

**A mixed methods pilot study evaluating the effectiveness of a mindfulness-based intervention for exam-related anxiety in secondary school settings.**

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## Declaration

I, Sophie Alexandra Casson, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

SACasson

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## **Abstract**

Educational outcomes can be inordinately compromised by anxiety – particularly affecting for young people at a crucial juncture in their educational career. Evidence suggests that the impact of mindfulness interventions in schools lead to improvements in mental health problems (Meiklejohn et al., 2012) academic achievements (Zenner et al., 2014) depression and anxiety (Kuyken et al., 2013) and test anxiety (Napoli et al., 2005).

This study employed a mixed methods pilot design to explore the impact of a new brief group mindfulness-based intervention for young people in Years 10 and 11 who present with anxiety, particularly in relation to exams. The intervention was delivered by Educational Psychologists (EPs) to six groups of young people ( $n=33$ ) with 16 young people completing the full programme (5 males and 11 females) in five secondary schools within two London boroughs.

Quantitative data took the form of pupils' self-reported measures of general anxiety, test anxiety and mindfulness, collected pre-intervention (T1) post-intervention (T2) and at follow-up (T3). Qualitative data was collected at T3 and involved eight semi-structured qualitative interviews with a sub-selection of young people ( $n=5$ ; 1 from each group) and staff ( $n=3$ ) to explore participants' experience of the programme, and staff's views about the feasibility and effectiveness of the intervention.

Quantitative findings for the participants indicated that there was one significant reduction in mindfulness for participants between T1 and T2, with no significant changes across any other outcome measures. However, qualitative findings suggest that the intervention has had a positive impact on young people's emotional well-being and ability to control feelings of test anxiety.

This study has contributed to the evidence-base regarding the feasibility and effectiveness of mindfulness-based interventions for young people, and has informed a wider understanding of issues relating to the implementation of such therapeutic interventions by EPs within their work in secondary schools.

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## **Chapter One: Background and Introduction**

This topic is focused on the concept of mindfulness as an approach to enhance young people's emotional well-being and resilience, and equip them with effective strategies in order to cope with the pressures of school life and exams. This study arose from the researcher's professional interest in the use of therapeutic interventions to support the growing prevalence of social, emotional and mental health (SEMH) difficulties experienced by young people throughout their school trajectories. The researcher has a particular interest in contributing to the evidence base surrounding such interventions for supporting young people in the education system, and in combating anxiety in relation to the increasing academic pressure placed upon young people undertaking exams. This study evaluated a mindfulness-based intervention aimed at young people in the G.C.S.E. years experiencing exam-related anxiety, and aimed to explore the facets of a successful intervention encompassing mindfulness techniques to enhance emotional well-being and reduce feelings of anxiety.

### **1.1 Introduction and Overview of Chapter**

This chapter firstly considers the recent governmental legislative reforms and political agenda striving towards improving the mental health and emotional well-being of children and young people (CYP), signifying the changing landscape of the profession, and leading to the core underlying rationale and impetus for this research. The focus will then turn to explore the professional context in which this exploratory research is embedded, before turning to examine the context within the local authority upon which the research is based. Finally, the personal interests of the researcher will be outlined, and the origins

and theory underpinning the delivery of therapeutic approaches for exam-related anxiety within the EP role will be explored.

## **1.2 National and Professional Context**

Children's mental health has become a national and societal priority; the prevalence of mental health difficulties has markedly increased and poor mental health is the largest burden of disability in the UK (DoH, 2014). Furthermore, The Children's Society (2015) recently elucidated that children in England ranked 14<sup>th</sup> out of 15 international countries for life and school satisfaction and subjective well-being. Findings indicate that around 5-10% of children in the UK have low levels of well-being, with lower well-being found amongst girls than boys in relation to body image and self-confidence. The report indicated that children ranked low with regards to bullying, self-image, and experience of school (The Children's Society, 2015). The report highlighted the strong link between subjective well-being and mental-ill health, and therefore further highlights the importance of offering preventative and proactive interventions as a means of supporting vulnerable CYP.

The drive to ensure that services are more cohesive, integrated and effective in order to support CYP's emotional needs, has been stipulated within the departmental advice 'Mental health and behaviour in schools' (DfE, 2014) and the new Code of Practice: 0-25 years (DfE, 2014). It is hoped that the development of Education, Health and Care Plans (EHCPs) will allow greater collaboration between education, health and social care services in order to provide cohesive support, paving the way for the EP to deliver services in the community. An EHCP brings the child or young person's education, health

and social care needs into a single, legal document and keeps the child or young person's voice at the centre of their plan (DfE, 2014).

The economic impact of emotional difficulties for CYP in the UK has been investigated. Snell et al. (2013) examined the impact of emotional disorders on the public sector services, and discovered that substantial costs are incurred on the education system. Health, social care and education costs associated with childhood psychiatric disorders totalled £1.47 billion in 2008, with the majority of costs in education and special education services. Furthermore, the proportion of students categorised as highly test anxious in an estimation of the prevalence of test anxiety in students in UK secondary schools, ranged from 2.1 to 30.2% with a mean of 15.1%. This indicates that a significant proportion of students' report experiencing anxiety in relation to exams, which may suggest that these young people are at greater risk of under-achievement (Putwain et al., 2014).

The prevalence statistics suggest that a high proportion of CYP within the school system are currently experiencing mental health difficulties (Willis & Jones, 2014). Further to this, surveys have suggested that poor mental health often undermines educational outcomes, and have reported that students with conduct and emotional disorders are at risk of missing school, exclusion, and fall behind in their educational attainment (DfE, 2014).

### **1.3 Research and Service Context**

The study takes place within a service during a climate of recent change; the service is a community interest company set up to deliver children's services.



The service comprises of two recently merged Educational Psychology Services (EPS) spanning two boroughs, and data is collected in both of these boroughs.

The borough in which the researcher is based is predominantly affluent, with low levels of crime, making it one of the least deprived in the country. However, there are pockets of relative deprivation and child poverty (CYP's Plan 2013-2017). According to the 2011 Census, the borough's population was estimated at 187,000, of which 44,000 are aged between 0-19 years old, and 14.1% of the borough population comes from Black, Asian and Minority Ethnic groups. Pupils who are eligible for free-school meals are estimated at 9.1%. The borough has 40 primary schools (ages 4-11), 5 infant schools (ages 4-7) and 5 junior schools (ages 7-11). There are 9 secondary schools (ages 11-16) and two special schools (Borough X Profile, 2013).

The neighbouring borough, and half of the makeup of the service, has a slight variation in profile. The CYP's Plan 2013-2017 reported that the borough is ranked the third least deprived of all 33 London boroughs, however there are extremes in terms of advantage and disadvantage. The borough has been cited as being a safe place for CYP to grow up, with relatively low levels of crime, and is ethnically diverse. The borough has 36 primary and nursery schools, 3 special schools and 10 secondary schools. Pupils who are eligible for free-school meals are estimated at 10.8% for primary schools, and 9.5% for secondary schools (Borough Y Profile, 2013).

The link between low socio-economic status, and the prevalence of mental health difficulties has been evidenced. The Good Childhood Report (2015) found significant links between children's 'subjective well-being', and a range of socio-economic factors, contextual factors, life events and behaviours for CYP in the UK. The report stated that traditional measures of family economic status (for instance, household income) explain some variation in children's level of subjective well-being, with 'child-centred material deprivation' explaining a higher proportion of this link. These findings have national policy implications and contribute to debates regarding re-prioritising targets to reduce the rates of CYP in the UK experiencing poverty (The Good Childhood Report, 2015, p. 11).

The impact of the growing mental health needs on CYP, and the gap in the current provision in meeting these needs, has been identified by the service. Developing and strengthening evidence-based practice has been identified as a core service priority. Key areas of service development priority include: Community Psychology; Training; and Pupil and Parent Participation. This study directly relates to these identified service priorities by focusing on mental health in the community, actively involving young people. It is hoped that it will further demonstrate the potential evidence-based interventions which may be offered as part of the menu of therapeutic support offered by the service.

A decrease in capacity for CAMHS services due to budget constraints has meant an increased emphasis has been placed on the EPS to focus on emotional well-being. One EP in the service had received Mindful Attention Programme (MAP) training at UCL centred on 'Mindfulness-based Approaches

for Working with Children and Young People', consisting of eight weekly three-hour sessions. The first mindfulness-based intervention delivered by the trained EP in the service was a universal programme for children in Year 8 in one secondary school in 2014, and promising results were found in their ability to focus, tolerance to cognitive and environmental distractions, and emotional well-being. Approaches to supporting pupil well-being and enhancing engagement arose as priorities for ongoing EP involvement. This is the first targeted short-term mindfulness intervention in the service, aimed at young people in Years 10 and 11 who are experiencing test anxiety. This intervention provides psycho-education around their stress and anxiety response and provides practical strategies to help students to perform at their best. A training day was delivered by the EP to the service, in order to equip EPs with appropriate knowledge about the intervention, and enable other EPs to deliver the intervention in their schools. It is hoped that it will contribute to the evidence-base for psychological interventions which are delivered by EPs in schools.

#### **1.4 Personal Interest**

The professional experiences gained during my background working in secondary school settings and during the past 32 months practicing as a Trainee Educational Psychologist (TEP), have demonstrated the notable academic and social pressures that young people can face. These experiences provided an insight into the emotional and psychological difficulties which CYP can be affected by, and highlighted the need to develop effective preventative support for them during such a crucial time in their lives. Further to this, I have a developing personal interest and practice of yoga and mindfulness, and have been enlightened regarding its transformational benefits to engender change,

build resilience and offer new perspectives, in order to be able to cope with life's challenges.

### **1.5 Therapeutic Interventions and Educational Psychologists (EPs) in Schools.**

The important role of schools in the promotion of CYP's mental health as a positive vehicle of prevention and change has been outlined in the recent DfE report, 'Mental health and behaviour in schools' (2014). They stipulated the crucial role that schools can play, and refer to the effective work that professionals, such as EPs, who hold specialist knowledge regarding the mental health of CYP, may provide in supporting those who are experiencing difficulties. Further recent literature has argued that EPs may be particularly well-positioned to support the well-being of CYP, due to their position as applied psychologists working in educational settings, and their capability to deliver effective therapeutic interventions. The EP therefore, is in a privileged position to be able to work holistically and therapeutically in order to engender positive change (MacKay, 2007) as they are exposed to many of the issues that may impact upon CYP as they move throughout the school system (Atkinson et al., 2013).

In summary, there exists concerns regarding children's mental health and the impact this may have on overall educational and lifetime outcomes. The importance of schools and professionals working with CYP to provide early intervention and targeted support has been highlighted, and EPs are well placed to provide such evidence-based therapeutic interventions within their

role in schools. The current research is therefore timely, and explores the impact of a new brief small group intervention targeted at adolescents experiencing anxiety, particularly in relation to exams. The intervention has been delivered in mainstream secondary school settings by EPs within one service across two London boroughs.

The following chapter will consider the recent literature within this field, focusing on the evidence-base for mindfulness for CYP and its impact on anxiety and test anxiety, and the existing interventions which encompass mindfulness techniques will be critically evaluated.

## **Chapter Two: Literature Review**

### **2.1 Overview of Chapter**

This chapter will explore the emerging literature relating to Mindfulness-Based Interventions (MBIs) and Cognitive Behavioural Therapeutic (CBT) approaches, with particular reference to the feasibility and effectiveness of EPs delivering such programmes within the therapeutic work which they provide to schools. It is beyond the scope of the research to review the wealth of literature that has emerged relating to mindfulness and CBT as therapeutic approaches for anxiety and mental health, however recent research papers, meta-analyses and reviews will be examined. A consideration of the gap that exists in the current literature will be examined, and the contribution that it is hoped this study will make will be outlined.

### **2.2 Defining Mindfulness**

The definition and conceptualisation of Mindfulness is varied, and the term is used in differing ways by different practitioners. Mindfulness has been defined as:

“...the awareness that emerges through paying attention on purpose, in the present moment, and non-judgementally to the unfolding of experience moment by moment” (Kabat-Zinn, 1982, p.145).

This definition is widely used within the Western world. Learning to pay attention in a purposeful way, allows the opportunity of stepping away from unconscious emotional, psychological and physiological responses to daily life, thus enabling the experience of the present moment. Being ‘fully present’ may

allow students to increase the quality of their learning performance by becoming more focused (Napoli et al., 2005). Mindfulness has further been described in relation to the use of the approach in applied settings: "...mindfulness is not a concept, it is not a good idea, it is not a philosophy, and it's not a catechism. It is a way of being, but it requires practice" (Kabat-Zinn, 2016). This definition seeks to dispel some myths and presumptions surrounding the language and origins of mindfulness-based practice. Mindfulness has been conceptualised in different ways; mindfulness is viewed by some as a state of mind achieved through meditation, whilst others believe that it encompasses a set of practical skills that can be taught and practised (Brown, Ryan & Cresswell, 2007). These alternative views may pose as potentially problematic, as it could be argued that there needs to be a clear operational definition before the concept of mindfulness can be fully understood and practiced.

