expression, and rumination and large for avoidance fusion.	
<b>Groark (2019)</b> USA	To assess the effectiveness of a mindfulness intervention (Mindful Schools) in improving different aspects of school engagement, including executive functioning processes, among students considered to be at-risk for poor school outcomes.	10  50% Male 50% Female Age: 16-17 Ethnicity: Not mentioned 1 high school	Cohort Study  Mindful Schools Adolescent Curriculum  7 weeks (with one week excluded for examinations), 10 sessions. 1 session twice a week for 30 minutes.  Administered by researcher.	Attention/ Concentration index (WRAML-2): visual memory task (Finger windows); verbal memory task (Number letter).  Trail Making Test (TMT): testing cognitive flexibility through two different sequencing and task-switching activities.  Difficulties in Emotional Regulation Scale (DERS): self-report questionnaire (higher scores= greater difficulty with ER)  Children and Adolescent Mindfulness Measure (CAMM): 10 item self-report questionnaire.  Progress monitoring measures: During the intervention, teacher reports, attendance data and grades were collected weekly.	When compared to baseline, the results, across the measured behavioural variables (i.e., attendance, grades, and teacher rating of engagement) ranged from positive to neutral after the mindfulness group. Most participants stayed the same or showed slight improvements, there were a few incidents of a significant decline during the intervention phase. In regard to the effect of the mindfulness-based intervention on behavioural engagement, the most important finding was related to improvement in participants' highest grades (grades for those courses in a given semester where the participant was earning the highest grade). Although the highest grades improved (effect size in the medium range), the same was not true for participants' lowest grades. In regard to observable measures of behavioural engagement in the classroom (i.e., on-task behaviour, emotional engagement, and rule-following), the results were variable. Specific to changes in participants' attentional abilities, the results were divided with half of the participants improving (an increase of at least ten standard score points) and half remaining stable.	<b>18/27</b>



					<p>Next, in regard to changes in cognitive flexibility, the results from the TMT resulted in the most consistent positive outcome. Six of the participants improved in their ability to complete this task indicating an increase in cognitive flexibility.</p> <p>ER: results were stable with little significant shift. There were two outliers with one individual showing a substantial increase in regulation skills and another, a substantial decrease in these skills.</p> <p>The guidelines for interpreting the ES results were followed. The effect size ranges are 0.0 to 0.2 (small), 0.21 to 0.6 (moderate), 0.61 to 0.8 (large), and 0.81 to 1.0 (very large)</p> <p>Highest grade: 6 participants demonstrated growth that was statistically significant based on the effect size analysis. The cross-case analysis for effect size resulted in a TauU of .51. These results were in the medium effect size range and indicated that the intervention had a positive impact on the highest grades of the participants.</p> <p>Lowest grade: A cross-case analysis of the entire group utilizing the TauU statistic resulted in a small change effect size (TauU=.12). While several participants had improvement, the overall improvement rate was marginal.</p>	
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					<p>On- task behaviour: 2 had significant changes in their performance. Five of the participants' median scores remained constant from baseline to intervention, including one that was at the ceiling of possible scores. Between phase analysis utilizing the Tau-U resulted in a score of .20 indicating a significant positive change across participants in the area of on-task behavior.</p> <p>Rule- following: 1 had significant change in their performance. Only one participant's median score decreased from baseline to intervention. Between phase analysis utilizing the Tau-U resulted in a score of .21, indicating a moderate positive change across participants on rule-following behavior.</p> <p>Overall, the results of this study suggested that participation in a mindfulness- based intervention improved behavioral engagement, although only the participants' highest grade was significant. Results from progress monitoring of attendance, on-task behaviors, emotional engagement, and rule-following behavior did not result in an effect size needed to infer generalized results.</p>	
<b>Lombas et al.</b> (2019) Spain	To evaluate the efficacy of a brief version of HCP on well-	524 49.8% Male 50.2% Female	Randomised Control Trial	Teacher Acceptability and Implementation Fidelity Questionnaire	Mindfulness was significant or trending towards significance, informing that the effect of the intervention was different among levels of Pretest Mindfulness.	<b>19/27</b>

	<p>being, school aggression, and classroom climate in students.</p> <p>To determine whether the intervention effect on the outcome variables was mediated by mindfulness.</p>	<p>Age: Average 13.6 years</p>	<p>Happy Classrooms</p> <p>18 weeks</p> <p>5 mins at least 2x daily</p> <p>Administered by teachers</p> <p>5 public schools</p>	<p>Student Acceptability Questionnaire</p> <p>Mindfulness Attention Awareness Scale (MAAS)</p>	<p>Finally, in the case of Autonomy, Emotional Clarity, Involvement, Intrinsic Motivation, Introjected Regulation, and Empathy neither Group nor the interaction between Group and Pretest Mindfulness were significant, which indicates that the intervention did not have any effect. We note that Pretest Mindfulness was significant in all regression analyses conducted except for External Regulation and Empathy, demonstrating the importance of the relation between mindfulness and most of the outcome variables.</p> <p>No standardised effect sizes listed for main findings</p>	
<p><b>Mai (2010)</b> USA</p>	<p>To explore the process and selected outcomes of a mindfulness program with a group of ninth graders participating in an afterschool program in a poor urban neighbourhood</p>	<p>12</p> <p>9 Male 3 Female</p> <p>Age: 13-17</p> <p>Ethnicity: 7 Hispanic, 4 African American 1 mixed-race</p> <p>Afterschool programme</p>	<p>Learning to Breathe</p> <p>6 weeks</p> <p>Researcher</p>	<p>Quantitative data were collected using five measures (<math>N=12</math>), while qualitative data were collected on a subset of participants (<math>N=7</math>).</p> <p>Qualitative:</p> <ul style="list-style-type: none"> <li>- Perceived Stress and Self-Efficacy Questionnaire (PS/SEQ)</li> <li>- daily stress measure given before and after each class.</li> <li>-semi-structured interviews following the intervention</li> <li>- field notes</li> </ul> <p>Quantitative:</p>	<p>PS:</p> <p>participants reported either a reduction in stress from the beginning to the end of class (16 out of a total of 36 responses, or 44%) or no change (20 out of 36 responses, or 56%). The mean reported reduction was 1.94.</p> <p>Qualitative:</p> <p>4 themes: difficulties in comprehension and expression; difficulties in emotion regulation; differences in conceptions of stress and stress denial; and relationships as a source of both stress and stress-relief.</p> <p>Quantitative:</p>	<p><b>14/17</b></p>