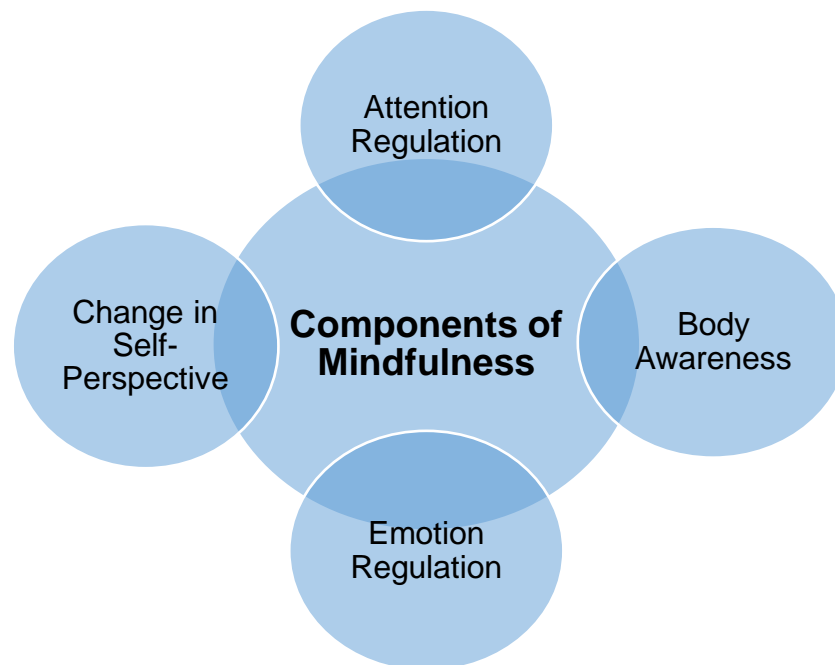
The mindfulness perspective is centred on direct experience, and involves the specific mental activity of re-directing one's attention towards present experience, by focusing on a specific object in order to acquire the ability to sustain attention and perform tasks more effectively despite distractions. Particular techniques to help achieve this involve mindful eating and focusing on the breath as an anchor. A further mindfulness technique involves broadening attention; if thoughts aim to dominate one's attention, then the wilful letting go and acceptance of these thoughts, allow the 'flow of internal events' (Davis, 2012). These techniques all feature in the intervention which this study seeks to evaluate. The mindfulness perspective may involve placing an emphasis on the physical experience and related bodily sensations synonymous with anxiety,

rather than proposing hypothetical possibilities for the future, for example excessive worry or predicting negative outcomes (Davis, 2012).

Mindfulness is believed to relate to meta-cognition, through the practice of observing internal and external processes (Davis, 2012). Meta-cognition refers to being consciously alert to our own thinking and knowing what is happening in the present moment; it consists of a higher order thinking which involves active control over the cognitive processes engaged in learning (Livingston, 2007). Meta-cognition holds importance in anxiety, as the cognitive process involves being consciously aware of what is happening in the present moment, and thus is believed to enable the person to possess greater conscious choice in how to respond to an experience, by processing a broader range of information (Davis, 2012). This therefore allows a greater control over the anxiety provoking situation. In addition, this perspective may be of particular use for CYP experiencing anxiety in relation to school-work and exams, in order to help them to regulate their stress responses, manage emotions and maintain concentration.

Holzel et al. (2011) provide a theoretical framework in which to define the mechanisms of mindfulness. The researchers posit that there are a number of distinct yet interacting mechanisms involved in producing the benefits of the practice of mindfulness meditation, and propose four key components (detailed in Figure 1) that encompass the mechanisms through which mindfulness works.





**Figure 1: Mindfulness Mechanisms (Holzel et al., 2011)**

It has been proposed that these components interact to contribute towards a process of 'enhanced self-regulation', and they can in turn become active to varying degrees at particular moments during mindfulness meditation. This model helps to understand the potential underlying mechanisms through which mindfulness works. The authors suggest future empirical work to apply mindfulness in the clinical domain, and the advanced techniques aimed at cultivating a healthy mind and promoting emotional well-being (Holzel et al., 2011).

Therein lies a difficulty in the distinct definition of mindfulness, as it does not seat neatly into one conceptual framework, such as 'experience', 'method', 'perspective', or 'cognitive process' (Davis, 2012). Rather, instead of trying to distance mindfulness from its Eastern Buddhist origins, Kabat-Zinn (2003)

suggested the importance of ensuring mindfulness maintains its integrity, and that a clear understanding of the term is gained through full 'experiential involvement' achieved through practice of the different techniques. The concept of mindfulness is not simplistic to explain (Crane, 2009). Rather, it is steeped in both Buddhist origin and theoretical frameworks, with the term interpreted in several ways, including a state of being, a meta-cognitive process, a dispositional quality, and an intervention (Davidson, 2010). Implicit in definitions of mindfulness is the argument that mindfulness may be best understood by directly personally experiencing the approach (Maitreyabandhu, 2009).

Importantly, MBIs may be introduced to different populations with no prior experience of mindfulness (Davis, 2012). However, there exists a plethora of definitions of the concept within the literature, therefore, in order to create an operational shared definition, greater specificity and precision may be required, in order for MBIs to be developed and tailored to support individual needs most effectively. Maintaining integrity to the origins of the approach and developing a shared common language and definition, is an important consideration for practitioners when identifying and delivering MBIs.

### **2.3 Defining Test Anxiety**

There appears to be a growing prevalence of anxieties in relation to school examinations and tests, and students often report that such forms of assessments are often the most anxiety provoking elements of their school experiences (Putwain, 2014). The educational and psychological literature

typically researches these anxieties under the construct of 'test anxiety'. Test anxiety has been defined as:

“The emotional, physiological and behavioural responses surrounding the potential consequences of negative evaluation on an upcoming test or exam” (Zeidner, 1998; cited in Von der Embse, 2013, p.57).

A further definition is offered by Putwain (2014):

“A situation-specific form of trait anxiety: that is, individual differences in the general tendency to appraise performance-evaluative situations (for example, examinations) as threatening. As many students judge their sense of self-worth on the basis of academic credentials, academic failure, or the anticipation of it, self-worth evaluations become threatened due to the possibility of negative judgements resulting from perceived failure” (Putwain, 2014, p.421).

Both definitions relate to students' perceived negative thoughts regarding their performance and fear of failure, resulting in higher anxiety and perhaps lower performance. Furthermore, test anxiety is believed to possess distinct yet inter-related cognitive, behavioural, and affective components, consisting of pre-occupying thoughts of failure, avoidant off-task behaviours, autonomic arousal and physiological responses to anxiety (Putwain, 2014). This implies that test anxiety interventions should seek to be multi-dimensional to account for and target these distinct components.

Test anxiety is believed to manifest in a specific form that is part of a wider group of problems, characterised by experiences of anxiety (McDonald, 2001).

It has been detected as early as seven years old, and prevalence rates for test anxiety are higher for students with disabilities, minority groups and females. Test anxiety varies along a continuum and is an individually subjective experience (McDonald, 2001). Research has estimated that between 10% and 40% of students will suffer from differing forms of test anxiety (Gregor, 2005). Anecdotally, there appears to be no clear evidence within the literature regarding a link between the role of affluence and test anxiety, however a social component to test anxiety has been proposed to reflect fears about how performance is viewed by others, such as parents, teachers and peers, and the associated pressures placed upon CYP by parental aspirations and expectations may increase the likelihood of experiencing test anxiety (Lowe & Ang, 2011; as cited in Putwain & Daly, 2014).

The majority of research suggests that the worry associated with expected failure negatively influences examination performance, rather than the physiological effects of feeling anxious and nervous leading up to or during an examination (Putwain, 2011; McDonald, 2001). Anxiety in relation to exams and poor academic performance have been found to be closely related, suggesting that anxiety can prevent students from achieving their potential (Niss, 2012). EPs can play an important role in supporting a CYP's mental health and emotional well-being by providing evidence-based interventions to CYP with test anxiety (Von der Embse et al., 2013).

## 2.4 Anxiety in CYP

In order to understand the spectrum of anxiety and to set the context of this study's focus, the following definition for anxiety will be outlined:

“a *future-oriented* mood state in which one is ready or prepared to attempt to cope with upcoming negative events” (Barlow, 2002).

This definition is suggestive of one's 'anxious apprehension' and 'anticipation' towards upcoming perceived negative events. This definition fits with the current research study, examining the effect of test anxiety on young people's ability to cope and perform during a pressurised period of time. Barlow (2002) describes the experience of test anxiety as 'imminent performance evoking a state of anxious apprehension'. Barlow describes the definition of anxiety as composing of a number of closely related cognitive and affective components, indicating the complexity of the nature of anxiety.

Anxiety disorders are common in young people. According to the Office of National Statistics Child and Adolescent Mental Health Survey (2004) approximately 290,000 (3.3%) of CYP in the United Kingdom have an anxiety disorder. More specifically, they estimated that 96,000 (2.2%) children have an anxiety disorder, and 195,000 (4.4%) young people have an anxiety disorder (Green et al., 2005) illustrating that adolescence is a particularly susceptible period for the development of anxiety disorders. They tend to run a 'chronic course' if left untreated, and are associated with increased risk of other serious mental health problems, such as other anxiety disorders, depression and substance abuse (Rapee, 2009; Allen et al., 2012). Many experience a childhood onset, with research suggesting an increase in prevalence during

adolescence. Furthermore, CYP who meet the criteria for developing anxiety disorders at one particular time, are at moderate-high risk of developing anxiety disorders as they move from childhood towards adolescence. Females demonstrate almost twice the risk of developing anxiety than males, although this finding is not wholly consistent (Rapee, 2009). In addition, there may be an impact of anxiety on adolescents in different settings, for example schools, peer and family relationships.

Research suggests the link between high anxiety and impaired cognitive performance, and indicates subsequently poor academic outcomes for anxious CYP (Wood, 2006). This further highlights the need to explore effective ways to improve mental health and emotional well-being in early years and adolescence. There has been notable support for the efficacy of early intervention and prevention of anxiety in CYP (Allen et al., 2012). Research suggests that the implementation of flexible approaches that are delivered to targeted youth in schools would be a favourable step towards ensuring the effective provision of evidence-based practice to CYP experiencing anxiety (Mychailyszyn et al., 2011). Furthermore, the past decade has seen the development of a number of efficacious interventions, which are centred upon a cognitive-behavioural paradigm, designed for children and young people experiencing anxiety (Wood, 2006). Moreover, anxiety and emotional difficulties may fall unnoticed in school, due to behavioural difficulties perhaps being more overt and therefore at the forefront of concern (Weems et al., 2010). Therefore, this highlights the need to identify and prevent anxiety-related difficulties from escalating amongst a vulnerable population.

## **2.5 Mindfulness-Based Interventions (MBIs) for Children and Young People (CYP)**

In order to review and synthesize research on mindfulness with CYP, EBSCO Host searches were conducted in the following electronic databases: Academic Search Complete, PsycINFO, PsycBOOKS, PsycARTICLES, PsycEXTRA, MEDLINE and ERIC, using the search concepts and terms ('mindfulness students' OR 'mindfulness-based interventions' OR 'mindfulness schools') AND ('adolescents' OR 'young people') AND ('research' OR 'review'). Only studies that had been published in peer reviewed journals and included the most relevant search terms in their abstracts were chosen, thereby increasing the level of quality appropriate for the research.

In addition, Google Scholar and The Mindfulness in Schools Project (MiSP) website (<http://mindfulnessinschools.org>) were consulted for relevant research papers for the purpose of this search. The search generated a number of papers, including four recent reviews researching the efficacy of MBIs for children and adolescents. One article reviewed 15 studies on secular mindfulness practices (Burke, 2010), another a more recent review of 24 studies targeted at children and adolescents, whereby interventions had been carried out in educational or clinical settings (Harnett & Dawe, 2012). A literature review of twenty intervention studies (Weare, 2013) and a meta-analysis of the effects of school-based mindfulness interventions on psychological outcomes, such as emotional problems, stress and resilience (Zenner et al., 2014) and finally a recent systematic review of 28 studies on MBIs for young people in school settings (Felver et al., 2016).

Further to section 1.2 which outlined concern about the rise in children's mental illness, a recent inquiry has reiterated that new effective approaches to tackle mental health are urgently required (The Mindfulness Initiative, 2015). There has been a recent surge in popularity for mindfulness, and media coverage has been widespread. The term Mindfulness-Based Interventions (MBIs) refers to the growing range of strategies and programmes aimed at supporting the development of mindfulness (Davis, 2012).

The interest and evidence-base surrounding mindfulness has grown apace in recent years. The architecture for MBIs is increasingly evidenced-based, particularly with adults, arising from Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) (Williams & Penman, 2011). MBCT is recognised by NICE (2004) as an effective treatment for adult depression relapse prevention. In addition, the application of mindfulness has been used to an extensively wide remit of areas, including anxiety (Davis, 2012). Furthermore, MBIs specifically designed to reduce performance anxiety, have proven to be beneficial in terms of coping with stress and test anxiety. Research findings suggest that MBIs appear to be easy to carry out, due perhaps to clear and comprehensive programmes and the relatively short time frame in which they can be delivered. In addition, CYP report finding MBIs as enjoyable, and they have been implemented in a wide range of contexts, including education, health, the workplace, and throughout a range of media, including face-to-face courses, online apps and self-help materials (Weare, 2014).



One review of fifteen studies on secular mindfulness practices for CYP discovered that mindfulness practices were received well by participants, as seen by Burke, (2010). CYP reported the improvement of attention (Napoli et al., 2005) and the reduction of anxiety (Semple, 2005) emphasising how the results from previous studies have legitimised the value of MBIs for CYP. However, the review highlighted the methodological issues of some studies, such as small sample sizes and a lack of control groups, thereby limiting the possibility of drawing accurate conclusions regarding the efficacy of the intervention as an outcome measure alone. In support of this, a more recent meta-analysis of 24 studies conducted by Zenner et al. (2014) highlighted the beneficial properties of MBIs for CYP, yielding positive effect sizes (Hedge's  $g = 0.40$  between groups) particularly in relation to improving cognitive performance ( $g = 0.80$ ) and stress ( $g = 0.39$ ). Nine measures comprised the domain of cognitive performance, and it was quantified by a number of components, such as: attention tests used in five studies, a creativity test used in one study, a 'mind wandering paradigm' applied within another study, and finally, grades used as dependent variables used in two studies. However, they note a diversity of samples, variation in content, implementation and outcome measures with this heterogeneity, making it difficult to make comparisons across studies. Furthermore, the diversity of the populations in the studies makes it challenging to 'build a consistent picture of efficacy', but allows for greater generalisability (Harnett & Dawe, 2012). The recommendations call for more rigorous experimental designs, and further suggest the need for interventions in school-based settings.

Research evaluating the efficacy of mindfulness with CYP is not yet as extensive as with adults, and the studies carried out to date have notable methodological limitations, such as the need to employ comparison groups matched on key characteristics, and the recruitment of larger sample sizes to be able to draw more conclusive implications. Moreover, whilst the existing evidence base suggests that mindfulness may benefit CYP with anxiety, further research is required to ascertain how mindfulness can best be delivered to CYP with varying levels of need (Davis, 2012). Definitive conclusions regarding its effectiveness therefore, must be tentative. Furthermore, a significant proportion of research has been conducted in countries such as the United States, and to a lesser extent the UK (Weare, 2012). Nevertheless, research with this population is growing rapidly and initial findings suggest that mindfulness shows promise as a school-based intervention for a range of mental health issues in CYP. Mindfulness may be of particular benefit and accessible for EPs to deliver, as it may have a direct effect across the learning and social contexts in which the young person exists (Iyadurai et al., 2014).

### **2.5.1 Modification of MBIs for CYP**

MBIs have indicated significant reductions in child report of anxiety, however, modifications to established programmes originally designed for adults has been questioned. A review of the literature of MBIs in educational settings proposed limitations with the modification of established programmes tailored specifically towards CYP. Adaptations of programmes originally developed for adults, such as MBCT, for the use with CYP have generally been led by practical concerns (e.g. shorter durations) rather than informed by models of

child development and family functioning, and the small sample sizes of many studies may compromise the ability to detect changes in the overall functioning of participants. Therefore, it is believed that interventions that are integrated into the ecological framework of the family may yield more effective results than an intervention delivered in isolation in schools (Harnett & Dawe, 2012).

It is recognised that for vulnerable CYP who are experiencing anxiety, suitable modifications may be required to established programmes which take into account difficulties in: emotional presentation, level of language, establishing relationships with the therapist, turn taking with peers in a group format, and in understanding emotions (Donogue, Stallard & Kucia, 2011). To investigate the application of an adapted MBI for children, Semple (2005) examined the feasibility and effectiveness of mindfulness teaching for children. Five participants aged between 7-8 years old participated in a 6-week programme, delivered in 45 minute weekly sessions. A within-subjects, pre-post design was used, whereby each participant acted as his or her own control. Using self and teacher-report measures, the research ascertained that MBIs can be taught successfully to children as young as seven years old, and that mindfulness techniques specifically adapted for children (MBCT-C) showed promise in alleviating anxiety and attention problems. Results demonstrated that all participants showed improvements in reducing internalising and externalising behaviours, and adaptive functioning. Teacher-reported data indicated that some pupils had also made academic progress. Some caution must be exercised in interpretation of the results however, as a very small sample was employed ( $n=5$ ) and the study was based in only one school.

In support of these findings, Semple et al. (2009) conducted a randomised control trial (RCT) and adapted the adult-designed MBCT programme by using 'age-appropriate modifications', such as reducing the length of the sessions, and including sensory and physical exercises. Twenty-five children, aged 9-13 years who were displaying indicators of stress or anxiety took part in the 12-week MBCT-C programme. Participants were matched by age and gender, and then randomly assigned to four groups split into age brackets or a wait-list control group. Measures included the Child Behavior Checklist, State-Trait Anxiety Inventory for Children, and Multidimensional Anxiety Scale for Children.

Outcome assessments for the reduction of attention problems yielded a small to medium treatment effect size (Cohen's  $d=.42$ ) and significant reduction in mean state anxiety ( $d=.38$ ) however a small treatment effect size was produced for the reduction of behaviour problems between groups ( $d=.27$ ). Significant reductions were found in anxiety symptoms and behaviour related problems for those children who reported clinically elevated levels of anxiety pre-intervention ( $n=6$ ). These preliminary findings suggest that MBIs adapted for children show promise for the treatment of anxiety, attention and behavioral problems, however the authors cited parents providing the only source of information, and the potential for group influence of treatment effects as limitations of this study. They further suggested that the study needs to be replicated with a larger clinical sample to produce more concurrent findings.

## **2.6 Mindfulness and Cognitive Behavioural Therapy (CBT) for Anxiety in CYP**

Due to the increasing prevalence of social and emotional difficulties in CYP during recent years, the delivery and application of therapeutic approaches, such as CBT, is now not solely viewed as the responsibility of workers in CAMHS settings (Atkinson et al., 2011) but has widened its remit to the capacity of other trained professionals in the field.

CBT is a therapeutic approach that has become increasingly popular in recent years. The process enables the client to alter their behaviours, through first becoming consciously aware of the thoughts and emotions that affect the actions that they make (Beck, 1991). CBT has been evaluated as being an effective intervention for adults with anxiety and depression (NICE, 2005) and for the treatment of CYP with low mood and depression (Rait, 2010). CBT additionally possesses a strong evidence-base for anxiety related difficulties, and the WHO recommends CBT as an effective evidence-based psychological treatment (Willis and Jones, 2014). Further, CBT has been found to be successful across a wide age-range, from young children under the age of ten (Stallard, 2002) to adolescents with anxiety disorders and emotional difficulties (Fuggle et al., 2013; Willis & Jones, 2014).

For CYP with sufficient verbal ability and the cognitive capacity to understand and engage with the meta-cognitive aspect of the thought-feeling-behaviour pathway, CBT may be considered a suitable intervention approach for CYP experiencing anxiety. Empirically supported skills-based programmes for

anxiety disorders include CBT, and generally involve psycho-education, emotional self-regulation, cognitive restructuring, relaxation techniques and gradual exposure, in order to be able to identify and then face the anxiety equipped with new knowledge and skills (Rapee, 2009).

Evidence suggests that CBT targeted at childhood anxiety, has been found to be effective in improving social functioning, academic performance, and overall school performance (Wood, 2006). In one such study exploring this, Wood (2006) tested the effect of reductions in children's anxiety over time by adopting a RCT in the context of participation in a CBT intervention programme. There were 40 children with high anxiety (6-13 years of age) included in the study. Measures were completed pre-intervention, mid-intervention, and post-intervention. Independent evaluators, children, and parents rated child anxiety; parents reported school performance, and children and parents rated social functioning. Two variations of a CBT intervention programme were employed over eight sessions: children were assigned to either a family-focused CBT, or child-focused CBT intervention conditions.

The intervention indicated that children in the two different conditions differed on most anxiety outcome measures, with most improvement seen in the family condition. Tests suggested that increased anxiety was predictive of improved social adjustment and school performance over the course of the intervention. The researchers suggest that anxiety reduction may have a direct impact on enhancing important developmental outcomes for CYP, regardless of age and gender.

However, there were limitations of this study including the sample size for this study was relatively small ( $n=40$ ) and the sample comprised of CYP from middle class, educated, two-parent families, limiting the generalisability of findings. Furthermore, in order to increase the methodological strengths, a wait-list control condition may have provided a more definitive measure of causal relations, by limiting possible ambiguity regarding the intervention's direct effect on the study's dependent variables over time, thus minimising possible misrepresentation of results. In addition, teacher reports of CYP's school performance may have been useful to add further weight to the findings, and to triangulate information. However, the study used multiple methods of assessment of outcomes, and therefore is able to provide evidence that CBT delivered in schools for CYP experiencing anxiety shows promising results, particularly in terms of enhancing overall emotional well-being and potentiating trajectories of school and social functioning.

In support of these findings, recent evidence suggests that there are benefits of combining mindfulness interventions with anxiety-management CBT approaches (Willis & Jones, 2014). Relaxation techniques when used in conjunction with the 'essential ingredients' that are responsible for the effectiveness of CBT approaches, have been found to be of value when reducing pupils' experiences of test anxiety, and in turn, improving their performance (Gregor, 2005). Similarly to CBT, mindfulness can assist the client to recognise anxious feelings and maladaptive thoughts, and can minimise avoidant behaviour, whilst equipping the client with appropriate coping and relaxation strategies. However, mindfulness places an emphasis on the

acceptance of thoughts, as opposed to challenging unhelpful thoughts and creating more positive thought cycles (Semple, 2005).

One study which highlights the positive effect of adopting a flexible intervention approach, examined the effect of different intervention groups comprising of a variation in design, in order to assess the impact on young people's personal experience of test anxiety. Gregor (2005) designed an experimental study in a secondary school in the UK, examining the effects of different interventions on the self-management of test anxiety. There were 105 pupils in Year 11 in the study, who were randomly assigned to either a mixed intervention group, a CBT group, a relaxation group, or an attention control group. Findings showed that the mixed relaxation/CBT group improved in their exam results in Maths compared with no improvement in the other groups, suggesting that cognitive behavioural approaches can be effective in supporting pupil's examination anxiety, particularly when combined with relaxation techniques - a core component of a mindfulness approach. Furthermore, anxiety levels in the groups with the highest recorded anxiety levels pre-intervention, decreased significantly post-intervention. These findings therefore encourage the view that mixed interventions in schools may be effective in the prevention of test anxiety, and in turn, aid the improvement of examination performance. Mixed interventions are thought to attend to the individual differences of anxious individuals, allow for variations in the concept of test anxiety, and encompass a variety of contexts and factors (Gregor, 2005). These findings are consistent with those of Putwain (2014) who highlighted the importance of adopting an approach which targets the cognitive, physiological and behavioural components of test anxiety.



In support of these findings, a recent meta-analysis conducted by Hoogsteder et al. (2015) included six studies comprising 164 adolescents in total, and specifically examined the effectiveness of individually-orientated interventions with CBT elements for adolescents with aggression problems. Their findings discovered that adding mindfulness and relaxation elements to CBT, appeared to further contribute to the effectiveness of the interventions, by reduction of stress and focus of attention (Hoogsteder, 2015). In further support of this, studies examining mindfulness interventions for traumatised vulnerable young people, suggest that yoga interventions have a positive impact on emotional self-regulation and responses to stress, such as intrusive thoughts, rumination, and emotional arousal (Mendelson et al., 2010). These findings coupled with those of Gregor (2005), suggest that combining CBT and mindfulness approaches may be a feasible and effective approach for reducing anxiety and stress in CYP with a range of mental health problems, and sets the context in which this study is embedded.

Other studies have found relationships between mindfulness, habitual worrying and test anxiety. One correlational study located in the UK, examined the effect of mindfulness on habitual worrying. Mindfulness was hypothesised on the basis of either a focus on the immediate experience, and an acceptance towards the stream of consciousness. A total of 336 university students took part in an online survey. Individual differences in mindfulness were assessed using student report on the Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003) and test anxiety was accounted for by 33 items developed by Hodapp and Benson (1997), which followed the stem “When I take an exam or test...” with example items such as “I ask myself whether my

performance will be good enough". Responses were given on 5-point scales (not at all typical of me – very typical of me) and high scores indicated high test anxiety (alpha= .94).