				<ul style="list-style-type: none"> <li>- Five-Factor Mindfulness Questionnaire (FFMQ)</li> <li>- Difficulties in Emotion Regulation Scale (DERS)</li> <li>- Behaviour Rating Index for Children (BRIC)</li> <li>- Attainment data</li> <li>- Attendance data</li> </ul>	<p>analyses yielded no evidence of differential group change.</p> <p>No standardised effect sizes listed</p>	
<p><b>Metz et al.</b> (2013) USA</p>	<p>To examine the effectiveness and acceptability of the Learning to BREATHE program on adolescent key emotion regulation skills, efficacy in emotion regulation, perceived stress, and somatic complaints</p>	<p>216 complete data Treatment: 34.9% Male Control: 33.3% Male</p> <p>Grade 10-12 Average age- 16.5 years</p> <p>two suburban high schools</p> <p>taking place during choir course elective lesson for the first 15-25 minutes of each lesson</p>	<p>Not randomised</p> <p>Learning to Breathe</p> <p>16 weeks, 18 sessions</p> <p>Choir course teacher</p>	<p>Data was collected via voluntary self-report survey packet.</p> <p>Difficulties in Emotion Regulation Scale (DERS) assessed the ability to regulate emotions (Gratz &amp; Roemer, 2004)</p> <p>The 13-item Psychosomatic Complaints Scale</p> <p>Seven items were adapted from the Somatization Index of the Child Behavior Checklist (Achenbach, 1991), one item from the Worry and Anxiety Questionnaire (Dugas et al., 2001), and five items from the symptom checklist created for the survey of Health Behaviour in School-aged Children (Haugland &amp; Wold, 2001).</p> <p>A single-item measure of perceived stress level was administered as well.</p> <p>The 14-item Affective Self-Regulatory Efficacy Scale</p>	<p>As illustrated in Table 3, three of the six subscales on the DERS and the total summary score displayed statistical significance. Program participants experienced more of a mean reduction in the limited access to regulation strategies, <math>F(1, 211) = 4.418, p = .037</math>, and lack of clarity, <math>F(1, 211) = 3.924, p = .049</math>, and in the total DERS scale score, <math>F(1, 211) = 5.441, p = .021</math>, as compared to the comparison group. In addition, the program group reported a mean reduction in the lack of emotional awareness DERS subscale, while the comparison group's mean subscale score did not change from pre-test to post-test, <math>F(1, 211) = 5.900, p = .016</math>.</p> <p>Program participants reported a larger reduction in psychosomatic symptoms from pre-test to post-test as compared to their comparison group counterparts, <math>F(1, 211) = 4.131, p = .043</math>.</p>	<p><b>20/27</b></p>