Findings suggested that the relationship between habitual worrying and test anxiety was mediated by dispositional mindfulness, and habitual worrying had a direct effect on test anxiety. Although this research focused on university rather than school students, it provided a valuable insight; the researchers suggest that there is a distinction between state and trait mindfulness, recommending that future studies investigate the other factors that play a role on treatment effects aside from mindfulness (Verplanken & Fisher, 2014). This is further supported by research suggesting that higher levels of habitual worrying, general anxiety and competency for mindfulness have a direct influence on the likelihood of experiencing test anxiety (Cunha & Paiva, 2012).

## **2.7 MBIs in Schools**

The evidence base for the effectiveness of MBIs delivered to both universal and targeted groups in schools has been deemed as promising (Burke, 2010; Weare, 2012). Evidence to date suggests that the impact of mindfulness interventions in schools appear to be for cognitive and mental health problems, including working memory, academic skills, attention, anxiety, depression, stress, emotional regulation and self-esteem (Meiklejohn et al., 2012) academic and learning achievements (Zenner et al., 2014) improved attention (Napoli et al., 2005) social and emotional competence and self-awareness (Schonert-

Reichl & Lawlor, 2010) and physical health and well-being outcomes (Weare, 2014).

A body of research is emerging in the UK through initiatives such as The Mindfulness in Schools Project (MiSP) (Hyland, 2014). This project has shown to be of particular benefit in improving adolescents' overall well-being, depression, stress, anxiety and resiliency (Kuyken et al., 2013; MiSP, 2012; Hennelly, 2011; Huppert & Johnson). The MiSP is a non-profit organisation, aiming to introduce, facilitate and support the teaching of secular mindfulness in schools. The project has developed a curriculum and a classroom-based introduction designed for teenagers, which adapts MBSR and MBCT into PHSE lessons, named 'dot-be' or '.b'. One UK based study carried out by Huppert & Johnson (2010) reported the outcomes of a control trial of the MiSP .b curriculum with 173 boys aged 14 to 15 in two English independent schools. The intervention involved basic mindfulness training delivered weekly for 4 weeks, and students were encouraged to practice mindfulness outside of the sessions. It was delivered in 11 religious education classes, 5 of which acted as controls and 6 which received the intervention.

Results from self-report data showed significant effects within the mindfulness group for mindfulness, psychological well-being, stress and resilience for those students who engaged in 10 minutes of mindfulness home practice per day, compared with small or no significant effects for those who did not engage in home practice. The study also found that significant improvements in well-being were associated with individual personality variables, such as emotional

stability and agreeableness, suggesting that young people who feel more emotionally stable and are receptive to trying mindfulness, experience more beneficial outcomes for their overall well-being. The sample consisted of all males so it lacks generalisability, and a longer intervention may have had found increased levels of well-being. However, the study does suggest that young people who possess motivation to engage in daily home practice, is a contributory factor for improvements in well-being.

A recent non-randomised controlled feasibility study evaluated the effectiveness of The MiSP, suggesting promising evidence regarding the programme's efficacy and acceptability. The study included 522 young people aged 12-16, from 12 secondary schools, and a design that allowed the intervention schools to be compared with control schools matched on key criteria, including: fee-paying private schools v. publically funded schools, year group and school-level academic results. Outcome measures were collected at baseline, post-intervention and at follow-up; these included: The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) to assess well-being; the Perceived Stress Scale (PSS) and the Center for Epidemiologic Studies Depression Scale Results (CES-D) to assess mental health; and five questions were given regarding sustained use of mindfulness practice in the three months following completion of the programme, to assess for mindfulness practice. Significant results were found for acceptability, a reduction in depressive symptoms, and a reduction of stress and increased well-being, compared to the control group.

However, as a feasibility study was adopted, they did not randomly assign schools and participants, and a limited number of self-report measures were

used. In addition, a greater diversity of schools would support the generalisability of results, and a broader range of teachers may allow the fidelity of the intervention to be assessed. The researchers state that further research should consist of appropriately developed RCTs in larger samples, to enable a more stringent evaluation of treatment effectiveness and allow for greater generalisability of findings (Kuyken et al., 2013).

Further to this, a study by Raes et al. (2014) was undertaken to explore the efficacy of a MBI aimed at reducing and preventing depression in adolescents in school. This first large scale RCT of a universal intervention involved whole classes of Dutch adolescents (age range 13-20) from five schools (N = 408). For each of the twelve pairs of parallel classes, one class was randomly assigned to the mindfulness condition, and one to the control condition. Students in the mindfulness intervention attended over eight weeks, and each session lasted 100 minutes. Students in the mindfulness group completed the Depression Anxiety Stress Scales immediately pre-intervention, post-intervention and at follow-up six months later, and the control condition mirrored the intervention group in the completion of measures. The mindfulness intervention showed significantly greater reductions in depressive symptoms compared with the control group at 6-month follow-up (Raes et al., 2014).

These findings suggest that school-based mindfulness interventions can help to reduce and prevent depression in adolescents. This RCT study provides robust evidence in support of the efficacy of MBIs in school to reduce depression in adolescents, and provides support for the implementation of a group

mindfulness programme aimed at preventing emotional instability in adolescents.

## **2.8 Test Anxiety and MBIs**

In order to review the literature on test anxiety and MBIs, an EBSCO search was conducted across the core databases listed in section 2.5. The following specific Boolean search was used: ('mindfulness-based interventions' OR 'mindfulness' OR 'mindful\* schools') AND ('test anxiety' OR 'exam\* anxiety' OR 'examination stress') AND ('young people' OR 'adolescents') and the field was set to Subject Terms, to ensure that the search remained focused and relevant. In order to further retain a narrow focus to the search, key limiters were implemented, such as specifying peer reviewed publications only and studies focusing on the adolescent age bracket. This specific search yielded two relevant papers. Further papers were additionally drawn upon when reviewing the literature on test anxiety more widely, in an effort to review the literature in the field and attempt to gain an understanding of the experience of test anxiety for CYP.

Von der Embse et al. (2013) stated that educational testing plays an increasingly important role in the means to which school achievement and student attainment is measured. They further highlight that test anxiety has risen with the use of such testing, and students experiencing high levels of test anxiety do not typically perform as well as those experiencing low levels of anxiety. The result of this systematic literature review of test interventions over a 10-year period, suggested that EPs play a pivotal role in supporting students

with test anxiety, due to their knowledge of testing and assessment, and mental health and emotional well-being.

Concerns are echoed in the literature regarding the competing workload demands, and the pressures of school work, particularly in Years 10 and 11 leading up to GCSE examinations. Research suggests that GCSE's can cause stress to an individual, irrespective of their personal predisposition (Denscombe, 2000; as cited in Putwain, 2011). Furthermore, figures captured in the International Health Behaviours Survey of Children (HBSC) demonstrate that England compares 'very unfavourably' compared to European neighbouring countries in terms of the extent to which boys and girls experience pressure related to school (Putwain, 2011). This highlights the problematic nature of educational testing, particularly for students who value academic achievement or have specific career aspirations, and are susceptible to succumbing to associated pressures and stress synonymous with examinations.

Despite the prevalent nature of test anxiety, it has been attested that there is a paucity of research examining mindfulness-based test anxiety interventions with CYP in secondary schools, particularly in the UK (Gregor, 2005) and in light of this, recommendations have been made for evidence-based test anxiety interventions to be delivered. Further, Weems et al. (2015) argued that there appears to be a gap in the literature for test anxiety interventions aimed specifically at high school students. There exists knowledge of effective interventions for treating test anxiety, however, and research has generally examined CBT and skills-based approaches to reduce test anxiety and improve

exam performance. However, small sample sizes used within many of the studies limit the generalisability and validity of the findings (Von der Embse et al., 2013).

Test anxiety is often an indicator of general anxiety problems, and training CYP in strategies in the context of a test anxiety intervention may have relevance to anxiety more broadly (Weems, 2010). Earlier studies have demonstrated the benefits of mindfulness interventions with children experiencing anxiety, with test anxiety an outcome. One such study explored the results of a mindfulness intervention with 194 children with high levels of anxiety aged between five and eight years old. An RCT was employed, with children allocated to the Attention Academy Program (AAP) intervention or monitoring control condition, who received no AAP training. The trainings for the experimental group were conducted in a separate classroom from the control condition, who participated in reading or quiet activities. The AAP constituted body scan meditations, movement, and relaxation exercises. Twelve sessions of 45 minutes each were conducted over 24 weeks, and took place in nine classrooms in two elementary schools in the USA. The measures used consisted of: the ADD-H Comprehensive Teacher Rating Scale, the Test of Everyday Attention for Children and the Test Anxiety Scale.

The children in the treatment group showed significant decreases in self-reported test anxiety. Teacher-reported objective measures found significant improvements in children's attention skills, significant reductions in test anxiety, and improvements in social skills, compared with the control group post-



intervention. This study showed promising results for the effect of mindfulness on alleviating test anxiety and enhancing performance outcomes. Evidence suggests that future research is required to employ larger scale robust designs, therefore this study demonstrates encouraging results using a methodologically sound RCT design, recruiting a significant number of participants (Napoli, Krech & Holley, 2005).

Although the studies reviewed provide a helpful insight into the emerging beneficial effects of mindfulness on test anxiety outcomes, there appears a shortage of studies specifically researching such interventions for adolescents in secondary schools in the UK. It is to this end which the current research hopes to make a contribution; the aim is to increase understanding regarding the relationship between the known effective properties of mindfulness on anxiety outcomes for young people, particularly in relation to anxiety surrounding examinations.

## **2.9 MBIs and Views of Young People**

Views and personal perspectives of young people are pivotal in shaping our understanding of the core aims of successful interventions, and assist in the development and improvement of interventions to improve engagement, accessibility and sustainability of techniques. Exploratory qualitative studies have been carried out to access young people's views regarding the effectiveness of MBIs, and challenging and negative aspects of the programme (Milligan et al., 2013). One study conducted by Wisner (2013) sought to gather young people's views and experiences of mindfulness, following participation in

an 8-week mindfulness programme. Thirty-five high school students in an Alternative Education Provision took part in the study and the researcher aimed to explore the effect of meditation on particularly vulnerable and at risk young people.

Each participant completed a journal throughout participation, which were subsequently analysed by the researcher. Themes that arose related to the benefits and challenges of meditation as experienced by the young people. Perceived benefits consisted of increased confidence, higher self-esteem, increased focus and control of thoughts. These findings can be triangulated with previous literature, suggesting that the experiences of participants support the suggested benefits of MBIs for young people. This study sought to explore the challenging factors associated with meditation, and offers a contribution into an insight of why some experience benefits of such programmes, and others do not. Challenges included dislike of the techniques, negative preconceptions and feelings during the meditation, and not investing in mindfulness, therefore acting as a barrier to engagement. Further challenges were cited as a lack of concentration, focus, physical discomfort and fatigue, and the impact of peer relations posing as a barrier to engagement. The results from this study highlight that although mindfulness is documented as an accessible intervention, it should not be assumed that this is a technique that will be suited to all, and could in-fact incur an alternative and unwelcome experience, subsequently not promoting a sense of positive emotional well-being.

This study provided a valuable insight into young people's views of their experience of a MBI. However, the study took place within an Alternative Education Provision, suggesting that young people were unable to cope within a mainstream setting at the time of the intervention. Furthermore, the small number of participants suggests that the generalisability of results is limited. However, the results contribute towards an understanding of the variation in quantitative results documented in the literature, and assists in informing future research and intervention.

## **2.10 Critique of Mindfulness within Institutions**

Whilst growing evidence exists suggesting that mindfulness interventions can help to ameliorate stress, anxiety and depression, it is important to acknowledge that mindfulness has also received critique in the literature, as an intervention to mitigate against social, political or systemic problems in institutions. As discussed throughout this chapter, extensive scientific research has been conducted studying the effectiveness and positive impact of mindfulness interventions, however few accounts exist which explore mindfulness through a critical lens. Stanley (2012) argued that mindfulness has become 'individualised as an object of contemporary psychological investigation', and proposes a relational approach to attempt to make sense of the phenomenon of mindfulness and the impact of related systemic and political factors. This approach views mindfulness as socially contingent, and as a resource for individuals and communities to develop a critically distant viewpoint towards society. It involves cultivating one's basic understanding of mindfulness as a 'public social practice' as well as an 'inner state of mind'.

Stanley (2012) argued that significant attention has been apportioned to mindfulness as a tool for enhancing emotional well-being, peace of mind and happiness in individuals' lives across different contexts. However, it has also been acknowledged that there exists a risk that mindfulness has become individualised to support emotional health within a capitalist society (Hickey, 2010). Stanley (2012) has proposed that the application of critical Psychology assists in the adoption of a sceptical position to develop an alternative perspective.

Mindfulness is becoming a part of 'mainstream mental health care', due to its economic viability (Stanley, 2012). Understanding mindfulness as an individualised 'inner state of mind', may encourage the idea that mindfulness approaches are 'within-person', reinforcing the premise of being separate from others and the social world. Interventions which take place within the systems in which the CYP exists, increase the likelihood of achieving positive outcomes, and assist in the application of an individualised personal approach to be applied across contexts and situations.

Stanley's (2012) critical relational perspective acknowledges the importance of viewing mindfulness in relation to the origins of the peace movement, however it also emphasises that the way in which mindfulness is understood alters according to its political and historical context. Sharf (1995) purports that mindfulness gains its meaning through the social contexts in which it exists, which can serve 'political and ideological' functions dependent on the context. The way in which the term functions may change dependent on its uses and

social context. The application of a critical psychological stance may allow the individualisation of mindfulness to be critiqued and reflected upon, whilst enabling a more socially engaged understanding to be developed (Stanley, 2012).

## **2.11 Research Aims and Rationale**

The current research wished to investigate an intervention focused on improving outcomes for CYP with anxiety, in particular relation to school performance and examinations. There is a growing evidence-base supporting mindfulness as an effective intervention that can be delivered to universal and targeted groups within school settings, and to a range of socio-economic and ethnically diverse backgrounds, however few wholly effective and well-developed programmes yet exist (Iyadurai et al., 2014). Furthermore, literature in the field of test anxiety suggests the importance of developing methods to reduce test anxiety that are based on robust evidence. Ergene (2003) noted that there is a paucity of research into the effectiveness of test anxiety programmes for young people in schools, and there currently exists a small proportion of reported research examining the effectiveness of test anxiety interventions with children and adolescents (Putwain, 2014). This is a gap which this research study seeks to address.

Evidence points towards the transformative influence that EPs can have in delivering such therapeutic interventions within their role in school environments (Fox, 2003; Atkinson et al, 2013; Kuyken et al., 2013; Iyadurai et al., 2014) where test anxiety interventions may hold value due to the ecology of the school

setting (Weems et al., 2014). This is consistent with Ecological Systems Theory (Bronfenbrenner, 1979), as emotion-focused preventative interventions conducted in the very context in which the problems lie and with the systems in which the CYP exists, will minimise the potential for obstacles, thereby increasing the likelihood of positive outcomes. Iyadurai et al. (2014) suggest that EPs are equipped with the relevant skills, experience, expertise and knowledge to deliver such interventions in school settings, whilst acknowledging the systemic influences surrounding CYP.

There exists a growing evidence base examining MBIs' effectiveness, consisting of primarily of quantitative designs, and there appears little evidence of qualitative information derived from young people's experiences and perceptions of mindfulness centred interventions. This is an important area to pursue, as it offers a deeper insight into the aspects of mindfulness-based practice that may be beneficial for CYP, any potential barriers to effective practice, and any factors that may assist in the sustainability of mindfulness techniques. Qualitative data may offer a richer explanation of findings that emerge from quantitative data, which offer the researchers and future programme leaders an insight into participants' views of the intervention and what works for them. Qualitative data is helpful in addressing the question of feasibility, accessibility and level of enjoyment of such interventions. The current research aims to explore this by adopting a mixed methods design utilising both a quantitative and qualitative format, exploring young people's views through semi-structured interviews post intervention.

Furthermore, previous reviews have implied the anticipated future direction of research in this field, stating the importance of using follow-up measures to ascertain the longer-term lasting benefits of outcome measures, and the triangulation of data using qualitative and behavioural measures, thereby implementing a mixed-methods approach to assess outcome and acceptability (Zenner et al., 2014) synonymous with the design of this study. More work is needed to examine the feasibility of MBIs with young people experiencing anxiety in relation to school pressures and exams, and the impact that such an approach may have on measurable outcomes of general anxiety, test anxiety and mindfulness. Despite the breadth of developing research in education settings, many of the studies took place outside of the UK, and there is variability in programme length and content. Therefore, there is a need to address methodological limitations addressed in previous studies, through the application of both quantitative and qualitative methods to gather a deeper understanding of any such effects from the points of view of both young people and school staff.

Conducting research in an applied setting (Robson, 2011) lends itself to the validity and authenticity of the findings. This study takes place in different secondary schools across dual-boroughs, therefore adding to the generalisability of findings to other similar schools and populations.

Furthermore, this study links with identified key priorities and development needs within a dynamic service, focused on targeting and promoting the mental health of its boroughs' young people.

The Mindfulness All-Party Parliamentary Group (2015) recently carried out an inquiry into the potential expansion of mindfulness into key public areas, such as education, health, work places and the criminal justice system, and believe that government should widen mindfulness training possibilities to these public domains, championing its status as a low-cost, effective intervention.

Interestingly, their report elucidated key recommendations for the education sector and they attest that mindfulness in schools should be a priority for future development and feasibility research, and could play a significant role in preventing mental ill health in order to combat the growing mental health crisis in the young (The Mindfulness Initiative, 2015).

In summary, the current evidence base for MBIs specifically with CYP is growing, however there appears to be a paucity of conclusive research for this population compared with research conducted with adults, and in particular, a gap in the literature on MBIs as an effective treatment for test anxiety for adolescents in the UK. It is hoped that this study will contribute to the growing evidence-base surrounding mindfulness and test anxiety, in order to support vulnerable CYP and school-staff effectively, whilst highlighting the value of offering therapeutic interventions as part of EP work.

## **2.12 Value and Contribution to Academic Knowledge and Professional EP Practice**

Findings from this research will be used to form the thesis for the Doctorate in Professional Child, Adolescent and Educational Psychology.

The current study investigated the impact of an intervention drawing upon



mindfulness and CBT-based techniques on test anxiety. This is a relatively new area of research in the UK and the findings may be useful in indicating the direction that future research should take and to inform treatment planning for this group of vulnerable young people at a crucial academic point in their lives.

lyadurai, Morris & Dunsmuir (2014) highlighted the importance of evaluating the effectiveness of mindfulness interventions in schools, in order to both inform practice, and to contribute to the evidence base. Furthermore, they argued that there are currently few well developed programmes in the UK, and suggested that EPs are suitably placed to deliver such valuable interventions within the remit of their role. Findings from this research will be used to inform developments of service provision and EP practice within the Local Authority and borough where the researcher is based.

### **2.13 Hypotheses and Research Questions**

The alternative hypotheses and related research questions are stated below:

**RQ 1:** Does the mindfulness-based intervention significantly reduce feelings of:

- a) test anxiety and b) general anxiety post-intervention programme?

**H<sub>1</sub>:** Participants will report a reduction in their feelings of test anxiety and general anxiety following completion of the mindfulness intervention programme.

**RQ 2:** Does the mindfulness-based intervention significantly increase emotional well-being, attention and focus of young people?

**H<sub>1</sub>:** Participants will report an increase in their emotional well-being and ability to attend and focus in school following completion of the mindfulness intervention programme.

**RQ 3:** What factors prevent or contribute to the sustainability of mindfulness techniques?

**RQ4:** What is the perceived level of feasibility and effectiveness of Educational Psychologists' delivering such interventions in schools as part of their practice, from the point of view of young people and school staff?

## **Chapter Three: Methodology**

### **3.1 Overview of Chapter**

This chapter provides a description of the design and methodology of this research, and the epistemological position that the research has adopted. Ethical considerations and steps taken in addressing these will be explained, followed by a description of research methods undertaken in this study, including recruitment of participants, quantitative and qualitative measures and procedures of the study, along with reflections on the study status to date.

### **3.2 Methodological Approach and Epistemological and Ontological Perspective**

The epistemological and ontological beliefs that the researcher adopts, underpin the theoretical perspective and methodological decisions for carrying out the research study. Epistemology refers to the theory and nature of valid knowledge, and 'concerns the relationship between the knower and the known' (Lincoln & Guba, 1985, p.37). Ontology refers to understanding the nature of reality and truth, and to the philosophical worldview (Teddlie & Tashakkori, 2009). Each epistemological position can be aligned with an ontological position, in order to understand and explore how reality can be observed and understood.

This study seeks to explore participants' personal experiences of the intervention, and centres on the belief that all individuals view the world individually and subjectively; this belief fits with that of Burr's (2003) social constructionist position. This study utilises self-report measures as a means of

gaining an insight into personal experience, however conversely acknowledges the challenges and possible limitations inherent of using self-report to measure the internal processes attributable to change. The research therefore adopts a pragmatic perspective, as it is deemed appropriate to advocate a methodological approach that works best for the research problem and aims lying at the heart of the research process. The subjective self-reports of young people and staff are considered as important to understand the core values and effectiveness of the intervention and the factors affecting implementation, whilst the objective outcome measures of anxiety, test anxiety, anxiety control and mindfulness provide an unbiased measure of the intervention's usefulness, benefits and impact over time.

As this study adopts a mixed methods design, utilising combined qualitative and quantitative approaches, it is believed that pragmatism may provide a compatible theoretical underpinning to mixing multi-strategies within the same project, allowing the qualitative constructionist approach and the quantitative positivist approach to be combined in order to answer the research questions (Robson, 2011, p.30). Pragmatism rejects the traditional dualism between research paradigms, allows the researcher to retain values and anticipate consequences, and 'truth' is derived from 'what works' practically in order to answer the research questions under investigation.

The pragmatic approach supposes an ontological relativism, suggesting that there is a multiple and objective reality, which is open to construction and interpretation by individuals. Pragmatism allows subjectivity and objectivity in

its epistemology, and allows the researcher to switch between the two perspectives to answer specific research questions. Collecting both quantitative and qualitative data allows the researcher to utilise both quantitative measures to gather information about the implementation, feasibility and effectiveness of treatment, and qualitative data to capture deeper exploration of participants' perspectives regarding the intervention. Pragmatism allows the researcher to choose between qualitative and quantitative methods, depending on the research questions and 'ongoing phase of the inductive-deductive research cycle' (Teddlie & Tashakkori, 2009). A pragmatic approach allows the researcher to switch between inductive and deductive reasoning, using deductive quantitative analysis to serve as indicators of change, in order to form a basis on which to carry out inductive qualitative data analysis to seek to further understand the change. It was felt that a pragmatic approach would allow the utilisation of different methodologies and analyses, in order to explore and answer different research questions and hypotheses.

### **3.3 Research Design**

A mixed methods pilot design will evaluate the effectiveness of a mindfulness-based programme for young people experiencing test anxiety, and obtain the views of young people and school staff on its feasibility, sustainability and effectiveness. This is a pilot evaluation, as it is a new brief intervention to be delivered by EPs and Trainee EPs across two boroughs. The aim of the study is to explore how feasible and effective for schools and young people such a programme is, and schools' and professionals' perceptions regarding adopting a mindfulness-based approach.

The use of a mixed methods design allows the researcher to address the specific research questions, and encourages the triangulation of data.

Quantitative data takes the form of pupils' self-reported measures of general anxiety, test anxiety, anxiety control, and mindfulness; this data was collected at three different time points: pre-intervention (T1) post-intervention (T2) and at follow-up six weeks following the intervention (T3). Qualitative data was collected at the follow-up stage (T3) and involved semi-structured qualitative interviews with a selection of young people and staff to explore participants' experience of the programme, and staff's views about the feasibility and effectiveness surrounding EPs' delivery of the programme.

The research is exploratory in nature, so as such did not include a control group or waiting list condition. It was deemed unethical for students who are experiencing anxiety prior to impending mock exams at the time of the data collection process to remain in a waiting-list condition. Furthermore, this is early stage feasibility research, and the researcher was primarily interested in the feasibility of the intervention and issues surrounding implementation, if young people experienced a reduction in anxiety over the intervention period, and exploration of what factors contribute to the successful delivery of an intervention such as this.

The study adopts a parallel mixed design and associated data analysis, which has been defined as: "the separate statistical analysis of QUAN data sources and thematic analysis of QUAL data sources within their respective strands.

Although the strand analyses are independent, each provides an understanding

of the phenomenon under investigation” (Teddlie & Tashakkori, 2009, p.341). Two distinct and separate processes were conducted: quantitative (QUAN) data was collected across T1, T2 and T3 and qualitative data (QUAL) was collected at T3 forming a QUAN/QUAL phase. A parallel mixed data analysis involves analysis of quantitative data using inferential statistical analyses, and qualitative analysis of the interview data adopting thematic analysis related to the narrative data. Employing between-strategies data collection, using quantitative questionnaires with qualitative interviews, allows for ‘the strengths of each strategy to be combined in a complimentary manner’ (Teddlie & Tashakkori, 2009, p.240) thus, it was deemed an appropriate and relevant strategy to adopt for this study. The study adopts an approximately equal quantitative and qualitative paradigm. Equal paradigm status was considered appropriate for this study, as data was collected concurrently, and qualitative data was collected in order to further explore and build on the findings from the quantitative data.

The selected research method should allow the most suitable method to be able to answer the research questions. In the current study, research questions one and two were evaluative, therefore were most effectively answered by the quantitative findings documenting change in the main outcome measures. Research questions three and four were open-ended and exploratory, in order to gather an insight into the experiences of the young people and staff who were involved in the mindfulness intervention, and therefore qualitative data was required in order to obtain an understanding of the individual viewpoints.