				<p>(ASRES) was created by the program developer to measure self-efficacy in emotion regulation.</p>	<p>Program participants, as compared to their counterparts, showed more of an improvement in the overall self-regulation efficacy, <math>F(1, 211) = 19.682, p = .001</math>.</p> <p>On average a 10% decrease in self-reported amount of stress in the past week from pre-test to post-test as compared to no change reported for the comparison group, <math>F(1, 211) = 8.075, p = .005</math>.</p> <p>Effect sizes To assist in effect interpretation in the case of unbalanced group sizes, Cohen's d are reported as well with values of 0.15 indicating a small, 0.45 moderate, and 0.90 a large effect</p> <p>stress 0.40 total emotional reg difficulties 0.33 nonacceptance emotional repositne 0.24 goal directed activity difficulties 0.04 impulse control diff 0.10 lack of emotional awareness 0.34 ltd access to regulation strategies 0.30 lack of emotional clarity 0.28 psychosomatic complaints 0.28 affective self- regulatory efficacy 0.62 (moderate)</p>	
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<p><b>Minkos et al. (2018)</b> USA</p>	<p>To examine the effect of a daily, audio-delivered, mindful breathing intervention on adolescents with emotional and behavioural difficulties attending an alternative educational setting.</p>	<p>2 100% Male Age: 15-16 Ethnicity: 1 Caucasian 1 Black Non-residential alternative education program</p>	<p>Longitudinal cohort  The intervention involved participants listening to the recording and engaging in the mindful breathing activity, which prompted them to focus their attention on their breathing.  1x daily  22-27 days  Administered by teachers</p>	<p>DBR (Direct behavioural rating) involves rating three core school-based behavioural competencies—academic engagement, respectful behaviour, and disruptive behaviour— at the end of a specified observation period. Secondary outcome: Systematic Direct Observation</p>	<p>Primary outcome:  DBR: Direct behavioural rating AE: Academic engagement SDO: Systematic direct observation  Student 1: DBR-AE 7.93 DBR-Disruptive 1.00 SDO-AE 84.17  Student 2: DBR-AE 8.17 DBR-Disruptive 0.17 SDO- AE- 95.70  Effect sizes were calculated only for the primary dependent variable, academic engagement: small to medium positive effects in intervention that were maintained in follow-up</p>	<p><b>18/27</b></p>
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<p><b>Salustri (2009)</b> USA</p>	<p>Whether participants would show any specific increases in their ratings of family, friends, school, living environment and self. Whether participants would show improvements in their percentages of school attendance, on time arrival to class and class work completion</p>	<p>7 5 Male 2 Female  Age: 16- 18  Ethnicity: 4 Latino 2 Caucasian  1 African American  Alternative high school</p>	<p>Reduction and Relaxation Program (Kabat-Zinn) adapted for use within the current alternative high school.  8 weeks, 2x weekly, approximately 45 minutes in length</p>	<p><i>Mindful Attention Awareness Scale (MAAS): Average score 4.25</i>  <i>Multidimensional Students' Life Satisfaction Scale (MSLSS)</i> <i>ONLY 5 PARTICIPANTS RECORDED</i> <i>Total Life Satisfaction average score: 4.54</i>  <i>Positive and Negative Affect Schedule for Children (PANAS-C)</i> <i>ONLY 6 PARTICIPANTS RECORDED</i> <i>PA Average score: 3.34</i> <i>NA Average score: 1.74</i>  <i>Behaviour Measure (based on # of absences, # of arriving on time, # of assignments completed)</i></p>	<p>Overall, participants showed minimal to no positive behavioural changes during the course of the study, with many showing a reduction in scores.  Minimal impact of the mindfulness program on the domains of the Multidimensional Students' Life Satisfaction Scale (MSLSS), with some participants displaying a delayed effect and many displaying negative effects during treatment.  No standardised effect sizes reported</p>	<p><b>17/27</b></p>
<p><b>Sibinga et al. (2016)</b> USA</p>	<p>The study evaluated an adapted mindfulness-based stress reduction (MBSR) program to ameliorate the negative effects of stress and</p>	<p>300 49.3% Male 50.7% Female  Age: 11-14  Ethnicity: 99.7% African American 0.3% Caucasian</p>	<p>MBSR  12 weeks, duration not clear  Administered by 2 experienced MBSR instructors</p>	<p>Mindfulness was measured with the 10-item Children's Acceptance and Mindfulness Measure  Children's Depression Inventory— Short Form [CDI-S]  Multidimensional Anxiety Scale for Children [MASC]</p>	<p>MBSR participants reported lower levels of depressive symptoms, self-hostility, somatization, negative affect, negative coping, and rumination. Importantly, MBSR students also showed significantly lower levels of posttraumatic stress symptoms, including in both subdomains of depressive and reexperiencing symptoms.  No standardised effect size listed</p>	<p><b>21/27</b></p>

	trauma among low-income, minority, middle school public school students	1 elementary/middle school		<p>Positive and Negative Affect Schedule (PANAS)</p> <p>Differential Emotions Scale (DES)</p> <p>Aggression scale</p> <p>State-Trait Anger Expression Inventory (STAXI-2)</p> <p>Children's Response Style Questionnaire (CRSQ)</p> <p>Brief COPE</p> <p>Coping Self-Efficacy Scale (CSE).</p>		
Vega (2018) USA	Examining the impact mindfulness practice has on students' attention, self-control, participation, and social care for others, as reported by the teachers and the impact	<p>29</p> <p>16 Male 13 Female</p> <p>Age: 12-14</p> <p>Ethnicity: Not mentioned</p> <p>NB only 20 students completed self-</p>	<p>Mindful Schools &amp; yoga once a week</p> <p>Duration unclear</p> <p>Administered by Language Arts teacher (completed)</p>	<p><b>Teacher rating:</b> Kinder Associates Behavioural Rubric (KABR)</p> <p><b>Self-rating:</b> Healthy Self-Regulation Scale (HSR), is a subscale of the Mindful Thinking and Action Scale for Adolescents</p>	For the dependent variable of attention, the null hypothesis is rejected, and the implementation of the mindfulness had an impact on the teachers' perceptions of students' attending skills within the classroom. The remainder of the results indicate a failure to reject the null hypothesis for the remaining dependent variables of self-control, participation in class, and care for others due to a lack of significant differences between the pre-ratings and post-ratings. Furthermore, the lack of significant difference between the pre- and post-ratings for the Total score item indicate that, overall,	<b>18/27</b>



	mindfulness practice has on student perceptions of their ability to calm themselves and use healthy coping skills.	rating element of analysis  Alternative Secondary Program	MS training course)		the implementation of mindfulness did not significantly impact the teachers' perceptions of the students' behaviours when looking at the dependent variables together.  Student results show that mindfulness did not have any statistical impact on student perceptions of their own healthy coping skills, thus there is a failure to reject the null hypothesis for the dependent variable of healthy coping skills.  No standardised effect sizes listed.	
<b>Wisner (2007)</b> USA	To extend meditation research to an alternative high school setting with the intention to investigate the perceived benefits of meditation for this population	35  19 Male 16 Female  Age: 15-19 (Average 17.28 years)  Ethnicity: 34 Caucasian 1 African American and Caucasian  Public compensatory alternative high school with a	Mindfulness meditation developed by the author.  8 weeks, 30 mins per session  Administered by author	<i>Concept Mapping</i> A focus prompt is a statement used to gather information about the question to be explored in the study. Three exercises include gathering statements through participant idea generation, sorting statements into groups, and rating the relative importance of each statement  <i>Questionnaires</i> Students completed a questionnaire, at the completion of the MM program, which gathered narrative information about practicing meditation at home during the course of the study.	3 broad areas of perceived changes in response to the meditation intervention: intrapersonal, psychosocial, and systemic. These broad areas of perceived change encompass several unique domains within the larger categories (i.e., self-awareness, calmness, stress management, emotional coping, attention, state of mind, school engagement, and school climate).  No standardised effect size listed	<b>15/17</b>