In summary, a mixed methods design was considered most appropriate by the researcher, in line with the pragmatic perspective and aims of this research study, in order to gather both quantitative and qualitative data to provide the most in-depth and rich findings.

### **3.4 Ethical Considerations**

The design and protocol for this research was approved by the Institute of Education Research Ethics Committee (REC) in December, 2014. The researcher adhered to the British Psychological Society's Code of Conduct and Ethics (2009) with careful reference to conducting research with human participants, when completing the ethics application.

Written informed consent was gained from all participants. In order to gain informed consent from all parties prior to the commencement of the research, detailed information sheets were provided to the EPS, schools, parents and young people (see Appendices). All participants were given the opportunity to contact the researcher with any queries, and an opt-out consent form was issued to parents. Following identification of participants, each school first contacted parents to ask permission for their number to be provided and to ensure that they were happy to be contacted by the researcher. This was then followed with calls to each parent to introduce the researcher and clarify any concerns or queries. Written informed consent was obtained from all young people (see Appendix 4), and the researcher attended each first session to be able to personally introduce the research and answer any questions. School staff were also given a full verbal explanation of the study, and written informed consent was sought for voluntary interviews (see Appendix 5).



Participants were assigned a unique code, and all data was related to each code and represented in the analysis in this format. All information collected remained strictly confidential, and participants were verbally reminded that their data will remain anonymous; unless information provided in questionnaires or interviews suggests harm to themselves or others; in these circumstances, the appropriate adults were informed, and the researcher checked that a school support plan was in place for the young person.

The researcher has carefully considered vulnerable children and adults as part of the safeguarding procedures. The programme leaders were advised that adopting a personal practice in mindfulness is appropriate to be able to teach the techniques to others. Furthermore, the programme leaders were informed to stop the intervention if they felt that the participant was experiencing undue distress. The participants were made aware of relevant staff in school that have knowledge of their participation in the group, whom they could contact in the result of this.

All participants were informed that they were under no obligation to take part in the study, and that if they wished to withdraw at any point, then they were free to do so without explanation. Completed questionnaires by participants who dropped out will remain included in the study, unless the researcher is informed otherwise. Any questionnaires or audio recordings of participants from interviews who subsequently wished to withdraw their data, would be destroyed. The researcher has offered the school feedback for the staff, parents and

participants following the completion of the research project to be able to disseminate the key findings.

### **3.5 Participants**

Thirty-three young people in Years 10 and 11, aged 15 to 16 years (Mean = 15.15; SD= .71; 16 males and 17 females) participated in the research. There were 20 participants in Year 11, and 13 participants in Year 10. Groups were either mixed or single sex depending on the school context. Participants were recruited via referral from school. Pastoral staff and/or SENCos in each school identified a number of young people who they believed would be suitable for the intervention based on the levels of anxiety that they appeared to be experiencing in relation to their exams. The socio-demographic characteristics of the sample are shown in Table 1 below.

Twelve young people dropped out of the intervention (Mean age = 15.75; SD = .62) consisting of 8 males and 4 females, two of which were in Year 10, and 10 in Year 11. Participants who dropped out of the intervention, consisted of eleven White British participants and one participant from an ethnic minority, with two participants eligible for free school meals, eight from two-parent families, six reported as parental education totalling over 16 years old, and two reported as having previous mental health difficulties. A significantly greater number of participants in Year 11 ( $n=10$ ) dropped out of the intervention (as shown below in Table 2), and through exploration of the data and feedback from school staff, it emerged that this appeared to be mainly due to the timing of the intervention. Some groups were delivered closer to exam season due to

practicalities and availability, therefore students cited the impending exams as their main reason for dropping out of the intervention. This therefore highlights that the timing of the intervention is crucial for pupil engagement, particularly for Year 11 students.

Twenty-one young people participated in the intervention programme (8 males and 13 females). Overall, sixteen participants completed all of the intervention (5 males and 11 females) and all pre- and post-intervention assessments.

A sub-sample of staff ( $n=3$ ) were additionally included in the study and were interviewed to explore their perceptions of participants' experience of the programme, and the feasibility and effectiveness surrounding EPs' delivery of the programme. Staff participants consisted of a Pastoral Manager, a Student Support Officer, and a Student Welfare Officer in three different Secondary school across two boroughs. The particular members of staff were identified, as they worked closely with the young people in their pastoral role, and had a thorough understanding of the intervention programme.

In order to ensure that participants who were most suitable to take part, the following inclusion and exclusion criteria determined by the school and the EP before recruiting the young people into the groups was applied:

### ***Exclusion Criteria***

Young people were not included if they were receiving a Tier 3 CAMHS psychological intervention. In addition, pupils were not included if they had a

current diagnosis of psychosis, or had very limited development of language, as this research requires a good level of language and communication skills.

### ***Inclusion Criteria***

Pupils were included if they were willing to attend and participate in a weekly group with other young people. Furthermore, as identified by school staff, the young people had a need for anxiety and emotional well-being improvement, and were particularly susceptible to anxiety in relation to exams.

Table 1

#### *Demographic Characteristics of Sample*

Variable	Year 10	Year 11
Intervention Year Group (Year 10 or 11) and No. of Participants	N = 13	N = 20
Gender	M = 3 F = 10	M = 13 F = 7
Age (Mean, SD)	M=14.54 SD=.52	M=15.55 SD=.71
Ethnicity	White=11 Minority=2	White=18 Minority=2
Free School Meals	1	3
Family Type (two-parent; single parent; step/blended; other)	2-Parent=6 Other=6	2-Parent=15 Other=5
Parent Education (more than 16 years; 16 years or less)	>16= 6 <16= 3	>16= 16 <16= 3
Previous Mental Health Difficulties	N = 9 Y = 3	N = 15 Y = 4

The data was explored for any marked differences across the completers and non-completers at pre-intervention stage (T1) on socio-demographic variables using a chi-square test. No significant differences were found across completers and non-completers across groups for any socio-demographic variables (gender, ethnicity, FSM, family status, parental education, mental health difficulties) aside from a significant difference for year group. Table 2 below shows the comparisons and significance value between participants who completed the programme and non-completers on socio-demographic variables.

Table 2

*Group Differences on Socio-Demographic Characteristics between Completers and Non-Completers*

Variable	<i>t/χ<sup>2</sup></i>	<i>Sig. (p value)</i>
Intervention Year Group (Year 10 or 11)	4.080	.043*
Gender	2.496	.114
Ethnicity	3.503	.477
Free School Meals	.495	.482
Family Type (two-parent; single parent; step/blended; other)	1.497	.683
Parent Education (more than 16 years; 16 years or less)	5.586	.471
Previous Mental Health Difficulties	.189	.664

*Note. p < .05*

## **3.6 Materials**

### ***Quantitative Outcome Measures***

Quantitative measures were selected in order to assess the intervention's targeted outcomes, including anxiety, anxiety control, test anxiety, general child adjustment and mindfulness. These measures have been adapted where necessary in order to be suitable for the intended audience (e.g. appropriate terminology has been used that is relevant for young people and for UK residents). For example, changing 'Math' to 'Maths' and 'grade' to 'exam' on the TASC. The measures were selected on the basis of their psychometric properties and their appropriateness for completion by adolescents in the school setting.

### **Demographic Information (See Appendix 9 and Table 1)**

A brief questionnaire assessed socio-demographic information at pre-intervention and included questions on young person's age, gender, school year, ethnicity, family status (e.g. single or two parent family) eligibility to free school meals, and any previous mental health difficulties.

### **Test Anxiety**

#### ***i) The Test Anxiety Scale for Children (TASC)***

The original 30 item measure was designed by Sarason et al. (1958) to assess test anxiety among children and adolescents. A shortened version of the TASC (Weems et al., 2009) consisting of 18 items was used in the present study to reduce youth assessment burden. The brief version of the TASC asks young

people to indicate yes (1) or no (0) to questions assessing young people's responses to exams and performance in class, for example; 'Do you worry when the teacher says that she is going to ask you questions to find out how much you know?' and 'Do you worry about passing the exams at the end of the year?'. Scores for test anxiety symptoms were derived from taking the mean rating of all 18 items, with total scores ranging from 0-1. An individual's scores represents the percentage of items included and provides a clear metric for interpreting analyses. For example, a score of 0.5 indicates that the young person endorsed 50% of the test anxiety items (Weems, 2015). Previous research suggests good validity and internal consistency (.85 ) for test anxiety scores of this modified version. The TASC reportedly predicts academic achievement and is sensitive to test anxiety intervention effects (Weems et al., 2010). Cronbach's alpha for the TASC total score at pre-intervention was .88 in the current sample.

## **Anxiety**

### ***i) Anxiety Control-Internal Emotions and External Threats - Anxiety Control Questionnaire for Children (ACQ-C)***

The ACQ-C assesses perceived lack of control over anxiety-related negative internal emotional and bodily reactions, and control over external threats; e.g. feared objects or situations. It was adapted from the adult version of the ACQ (Rapee et al., 1996) for children by Weems et al., (2003). The ACQ-C consists of 10 items rated on a 5-point scale from 0 = 'none' to 4 = 'very very much'. The ACQ-C is widely used and has excellent internal consistency ( $\alpha = .93$ ) and

adequate two-month test-retest reliability (Hogendoorn et al., 2013; Weems et al., 2010). Cronbach's alpha was .92 at pre-intervention in the current sample.

### ***ii) The Spence Children's Anxiety Scale (SCAS)***

The SCAS was developed by Spence (1997) to assess the severity of anxiety symptoms, with subscales mirroring DSM-IV anxiety disorder diagnostic categories. The measure consists of 44 items, 38 assess symptoms of anxiety and 6 are positive filler items intended to reduce negative response bias, randomly allocated within the questionnaire. The SCAS consists of six subscales: separation anxiety (6 items), social phobia (6 items), obsessive compulsive oriented items (6 items), agoraphobia (9 items), generalised anxiety (6 items), and physical injury fears (5 items). Items are rated on a 4-point scale from 0 (never) to 3 (always). Internal consistency of the total scale has been found to be extremely high with Cronbach's alpha .93 and has good 6-month re-test reliability (Spence, 1998). Cronbach's alpha for the SCAS total score at pre-intervention was .96 in the current sample, confirming that the items of the scales are measuring the same construct.

## **Child Adjustment**

### ***The Strengths and Difficulties Questionnaire (SDQ)***

The SDQ: Child Version (SDQ; Goodman, 1997) is a brief behavioural screening questionnaire for adolescents. The SDQ includes five scales, each consisting of five items: Emotional Symptoms, Conduct Problems, Hyperactivity/Inattention, Peer Problems and Prosocial Behaviour. Items are



rated on a Likert scale from 0 'not true' to 2 'certainly true' in response to statements about positive and negative child attributes. A total difficulties score ranging from 0-40 is obtained by summing the subscales scores for emotional symptoms, conduct problems, hyperactivity/inattention and peer problems. The SDQ has good reliability and validity (Goodman, 1997; Goodman, 2001). Cronbach's alpha for the SDQ total score at pre-intervention was .83 in the current sample, which indicates that this measure is reliable across the four subscales.

## **Mindfulness**

### ***The Child Acceptance and Mindfulness Measure (CAMM)***

The CAMM is a 10-item child self-reported measure of mindfulness which assesses the extent to which CYP observe internal experiences, act with awareness, and accept internal experiences without judgement. Items are rated on a 5-point scale ranging from 0 'Never true' to 4 'Always true'. The CAMM is a relatively new assessment, which was designed based upon The Five Facet Mindfulness Questionnaire (Baer, Smith, Lykins, Button, Krietmeyer, Sauer, Walsh, Duggan, & Williams, 2008) which measures mindfulness in adults. The CAMM demonstrates high construct validity, adequate internal consistency, with Cronbach's alpha reported as .87, and has been deemed developmentally appropriate (Greco, Baer, & Smith, 2011). Further research supports this measure as a good measure of mindful awareness in the adolescent population (De Bruin, Zijlstra, & Bogels, 2013). Cronbach's alpha was .82 at pre-intervention in the current sample.

## ***Qualitative Measures***

In order to generate a rich and contextualised understanding of participants' insights, this study utilised semi-structured individual interviews with self-selecting volunteers of young people ( $n=5$ ; 3 males and 2 females) and staff ( $n=3$ ) representing each school setting. Semi-structured interviews were employed to allow deeper exploration of individuals' perceptions. This method was selected as it allows freedom and flexibility in approach (Robson, 2011) and provides the opportunity to gather detailed responses which were not limited to a restricted set of answers (Barriball & While, 1994).

The interview schedules for staff and young people (see Appendices 7 and 8) were informed by literature on young people and stakeholders' perceptions of MBIs, and from previous qualitative studies exploring mindfulness (Milligan et al., 2013). The key interview themes included: Perceptions of programme components and delivery; outcomes associated with participation; sustainability of mindfulness-based techniques; positive and challenging/negative aspects of the programme, and effectiveness and feasibility of EP intervention delivery.