		primary mission of dropout prevention				
<b>Wisner &amp; Starzec (2016)</b> USA	To understand the experiences of Grade 10 alternative high school students as they participated in a secular mindfulness skills program.	19 10 Male 9 Female  Age: 15-17  Ethnicity: 17 Caucasian 1 Hispanic 1 African American and European American  Public compensatory alternative high school	Variety of mindfulness skills including breath awareness, seated mindfulness meditation, lying mindfulness meditation, and walking mindfulness meditation.  7 months, 2x weekly, 30-45 minutes per session  Administered by English teacher and researchers	Questionnaire asking about student experiences of mindfulness  Journal Entries English class writing assignments. These writing exercises (conducted about every 2 weeks) provided prompts asking students to process their experiences with the mindfulness skills.  Semi-structured interviews	2 broad areas of perceived benefits of participation in the mindfulness skills program: intrapersonal and interpersonal benefits. Intrapersonal benefits included themes of self-awareness and self-regulation. Interpersonal benefits included themes of building relationships (with peers, family members, and teachers) and learning to trust.  No standardised effect size listed	<b>10/10</b>
<b>Wongtongkam et al. (2014)</b> Thailand	To investigate the effects of a 'mindfulness meditation', on both anger	96  70% Male 30% Female	MBSR  3 consecutive weeks,	State-Trait Anger Expression Inventory (STAXI-2)  Pittsburgh Youth Study five item self-report measure	The intervention did not appear to lead to major reductions in self-reported anger or violence, although qualitative data elicited from interviews with participants suggested that the students had improved their self-	<b>16/17</b>

	and the expression of anger in technical college students in Thailand, South East Asia.	Age: average: 17.56 years  Ethnicity: Not mentioned	9:00- 5:00 daily  Administered by Buddhist monks	Semi-structured interviews post intervention	regulation skills and developed greater self-awareness  No standardised effect sizes listed.	
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Appendix B- Quality Assessment Results using Downs and Black Quality Checklist (Downs &amp; Black, 1998)

Study	Aims explained	Outcome measures explained	Participant characteristics explained	Conditions explained	Principal confounders explained	Findings explained	Distribution of data and random variability explained	Potential adverse effects explained	Participants lost defined	Actual probability values reported
Bluth et al. (2016)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Broderick & Metz (2009)	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Franco et al. (2016)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Fung et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Lombas et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Metz et al. (2013)	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Sibinga et al. (2016)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Anderson (2017)	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	No
Groark (2019)	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Minkos et al. (2018)	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Salustri (2009)	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No
Vega (2018)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

Study	Representative sample asked to participate	Representative sample prepared to participate	Representative context	Participants blinded to intervention received	Assessors blinded when measuring outcomes	Unplanned analyses identified	Appropriate time periods between intervention and testing	Appropriate testing	Intervention fidelity	Outcome measures accurate
Bluth et al. (2016)	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Broderick & Metz (2009)	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Franco et al. (2016)	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Fung et al. (2019)	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Lombas et al. (2019)	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Metz et al. (2013)	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Sibinga et al. (2016)	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes
Anderson (2017)	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Groark (2019)	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Minkos et al. (2018)	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Salustri (2009)	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Vega (2018)	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes

<b>Study</b>	<b>Participants recruited from the same population and at same time</b>	<b>Participants recruited from the same time</b>	<b>Participants allocated to groups randomly</b>	<b>Participants and professionals blinded to group allocation</b>	<b>Adequate adjustment for confounding variables</b>	<b>Lost participants taken into account</b>	<b>Sufficient power explained</b>	<b>TOTAL SCORE</b>
Bluth et al. (2016)	Yes	Yes	Yes	No	Yes	Yes	Yes	<b>20/27</b>
Broderick & Metz (2009)	No	Yes	No	No	No	Yes	Yes	<b>17/27</b>
Franco et al. (2016)	Yes	Yes	Yes	No	Yes	Yes	Yes	<b>19/27</b>
Fung et al. (2019)	Yes	No	Yes	No	Yes	Yes	Yes	<b>18/27</b>
Lombas et al. (2019)	Yes	Yes	No	No	Yes	Yes	Yes	<b>19/27</b>
Metz et al. (2013)	Yes	Yes	No	No	No	Yes	Yes	<b>20/27</b>
Sibinga et al. (2016)	Yes	Yes	Yes	No	Yes	Yes	Yes	<b>21/27</b>
Anderson (2017)	Yes	Yes	No	No	No	Yes	No	<b>15/27</b>
Groark (2019)	Yes	Yes	No	No	No	Yes	Yes	<b>18/27</b>
Minkos et al. (2018)	Yes	Yes	No	No	No	Yes	No	<b>18/27</b>
Salustri (2009)	Yes	Yes	Yes	No	No	Yes	No	<b>17/27</b>

Vega (2018)	Yes	Yes	No	No	Yes	Yes	No	<b>18/27</b>
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## Appendix C- Quality Assessment Results using Critical Appraisal Skills Programme Qualitative Checklist (CASP, 2018)

Study	Was there a clear statement of the research aims?	Is a qualitative methodology appropriate?	Was the research design appropriate to address the aims of the research?	Was the recruitment strategy appropriate to the aims of the research?	Was the data collected in a way that addressed the research issue?	Has the relationship between researcher and participants been adequately considered?
Wisner & Starzec (2016)	Yes	Yes	Yes	Yes	Yes	Yes

Study	Have ethical issues been taken into consideration?	Was the data analysis sufficiently rigorous?	Is there a clear statement of findings?	How valuable is the research?	<b>TOTAL SCORE</b>
Wisner & Starzec (2016)	Yes	Yes	Yes	Yes	<b>10/10 100%</b>



## Appendix D: Quality Assessment Results using the Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018)

Mai (2010)

Category of study design	Methodological quality criteria	Responses			
		Yes	No	Can't tell	Comments
Screening questions (for all types)	S1. Are there clear research questions?	✓			
	S2. Do the collected data allow to address the research questions?	✓			
	<i>Further appraisal may not be feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.</i>				
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?	✓			
	1.2. Are the qualitative data collection methods adequate to address the research question?	✓			
	1.3. Are the findings adequately derived from the data?	✓			
	1.4. Is the interpretation of results sufficiently substantiated by data?	✓			
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?	✓			
2. Quantitative randomized controlled trials	2.1. Is randomization appropriately performed?			✓	
	2.2. Are the groups comparable at baseline?	✓			
	2.3. Are there complete outcome data?	✓			
	2.4. Are outcome assessors blinded to the intervention provided?		✓		
	2.5. Did the participants adhere to the assigned intervention?	✓			
3. Quantitative non-randomized	3.1. Are the participants representative of the target population?				
	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?				
	3.3. Are there complete outcome data?				
	3.4. Are the confounders accounted for in the design and analysis?				
	3.5. During the study period, is the intervention administered (or exposure occurred) as intended?				
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question?				
	4.2. Is the sample representative of the target population?				
	4.3. Are the measurements appropriate?				
	4.4. Is the risk of nonresponse bias low?				
	4.5. Is the statistical analysis appropriate to answer the research question?				
5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?	✓			
	5.2. Are the different components of the study effectively integrated to answer the research question?	✓			
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	✓			
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?			✓	
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?	✓			

TOTAL SCORE: 14/17 82%

Wisner (2014)

Category of study designs	Methodological quality criteria	Responses			
		Yes	No	Can't tell	Comments
Screening questions (for all types)	S1. Are there clear research questions?	✓			
	S2. Do the collected data allow to address the research questions?	✓			
	<i>Further appraisal may not be feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.</i>				
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?	✓			
	1.2. Are the qualitative data collection methods adequate to address the research question?	✓			
	1.3. Are the findings adequately derived from the data?	✓			
	1.4. Is the interpretation of results sufficiently substantiated by data?	✓			
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?	✓			
2. Quantitative randomized controlled trials	2.1. Is randomization appropriately performed?				
	2.2. Are the groups comparable at baseline?				
	2.3. Are there complete outcome data?				
	2.4. Are outcome assessors blinded to the intervention provided?				
	2.5. Did the participants adhere to the assigned intervention?				
3. Quantitative non- randomized	3.1. Are the participants representative of the target population?	✓			
	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?	✓			
	3.3. Are there complete outcome data?	✓			
	3.4. Are the confounders accounted for in the design and analysis?			✓	
	3.5. During the study period, is the intervention administered (or exposure occurred) as intended?	✓			
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question?				
	4.2. Is the sample representative of the target population?				
	4.3. Are the measurements appropriate?				
	4.4. Is the risk of nonresponse bias low?				
	4.5. Is the statistical analysis appropriate to answer the research question?				
5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?	✓			
	5.2. Are the different components of the study effectively integrated to answer the research question?	✓			
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	✓			
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?			✓	
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?	✓			

TOTAL SCORE: 15/17

Wongtongkam et al. (2014)

Category of study designs	Methodological quality criteria	Responses			
		Yes	No	Can't tell	Comments
Screening questions (for all types)	S1. Are there clear research questions?	✓			
	S2. Do the collected data allow to address the research questions?	✓			
	<i>Further appraisal may not be feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.</i>				
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?	✓			
	1.2. Are the qualitative data collection methods adequate to address the research question?	✓			
	1.3. Are the findings adequately derived from the data?	✓			
	1.4. Is the interpretation of results sufficiently substantiated by data?	✓			
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?	✓			
2. Quantitative randomized controlled trials	2.1. Is randomization appropriately performed?				
	2.2. Are the groups comparable at baseline?				
	2.3. Are there complete outcome data?				
	2.4. Are outcome assessors blinded to the intervention provided?				
	2.5. Did the participants adhere to the assigned intervention?				
3. Quantitative non- randomized	3.1. Are the participants representative of the target population?	✓			
	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?	✓			
	3.3. Are there complete outcome data?	✓			
	3.4. Are the confounders accounted for in the design and analysis?			✓	In discussion
	3.5. During the study period, is the intervention administered (or exposure occurred) as intended?	✓			
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question?				
	4.2. Is the sample representative of the target population?				
	4.3. Are the measurements appropriate?				
	4.4. Is the risk of nonresponse bias low?				
	4.5. Is the statistical analysis appropriate to answer the research question?				
5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?	✓			
	5.2. Are the different components of the study effectively integrated to answer the research question?	✓			
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	✓			
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?	✓			
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?	✓			

TOTAL SCORE: 16/17

## Appendix E: Topic Guide

**Study Title: The experience of a mindfulness intervention for YP within a secondary alternative provision setting.**

**Researcher:** Maisie Kelly

**Topic Guide (Version 1, 05.07.21)**

**ERGO Number:** 66518

Thank you for agreeing to take part in this interview. The purpose of this interview is to understand your experiences of the mindfulness intervention you have taken part in. There are no right or wrong answers so please feel free to tell me whatever you are comfortable with. We can pause or stop the interview at any time if you would like a break. Everything you tell me will be kept confidential, so please feel free to tell me as much as you would like.

I will be asking some questions about your experiences of the mindfulness intervention.

**Can you tell me a little bit about you?**

Prompts:

- Can you tell me about what you know about mindfulness?
- What does mindfulness mean to you?