The interview schedule for the young people was piloted with two young people who took part in the first 4-week cycle of the Mindfulness group run by the programme founder in Autumn 2014, which the researcher observed to become familiar with the intervention prior to undertaking data collection. Informed consent for the pilot was sought from both the participants and their parents before the interview took place. The staff interview schedule is focused upon feasibility and effectiveness of the intervention in reducing young people's test

anxiety. This interview schedule was piloted at the same time as the first interview, and any points that arose assisted in the adaptation and clarification of the script and schedule for future interviews.

Table 3

*Outline of Qualitative and Quantitative Data Collection Points*

	<b>Pre-Intervention (T1)</b>	<b>Post-Intervention (T2)</b>	<b>Follow-Up (T3)</b>
<b>Young People</b>	Demographic Data  Anxiety (SCAS) Child Adjustment (SDQ) Mindfulness (CAMM) Test Anxiety (TASC) Anxiety Control (ACQ-C)	Post-Intervention Data  Anxiety (SCAS) Child Adjustment (SDQ) Mindfulness (CAMM) Test Anxiety (TASC) Anxiety Control (ACQ-C)	Post-Intervention Data  Anxiety (SCAS) Child Adjustment (SDQ) Mindfulness (CAMM) Test Anxiety (TASC) Anxiety Control (ACQ-C)  <b>Qualitative Interview</b>
<b>Staff</b>			<b>Qualitative Interview</b>

### 3.7 Procedure

The EPs in the local authority were informed of the nature of the research at a team meeting in December 2014. Interested EPs were asked to identify schools who were known to them to see if they would like the intervention to be delivered. All EPs who wished to deliver the intervention sent the programme information along with the research information to their chosen schools. Once

schools had agreed to take part, opportunistic sampling was carried out, whereby schools identified a minimum of 6 participants from the target population of Years 10 and 11 pupils, who met the inclusion criteria for the groups. Young people were identified by the Pastoral Head of Year (PHoY) or School Support Worker (SSW) who decided which students would benefit most from inclusion in the programme, based on exhibition of anxiety-related symptoms, particularly in relation to exams. Young people were given the opportunity to rate their anxiety levels pre and post the intervention within the measure packs. Young people varied in their responses to their change in anxiety and in their stress response to external threats, such as exams. Young people were informed of the intervention by school staff, and were either asked to attend, or the young people actively sought support from school staff, recognising their need for psychological support to help to manage their anxieties.

The sample was drawn from mainstream secondary schools across two boroughs in the Local Authority. Five schools were invited to participate in the research. Parents were informed of the programme and research by school and were mailed an information sheet, and young people were also informed of the research by school and were each provided with an information sheet and consent form.

Following the initial selection phase and once school had contacted parents to verbally seek consent and inform them that the researcher would be making initial contact, the researcher contacted parents to inform them of the research

and to gain their verbal consent. Parents were provided with an opt-out consent form by school (see Appendix 6). One parent chose to opt out at the initial stage. The researcher then met with all willing young people who wished to participate and school staff in each school at the beginning of the intervention to provide a more detailed explanation of the nature of the research, and liaised with the key EP running the group and member of school staff in each school on an ongoing basis, to ensure clarity over the running of the programme and to remain informed regarding any participants who had dropped out of the intervention. The researcher did not facilitate or run any sessions of the mindfulness intervention programme in order to reduce any biases towards positivity about the intervention in the subsequent interview phase, and to maintain a clear distinction between the research and the intervention.

Questionnaires were administered at three different time points: pre-intervention (T1) post-intervention (T2) and at follow-up approximately six weeks after the intervention (T3). Demographic and background information (e.g. ethnicity; eligibility for free school meals) was gathered in the first (T1) questionnaire (see Appendix 9). Young people and staff were offered the opportunity to participate in an interview following the intervention at T3. One young person was chosen at random for interview from all participants who volunteered from each group. The member of school staff who worked closely with the young people and coordinated their involvement in the groups was also provided with the opportunity to be interviewed at the end of the intervention. A sub-sample of young people ( $n=5$ ) and school staff (e.g. PHoY) ( $n=3$ ) participated in interviews. The researcher carried out all interviews, which were audio-recorded to support the transcription of data.

The research and intervention programme took place across three different time-points (T1, T2, & T3) and each school delivered the intervention at different times in the Spring and Summer terms, as shown in Table 4 below.

Table 4

*Timeline of Data Collection in Schools during Research Process*

	<b>Pre-Intervention (T1)</b>	<b>Post-Intervention (T2)</b>	<b>Follow-Up (T3)</b>
	- Quantitative Pre-Intervention Questionnaires.	- Quantitative Post-Intervention Questionnaires.	- Quantitative Follow-Up Questionnaires. - Qualitative Pupil and Staff Interviews.
<b>School 1; Group 1 (Years 10&amp;11), Group 3 (Year 11):</b>	January 2015  March 2015	February 2015  April 2015	March 2015 May - Interviews  May 2015
<b>School 2; Group 2 (Year 10):</b>	February 2015	March 2015	May 2015
<b>School 3; Group 4 (Year 11):</b>	March 2015	March 2015	June 2015
<b>School 4; Group 5 (Year 11):</b>	April 2015	-----	-----
<b>School 5; Group 6 (Year 10):</b>	May 2015	July 2015	July 2015

### **3.8 The Intervention**

The programme was designed by Dr Jennifer Head, Senior Educational Psychologist, from Achieving for Children Educational Psychology Service. Dr Head received Mindful Attention Programme (MAP) training centred on 'Mindfulness-based Approaches for Working with Children and Young People', from Iyadurai, Morris and Dunsmuir at the Clinical, Educational and Health Psychology Department at UCL, consisting of eight weekly three-hour sessions in 2012. Following on from this training, Dr Head designed a programme aimed at pupils who are experiencing moderate levels of stress and anxiety related to school and exams.

It is based on evidence-based mindfulness approaches and also draws on techniques from CBT. The intervention was informed by evidence-based and well established CBT and Mindfulness-based interventions and resources, including Biegel's (2009) 'The Stress Reduction Workbook for Teens: Mindfulness skills to help you deal with stress'; Cattley and Lavelle's (2009) 'Mindfulness for Schools: a training course for teachers and teenagers'; Barrett's (2010) 'My FRIENDS Youth Resilience Program: Activity Book for Youth', and Williams and Penman's (2011) 'Mindfulness: a practical guide to finding peace in a frantic world'. The intervention comprised of varied activities adapted from these resources, as well as the Mindful Attention Programme first designed in 2012 by Jeremy Morris (Educational Psychologist and Cognitive Behaviour Therapist at UCL) that included experiential mindfulness practice, and intended to target unhelpful thought patterns and feelings of anxiety.

## **Intervention Content**

The programme is designed for pupils who are experiencing moderate levels of stress and anxiety related to school and exams in particular, which is affecting their emotional well-being and ability to cope successfully with academic pressures. Session one involved identifying and discussing the young people's stressors, and the different ways in which they affect them; rating current levels of stress and how they would like to change; introduction of the concept of mindfulness; and a mindful eating activity. The second session involved experiential practice of either mindful eating or mindful breathing activities (the young person is provided with the choice of either practice); introduction of the thoughts-feelings-behaviour pathway; discussion of helpful and unhelpful ways of managing stressful situations; mindfulness experience of a breathing practice; and setting individual positive affirmations. Session three involved mindful practice of the breathing technique; visualisation techniques for letting thoughts go; reflection of practice over the previous week; recap of the thoughts-feelings-behaviour pathway and a focus on control over thought processes; and mindful listening as an attention training and stress reduction exercise. Session four consisted of a mindful movement activity using body stretches; an activity focused on letting thoughts go; 'doing school work mindfully' worksheet, and producing a poster on everyday use of mindfulness; and CDs with recorded mindfulness practices. Finally, the follow-up session involved mindfulness practice of a chosen activity; a handout consisting of key techniques, such as positive affirmations and a positive events diary; and a rating of current stress levels and reflection on what pupils are doing to enable them to manage their stress.

A brief summary of the content of each session is outlined below in Table 5.



Table 5

*Summary Outline of Intervention Programme*

<b>Session 1</b>	<b>Session 2</b>	<b>Session 3</b>	<b>Session 4</b>	<b>Follow-up session</b>
Introduction to programme	Mindful practice: eating or breathing	Mindful practice: breathing	Mindful practice: body stretch	Warm-up: rounds considering positive next steps following the exams.
Discussion of stressors	Reflections on home practice	Reflections on home practice	Reflections on practice	Mindfulness practice from CD
Scaling of stress levels now and expected progress	Introduce CBT concept (thoughts-feelings-behaviour)	Fawlty Towers video clip – example of an unhelpful response to coping with a stressful situation.	'Doing schoolwork mindfully' handout	Distribute copies of handout to each pupil
Eliciting behavioural indicators of progress	Illustrate CBT cycle using Kung Fu Panda sheet	Introduction to the concept of helpful and unhelpful thoughts and thoughts being under our own control with practice.	Mindfulness posters	Work through handout, including at least: <ul style="list-style-type: none"> <li>- Past exam experiences</li> <li>- Preparation list activity</li> <li>- One brief mindfulness practice</li> <li>- 1 positive affirmation each</li> <li>- Introduction to Pleasant Events Diary</li> </ul>
Introduction to what mindfulness is	Pupils fill in table for stressor	Creating powerful thought cards	Distribute and explain content of CDs	
Kung Fu Panda clip	'Managing stress' video clip	Mindful listening to music	Any practice from the CD	
Mindful Eating	Breathing practice Affirmations for practice	Discussion to identify practice over next week		
				Scaling activity – stress levels following completion of the programme, and planning how to further manage stress in the future.

## **Intervention Protocol**

The programme consisted of four consecutive weekly sessions, as well as a follow-up and review session 6-8 weeks after the end of the programme. The sessions involved informal and supportive discussion about how pupils are managing anxiety and group sharing ideas on what can help. The programme provided psycho-education to pupils, and they were introduced to practical strategies for reducing their anxiety in order to support them to perform at their best, particularly during exams. Each group included 6-8 pupils, depending on the needs of the school. Pupils were asked if they would like to participate based on concerns raised by teachers, parents and pupils themselves. The intervention was run weekly for approximately 45 minutes, at a time convenient for the young people and the schools; either at lunchtimes, before school, or after school.

Participants were asked to complete the T1, T2 and T3 questionnaires at the relevant time points, directly before the first session, directly after the fourth session, and following the follow-up fifth session. The participants were provided with a note to excuse them from lesson time, when the specified sessions were extended to include completion of questionnaires.

The intervention was implemented by EPs and TEPs in different schools, and was at times assisted or observed by a member of school staff in particular groups, providing additional support. All programme leaders were given an attendance grid and fidelity checklist (see Appendices 11 and 12) to complete, designed by the EP who developed the intervention. This was to ensure

intervention integrity and consistency of the intervention protocol across the professionals leading the interventions in different schools. Any deviancy from the intervention protocol was noted on the fidelity checklist, to ascertain how much of the content was completed every session by each EP. There was some variation in the activities involved in the sessions, due to practicalities and time allowance that each EP had to run the session, however overall, high rates of fidelity to the intervention protocol were reported. EPs reported 97% fidelity for groups 1-3, and 95% for group 4, however only 46% fidelity was reported for group 6 – this was attributed to shorter sessions of 30 minutes duration at lunchtimes, therefore a reduction in the number of activities delivered was reported. Group 5 dropped out after session one, therefore fidelity is unable to be reported.

### **EP Training and Experience**

The EPs delivering the programme possessed a commitment to practicing mindfulness daily. The programme draws upon both mindfulness and CBT-based principles and approaches, and therefore the EPs had received training in both mindfulness and CBT-based approaches to utilise in their professional practice. All EPs in the service had received formal CBT training over the course of eight days delivered by UCL in 2014, and had also received training as part of their doctoral training programmes. The programme leader had delivered an introductory training session on mindfulness-based approaches to the whole EPS. Group supervision for those delivering mindfulness-based interventions was provided, and sessions occurred once every half-term. A mindfulness working group was additionally initiated within the EPS, to be able

to reflect upon mindful practice and to engage with the evidence base. In addition, one-to-one coaching sessions were provided to EPs who were delivering training, and all EPs were provided with a copy of Williams and Penman's (2011) 'Mindfulness: a practical guide to finding peace in a frantic world', in order to engage with the eight-week course of self-study, and be able to enhance personal and professional practice.

### **3.9 Data Analysis**

#### **3.9.1 *Quantitative Data***

Quantitative data was analysed using the Statistical Package for the Social Sciences Version 22 (SPSS 22). Statistical analyses included a Repeated Measures ANOVA, as the same participants were tested across three separate time points, and the data met the assumptions for parametric analyses. Factors explored within the ANOVA were the three separate time points as the independent variable (IV), including pre-intervention (T1) post-intervention (T2) and follow-up (T3). The dependent outcome variables (DV) included the total scores for all outcomes measures including the SCAS, SDQ, CAMM, TASC and ACQ-C. These factors were explored to ascertain any changes in young people's levels of general anxiety, test anxiety, mindfulness, and anxiety control across the three different time points following attendance of the intervention programme.