**Tell me about how you found the mindfulness sessions.**

Prompts:

- What did they make you think about?
- What did they make you feel?
- What did you like/ dislike about the sessions?
- Did they help you in any way? If so, how?
- Did you notice anything during the mindfulness sessions about yourself?
- Moving forward, do you think mindfulness is something you would like to keep learning about?

**Tell me about what you think about doing mindfulness in school?**

Prompts:

- Would you like to do mindfulness in school?
- Is there anything that would be tricky about this?
- Do you think you would like to do mindfulness at home?
- If you would like to do more mindfulness, how would you like this to look?  
E.g. through sessions at school, an app you can access etc.

**Is there anything else you would like to talk about that we haven't covered?**

**That is all the questions I have for you - Do you have any questions for me?**

## Appendix F: Participant Information Sheet for YP

**Participant Information Sheet** (Version 3, 17.09.21)

**Study Title: The experience of a mindfulness intervention for YP within a secondary alternative provision setting.**

**Researcher:**

Maisie Kelly

**ERGO number:** 66518



Hello! You have been invited to take part in the above research study. To help you decide whether you would like to take part or not, I am going to explain what this study is about and what you would do if you took part. Please read the information below carefully and ask questions if you're not sure about anything or if you would like more information. You may like to talk about it with other people but it is up to you to decide whether or not to take part.



**What is this about?**

I am training to become an Educational Psychologist, which is someone who works with YP to help them with their education and school life. I want to find out about how YP who attend an alternative provision like your school experience doing a mindfulness programme.

**Why have I been asked to take part?**

You have been asked to be a part of this study because you go to school in an alternative provision.



**What will happen to me if I take part?**



If you choose to take part, you will take part in a mindfulness intervention that I have created. You will watch a different video once a week for four weeks which will encourage you to focus your attention and be 'in the moment'. Each video session will last about 20 minutes, and you will do this alongside a member of staff. You will be asked some things about what you think about the video and perhaps how it made you feel. You will also have the option to see the video again in your own time through a QR code you can scan. It is completely up to you if you would like to do this or not.

After you have seen the four different videos, I will then come to have a conversation with you about it, at a time which you agree to at your school. You can bring a member of school staff with you if this would make you feel happier.

You will chat about your experiences of doing the mindfulness sessions and your opinions and thoughts on them.

This conversation will be recorded (just the audio) on a laptop, so that it can be typed up afterwards for the study. There isn't a time limit, and you will be able to talk as much or as little as you like. I guess this might take up to 30 minutes but it can be longer or shorter.



When I type it up, I will change your name and any details which would help people to know who you are.

### Will I get anything for taking part?

No, if you do choose to take part, you will not get anything directly, although I hope that you will enjoy the sessions. However, finding out your thoughts and adding these to the research could be really helpful for other YP like you. We hope the research will show us what students like you think about mindfulness sessions. You may also find it useful to discuss your experiences.



### Are there any risks?

If you do take part, you will talk about your personal experiences of mindfulness. This may mean we have to talk about more sensitive or personal things which could cause you some discomfort or stress. But, we don't have to talk about these things, and, if you feel like you don't want to talk anymore, you can choose to move on to another question or stop the questions at any time.

### What data will be collected?

I will be recording the conversation which we have together and keeping this recording on a secure university laptop, which has a password to stop others from using it. I will keep any forms with your name and details on them in a locked cabinet. Your name will be changed in the research to keep your information confidential. I will not have your telephone number or address at any point during this study.

### Will my participation be confidential?

Your details and the information I collect about you during the study will be kept strictly confidential. Your name will be changed in the research to keep your information confidential. Electronic data (such as the recording) will be kept on a secure university laptop, which has a password to stop others from using it. I will save this using a different name to yours, and once I have typed up the conversation, this recording will be destroyed so no one else can hear it. I will keep any forms with your name and details on them in a locked cabinet.

Only members of the research team (the people at the university supporting me in my research) and responsible members of the University of Southampton may be given access to this data for monitoring purposes and/or to make sure that the research is being done correctly. Some people whose job it is to check that I am carrying out the study correctly might need to look at your data. All of these people will keep your information confidential.



### Do I have to take part?



No, it is entirely up to you to decide whether or not to take part. If you decide you want to take part, your parent/guardian will need to sign a consent form.

### What happens if I change my mind?

You can change your mind and decide not to take part at any time up until 14 days after our conversation without giving a reason. Just let the staff member doing the sessions know that you would like to stop doing the study and they will inform me.



### What will happen to the results of the research?

Your personal details will remain strictly confidential. My research will be written up and you can ask for a copy if you would like. Findings will not include information that can directly identify you. Your conversation will be held in written form with your details anonymised so people can't know it is you. I will change your name and any other details which could help people to find out it is you speaking.

### Where can I get more information?



If you have any questions about this research, please contact me:  
Maisie Kelly- [mnk1e10@soton.ac.uk](mailto:mnk1e10@soton.ac.uk)

### What happens if there is a problem?

If you have a concern about anything to do with this study, you should speak to the researcher who will do their best to answer your questions. They can be contacted at:  
Maisie Kelly- [mnk1e10@soton.ac.uk](mailto:mnk1e10@soton.ac.uk)

If you are unhappy or have a complaint about any aspect of this study, please contact the University of Southampton Research Integrity and Governance Manager (023 8059 5058, [rgoinfo@soton.ac.uk](mailto:rgoinfo@soton.ac.uk)).

### Data Protection Privacy Notice

The University of Southampton conducts research to the highest standards of research integrity. As a publicly-funded organisation, the University has to ensure that it is in the public interest when we use personally-identifiable information about people who have agreed to take part in research. This means that when you agree to take part in a research study, we will use information about you in the ways needed, and for the purposes specified, to conduct and complete the research project. Under data protection law, 'Personal data' means any information that relates to and is capable of identifying a living individual. The University's data protection policy governing the use of personal data by the University can be found on its website (<https://www.southampton.ac.uk/legalservices/what-we-do/data-protection-and-foi.page>).

This Participant Information Sheet tells you what data will be collected for this project and whether this includes any personal data. Please ask the research team if you have any questions or are unclear what data is being collected about you.

Our privacy notice for research participants provides more information on how the University of Southampton collects and uses your personal data when you take part in one of our research projects and can be found at <http://www.southampton.ac.uk/assets/sharepoint/intranet/ls/Public/Research%20and%20Integrity%20Privacy%20Notice/Privacy%20Notice%20for%20Research%20Participants.pdf>

Any personal data we collect in this study will be used only for the purposes of carrying out our research and will be handled according to the University's policies in line with data protection law. If any personal data is used from which you can be identified directly, it will not be disclosed to anyone else without your consent unless the University of Southampton is required by law to disclose it.

Data protection law requires us to have a valid legal reason ('lawful basis') to process and use your Personal data. The lawful basis for processing personal information in this research study is for the performance of a task carried out in the public interest. Personal data collected for research will not be used for any other purpose.

For the purposes of data protection law, the University of Southampton is the 'Data Controller' for this study, which means that we are responsible for looking after your information and using it properly. The University of Southampton will keep identifiable information about you for 10 years after the study has finished after which time any link between you and your information will be removed.

To safeguard your rights, we will use the minimum personal data necessary to achieve our research study objectives. Your data protection rights – such as to access, change, or transfer such information - may be limited, however, in order for the research output to be reliable and accurate. The University will not do anything with your personal data that you would not reasonably expect.

If you have any questions about how your personal data is used, or wish to exercise any of your rights, please consult the University's data protection webpage (<https://www.southampton.ac.uk/legalservices/what-we-do/data-protection-and-foi.page>) where you can make a request using our online form. If you need further assistance, please contact the University's Data Protection Officer ([data.protection@soton.ac.uk](mailto:data.protection@soton.ac.uk)).

**Thank you so much for reading this! I hope to hear from you soon :-)**



Appendix G: Consent form

**Consent Form** (Version 4, 31.08.21)

**Study title: The experience of a mindfulness intervention for YP within a secondary alternative provision setting.**

**Researcher names:** Maisie Kelly

**ERGO number:** 66518

*Please initial the box(es) if you agree with the statement(s):*

I have read and understood the participant information sheet for parents (31.08.21 /Version 2) and have had the opportunity to ask questions about the study.	
I agree for my child to take part in this research project and agree for my data to be used for the purpose of this study.	
I understand my child’s participation is voluntary and they may withdraw up until 14 days after the interview for any reason without their participation rights being affected.	
I understand that my child may be quoted directly in reports of the research but that they will not be directly identified (e.g. that their name will not be used).	
I agree for my child to take part in the interview for the purposes set out in the participation information sheet and understand that this will be recorded using audio.	
I understand that taking part in the study involves audio recording which will be transcribed and then destroyed for the purposes set out in the participation information sheet.	

Name of participant (print name).....

Signature of parent/ carer.....

Date.....

Name of researcher (print name) .....

Signature of researcher .....

Date.....

## Appendix H: Assent form

**Assent Form** (Version 2, 17.09.21)

**Study title: The experience of a mindfulness intervention for YP within a secondary alternative provision setting.**

**Researcher names:** Maisie Kelly

**ERGO number:** 66518

*Please initial the box(es) if you agree with the statement(s):*

I have read and understood the participant information sheet for YP (17.09.21, Version 3) and have had the opportunity to ask questions about the study.	
I agree to take part in this research project and agree for my data to be used for the purpose of this study.	
I understand taking part is voluntary and I can choose to withdraw up until 14 days after the final conversation with the researcher for any reason.	
I understand that I might be quoted directly in reports of the research but that I will not be directly identified (e.g. my real name will not be used).	
I agree to take part in the interview for the purposes set out in the participation information sheet and understand that this will be recorded using audio.	
I understand that taking part in the study involves audio recording which will be transcribed and then destroyed for the purposes set out in the participation information sheet.	

Name of participant (print name) .....

Signature of participant .....

Date.....

Name of researcher (print name) .....

Signature of researcher.....

Date.....

## Appendix I: Debriefing form

**Debriefing Statement** (Version 2, 09.08.2021)

**Study Title: The experience of a mindfulness intervention for YP within a secondary alternative provision setting.**

**Researchers:** Maisie Kelly

**ERGO ID:** 66518

The aim of this research was to find out more about your experiences of a mindfulness intervention. It is expected that the results will help us to understand how you found the mindfulness intervention and your experiences of doing this kind of intervention. Your data will help our understanding of how mindfulness could be used to support YP in alternative provision. Once again, results of this study will not include your name or any other identifying characteristics. The research did not use deception. You may have a copy of this summary if you wish as well as a copy of the research findings once the project has finished. If you have any further questions please contact: Maisie Kelly ([mnk1e10@soton.ac.uk](mailto:mnk1e10@soton.ac.uk)).

Thank you for your participation in this research.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the University of Southampton Research Integrity and Governance Manager (023 8059 5058, [rgoinfo@soton.ac.uk](mailto:rgoinfo@soton.ac.uk)).

**If speaking about your experiences for this research has made you feel upset or uncomfortable and you want to talk about this after the study, please ensure you discuss this with your family doctor, a trusted adult at your school, or another trusted adult. You can also contact YoungMinds by texting 85258 or visiting <https://youngminds.org.uk/>, or call ChildLine on 0800 1111 if you are feeling as though you would like some support or to talk to someone about your well-being.**

## Appendix J: Example of transcription and initial codes

'Cameron'		
29	Cameron- Umm it made me feel like relaxed and <u>calm</u>	Maisie Kelly Feelings- relaxed and calm
30	Researcher- What did you like about the sessions and was there anything you didn't like	
31	about them? You can be completely honest.	
32	Cameron- Sometimes the videos felt a bit too long, umm... other than that it was <u>fine</u>	Maisie Kelly Adaptations- videos too long. Maybe it is hard to concentrated for that long?
33	Researcher- Yeah? Ok. Did you notice anything, during the sessions... anything about	
34	yourself or how you felt or changes maybe in yourself?	
35	Cameron- No...	
36	Researcher- No. and do you think mindfulness is something you might like to keep learning	
37	about from now?	
38	Cameron- I don't know.	
39	Researcher- Not sure. Ok. What do you think about doing mindfulness in school?	
40	Cameron- It helps me but then when I walk out that classroom where we do the mindfulness	
41	it goes all out the window. They all just start shouting and <u>screaming</u>	Maisie Kelly Difficulty- holding on to impact after the session It helps but then the impact is gone after they leave the room.
42	Researcher- Mmm.	
43	Cameron- It's loud.	
44	Researcher- What do you think is the good thing about when you're in that room doing the	
45	mindfulness?	
46	Cameron- Being, like, alone. Away from <u>everyone</u>	Maisie Kelly Feature- privacy
47	Researcher- Mmm.	
48	Cameron- And like the silence was <u>nice</u>	Maisie Kelly Feature- quiet
49	Researcher- Yeah. Just having that calm <u>time</u> ?	
50	Cameron- Mmm.	
51	Researcher- Do you think you'd like to do it more in school?	
52	Cameron- <u>Yeah</u> ...	Maisie Kelly Willing to do more sessions in school
53	Researcher- What do you think that would look like?	
54	Cameron- Umm...	
55	Researcher- How would you want that to look? Is there anything that you think would be	
56	difficult about doing it at school more?	

	A	B
1	<b>Code</b>	<b>Line</b>
2	Unhappy at school	11
3	Not knowing about mindfulness	18
4	Avoiding lessons	22
5	Feelings- being in the moment	27
6	Feelings relaxed and calm	29
7	Videos too long- too long to focus?	32
8	Hard to keep the effect after session	40
9	Privacy	46
10	Quiet	48
11	Willing to do more sessions in school	52
12	Avoiding lessons	57
13	Avoiding lessons which are loud	61
14	wanting to be alone- privacy	67
15	Having an adult helps keep focus	73; 75
16	Home is calmer so need mindfulness in school	78
17	Harder to be calm at school	88
18	Video preference- don't like cats, don't like the video	100
19	Water sensory element	106
20	Linking videos to real like experiences	106
21	Hard to talk about the videos in the session- knowing what to say	111
22	People distracting during sessions	116
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	<b>Cameron</b> Mike Finn Blake Johnny Nick Luna	

Cameron Codes	
Not knowing about mindfulness	UNDERSTANDING AND EXPERIENCE
Avoiding lessons	MOTIVATION/ FEATURE
Feelings- being in the moment	FEELINGS AND IMPACT
Feelings relaxed and calm	IMPACT
Videos too long- too long to focus?	CONTENT BARRIER
Hard to keep the effect after session	IMPACT
Privacy	ENVIRONMENT PREFERENCE
Quiet	ENVIRONMENT PREFERENCE
Willing to do more sessions in school	ENJOYMENT OF EXPERIENCE
Avoiding lessons	MOTIVATION/ FEATURE
Avoiding lessons which are loud	MOTIVATION/ FEATURE
wanting to be alone- privacy	ENVIRONMENT PREFERENCE
Having an adult helps to keep focus	ENVIRONMENT
Home is calmer so need mindfulness in school	ENVIRONMENT
Harder to be calm at school	PERSONAL FEELINGS
Video preference- don't like cats, don't like the video	CONTENT
Water sensory element	CONTENT SENSORY
Linking videos to real like experiences	IMPACT REFLECTION AND FEELINGS
Hard to talk about the videos in the session- knowing what to say	PERSONAL?? BARRIER
People distracting during sessions	ENVIRONMENT BARRIER
Losing concentration when others distract	ENVIRONMENT BARRIER

## Appendix K- Example script from mindfulness video and link to video

[blank screen]

Hello and welcome to this session. We are going to spend the next few minutes focusing our minds on a video which you will see in just a moment. Try to focus your attention on the video as best you can. I will be guiding you through this and helping you gently to focus on what you can see in the video.

Before we start, find a position which you find relaxing and comfortable. This might be sitting on a chair, sitting on the floor with your legs crossed or lying down on the floor. Allow your hands to rest in your lap or by your side. Try to relax.

[waves footage starts]

Have a look at the video on the screen now.

...Notice the different sounds you can hear.

...Notice the different elements that you can see in this video.

...Try to imagine how it would feel to be in this place. How would you feel? Maybe you would feel the stones under your feet? Or the sensation of the wind on your skin?

Take a few moments to quietly watch the video and focus your mind on this scene.

[fade to blank screen]

Now slowly start to picture yourself in this room. Imagine yourself sitting in this room. Feel the weight of your body and where it connects to the chair or floor. Start to notice any sounds you can hear in the room or just outside. Notice any sensations or movements in your own body.

You will now have a quick chat with your partner about the video.

[questions displayed on screen as well]

What did you notice?

What thoughts came into your mind?

How did the video make you feel?

Well done! Today's session is complete. I look forward to seeing you again for another session, where we will focus our minds again with a different video.

**Waves video link:** [https://www.youtube.com/watch?v=kVEgDh2C\\_iA](https://www.youtube.com/watch?v=kVEgDh2C_iA)