### **3.9.2 Qualitative Data**

Once all of the data had been collected and transcribed, the data from all interviews, representing the 'data corpus', was analysed using thematic analysis (Braun and Clarke, 2006). Young person and staff interviews were analysed separately using the thematic analysis approach. An inductive data-driven method was followed, whereby emergent themes develop, and repeated patterns of meaning are discovered following closely reviewing the data. This flexible approach was deemed to be appropriate by the researcher, as it seeks to describe patterns across the data and offers an accessible and flexible form of analysis that fits within a mixed method design. In addition, it sits within a constructionist framework, therefore does not focus on self-motivation or individual pathologies, rather the socio-cultural aspects that enable the individual perceptions (Braun & Clarke, 2006). Thematic Analysis is a methodology that can be aligned with various epistemological stances, therefore it is believed to be an appropriate method of analysis to use within a mixed methods framework. This method allows an exploration of individual subjective perceptions and experiences, whilst adopting a pragmatic approach, drawing on the more objective aspects of behaviour to determine participants' experiences, which aligns with the hoped for outcomes for this study.

A considered decision was made to choose thematic analysis (Braun and Clarke, 2006) over other forms of qualitative analytic methods, such as: Interpretative Phenomenological Analysis (IPA) (Smith, Flowers & Larkin, 2009) Grounded Theory (Glaser & Strauss, 1967) and Content Analysis (Hsieh & Shannon, 2005).

IPA is a form of qualitative analysis which aims to convey a deep insight and understanding of the meanings of everyday life experiences. The approach allows an insight into the meaningful nature of people's participation in their cultural and social lives (Robson, 2011). IPA explores individuals' personal perceptions or accounts of the world or an event in great detail, as opposed to attempting to produce objective records of the event. IPA is attached to phenomenological epistemology and is theoretically bounded, which seeks to understand people's everyday experience of reality in great detail, in order to gain an understanding of the phenomenon being explored (Braun & Clarke, 2006). As this study adopts a pragmatic stance and utilises mixed methods, it was deemed that thematic analysis would be a more appropriate form of analysis for this study, as it can be aligned with various epistemological stances.

Grounded Theory seeks to identify patterns from the data in order to generate a theory which relates directly to the particular situation which forms the focus of the study. The theory is grounded in the data obtained during the study (Robson, 2011). Grounded theory could have been selected for this study, as it can be appropriate for use in both qualitative and quantitative studies. However, it may be difficult to gather sufficient rich data in order to be able to generate a theory in a small scale research project such as the current study.

Content Analysis was also considered for this research study, as it is a method which, similarly to thematic analysis, involves analysing data and identifying patterns across data sets to search for meaning (Hsieh & Shannon, 2005).

Content analysis can quantify qualitative data, and use surface level information to quantify themes. This form of analysis can require detailed technical and theoretical knowledge (Braun & Clarke, 2006) and therefore it was felt that this analytic method would not be as appropriate for the current study.

In contrast to other methods of analysis, such as IPA or grounded theory, thematic analysis is not wedded to a pre-existing theory (Braun & Clarke, 2006) and is flexible in its application, therefore it can be applied within different theoretical frameworks and epistemological stances, making it suitable for this mixed methods study to be able to gain a rich account of young people and staff's views and the associated contextual factors.

### **3.9.3 Qualitative Phases of Analysis**

In line with the suggestions made by Braun and Clarke (2006) the six key phases were closely followed. Recordings were transcribed, then checked for accuracy. The transcripts were each read in full to ensure familiarity with the data, and notes of meaningful information was made. Initial codes were then generated across the entire data set, with the same codes given to similar extracts. Dialogue considered extraneous to the efficacy of the intervention were not coded. Codes were then reviewed, colour-coded and collated, by generating a code list for the data set (see Appendices 18 and 19), and grouping of codes into hierarchical themes, with core candidate, and related subordinate themes.

The search for themes was guided by the overarching aim of ascertaining the efficacy of the intervention, and the pragmatic question surrounding the aspects

of the MBI that were deemed most useful and applicable to the young people; the feasibility of the delivery of the programme; and any aspects of the intervention which could be improved for the future. Broader themes were developed through the identification of prominent and distinct codes, and illustrative quotes were identified for each theme. The quotes within each theme were re-read, and checked across both the theme and the entire data set, to ensure that the themes followed a coherent pattern and narrative of the data, enabling internal homogeneity and external heterogeneity across the data. Where applicable, themes were rearranged and re-named. Themes were based on the strength of prominent codes, or conversely, on one particular participant's experiences, due to the subjective nature of the intervention experiences. A frequency count was undertaken for each theme and sub-theme, to ensure clarity over the prominence of themes across the data set. Thematic maps were devised for both the young person and staff interview data sets (detailed in the Results Chapter), to allow a visual representation of the decided themes and sub-themes emergent from the data. Finally, the names of each theme and sub-theme were carefully defined and revised, through ongoing analysis, and were checked for clarity in supervision sessions with a supervisor. This was undertaken to ensure internal validity of interpretation by reducing researcher bias, and to guarantee and capture a meaningful and coherent representation of experiences.

Braun and Clarke (2006) have proposed guidelines for analysing qualitative data, which were closely followed within this study. They describe the six key steps to qualitative analysis, which are described in detail in Table 6 below.



Table 6

*Six Phases of Braun and Clarke's (2006) Thematic Analysis*

<b>Phase 1: Familiarisation with Data</b>	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
<b>Phase 2: Generating Initial Codes</b>	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
<b>Phase 3: Searching for Themes</b>	Collating codes into potential themes, gathering all data relevant to each potential theme.
<b>Phase 4: Reviewing the Themes</b>	Checking if the themes work in relation to the codes extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
<b>Phase 5: Defining and Naming Themes</b>	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
<b>Phase 6: Producing the Report</b>	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of

	<p>selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.</p>
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### **3.9.4 Inter-rater Reliability**

A small sample of an interview and identified codes were shared with three Trainee Educational Psychologists who cross-checked them against the data, to ensure that the codes were transparent and accurate, and to ensure that the coding undertaken by the researcher was trustworthy and reliable (see Appendix 15). Furthermore, the qualitative analysis and codes were shared with a supervisor, who cross-checked sections of the coding, to ensure trustworthiness and coherence of coding decisions. An example section of coding is noted below in Table 7. The researcher has included two data extracts coded by peers to ensure inter-rater reliability, and any subsequent changes to the coding made by the researcher to ensure reliability and accuracy of analysis.

Table 7

*Data Extracts and Codes*

<b>Inter-Rater (1.) and Researcher (2.) Coding</b>	<b>Data Extract</b>	<b>Codes</b>
<p>1.</p> <p>2.</p>	<p>“...Originally I was rather stressed with exams coming up, so taking part in the mindfulness has help me to de-stress, calm myself, and realise that I can become calm in situations like this, so it has helped a lot”.</p>	<p>Managing stress and impact: de-stress, calm and realisation. Change.</p> <p>Impact: Helpful coping strategy. Emotional release. Empowering: Realising potential to use techniques.</p>
<p>1.</p> <p>2.</p>	<p>“...If I’m upset about something, uh I’d actually take part and use one of the techniques, which would instantaneously allow me to, you know, get back to where I was previously”.</p>	<p>Helpful in other contexts. Change. Use of techniques. Get back to where was. Instantaneous - speed.</p>

		Utilisation of learned techniques. Change. Use of techniques in varied contexts. Reflection of life prior to anxiety. Accessible: Instant impact.
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### 3.10 Trustworthiness, Reliability and Validity

It is of importance to consider the reliability and validity throughout when undertaking a research project, to ensure that the results demonstrated are representative of the data, and to ensure their applicability and relevance to the context of existing knowledge and literature within the field. The use of a mixed methods design for this study enabled the strengths of each method to counterbalance any weaknesses of other methods, and improved the validity, reliability and trustworthiness of this study (Robson, 2011).

Within a quantitatively designed study, the validity of the study refers to its consistency of the assessment tools chosen to measure the variables of interest (Robson, 2011). Within the current study, all outcomes measures, including the SDQ, SCAS, CAMM, TASC and ACQ-C, were considered to be developmentally appropriate measures, and their psychometric properties and construct validity were good. Scoring of all quantitative questionnaires was

undertaken by carefully following the measure's specific scoring guidance, to ensure accuracy and reliability of the results. The interview schedules were designed by reviewing the relevant literature, to ensure that they accurately captured the areas the researcher wished to explore. Both the quantitative and qualitative thematic analyses were shared with supervisors in research supervision, and peers in a research supervision group, to cross-check the coding and themes, to ensure coherence of the analysis, replicability of the findings, and trustworthiness of coding decisions by unbiased and objective reflectors.

## **Chapter Four: Results**

### **4.1 Overview of Chapter**

This chapter provides an overview of the quantitative and qualitative findings from this research study. The specific adopted method of data analysis and procedure is outlined and described in detail, including the exploratory data analysis whereby the quantitative data was explored to assess if it met the assumptions for parametric statistical analysis. The findings that were evident from Repeated Measures Analysis of Variance (ANOVA) procedures are presented in relation to each outcome measure across the three assessment time points (pre-intervention, post-intervention, and follow-up). Data was analysed using IBM SPSS Version 22. Finally, findings which emerged from the utilisation of thematic analysis of the qualitative data derived from interviews with young people and staff are presented.

### **4.2 Analytic Approach**

Complete data sets for the sixteen participants who completed all three stages of the intervention programme were obtained at pre-intervention (T1) post-intervention (T2) and at follow-up 6-8 weeks post intervention (T3). Twelve participants dropped out of the research and five participants missed the completion of a set of measures at T2 and T3 respectively, therefore it was not possible to include these participants in the main analyses. Exploratory data analysis was carried out to assess the suitability of data for the main outcome measures at all three time points for analysis using parametric testing. One-way Repeated Measures ANOVAs were conducted to determine whether there was a statistically significant difference in levels of mindfulness, anxiety control,

and test anxiety following the mindfulness intervention. The independent variable for each ANOVA was Time (3 levels: pre, post, follow-up) with separate ANOVAS conducted with mindfulness, anxiety control, test anxiety, and anxiety symptoms as the dependent variables.

#### **4.2.1 Intention-to Treat Analysis**

Data was also analysed using both a “completers” and an “intention-to-treat” analysis, using the “last observation carried forward” method to replace any missing data. An intention-to-treat analysis is a conservative method of ensuring that all participants who were eligible for the intervention are included, and assumes no change in all outcome measures for those who dropped out. The pattern of findings between both groups were consistent and no significant results were reported, aside from one significant result between T1 and T2 on the CAMM measure for the “completers” group. The analyses presented here include the sample of participants who remained in the study and completed measures at all three time points.

### **4.3 Quantitative Analyses**

#### **4.3.1 Outcome Measures at T1, T2, and T3**

The mean scores and standard deviations (SD) for all main outcome measures are displayed in Table 8 below.

Table 8

*Mean Scores and SDs for Main Outcome Measures*

Construct	Pre (T1) Mean [SD]	Post (T2) Mean [SD]	Follow-Up (T3) Mean [SD]
Child Adjustment (SDQ)	14.44 [6.54]	15.67 [5.31]	13.84 [6.09]
Anxiety (SCAS)	35.22 [21.29]	41.17 [23.25]	39.26 [22.73]
Test Anxiety (TASC)	.6290 [.25]	.6235 [.25]	.6754 [.25]
Anxiety Control (ACQ-C)	1.796 [.92]	1.793 [.80]	1.895 [.84]
Mindfulness (CAMM)	20.56 [8.36]	16.94 [6.25]	19.63 [7.21]

*Note.* Strengths and Difficulties Questionnaire (SDQ) Goodman (1997); Sue Spence Anxiety Scale (Spence, 1997); The Test Anxiety Scale for Children (TASC) (Sarason et al., 1958) (Adapted by Weems et al., 2009); The Anxiety Control Questionnaire for Children (ACQ-C) (Weems et al, 2003); The Child Acceptance and Mindfulness Measure (CAMM) (Greco, Baer, and Smith, 2011).

The data was explored for any differences across the completers and non-completers groups at pre-intervention stage (T1) on outcome variables using a between-subjects one-way ANOVA. No significant differences were found on the main outcome measures. Table 9 below shows the comparison and significance level between participants who completed the programme and non-completers on main outcome measures at T1.



Table 9

*Mean Scores and SDs for T1 Main Outcome Measures for Completers and Non-Completers*

	Measure (T1) Mean [SD] C = Completers NC = Non- Completers	<i>F</i> value	<i>Sig.</i> ( <i>p</i> value)
Child Adjustment (SDQ)	36.90 [21.58](C) 32.00 [21.37] (NC)	.375	.545
Anxiety (SCAS)	13.90 [5.44] (C) 15.45 [8.47] (NC)	.398	.533
Test Anxiety (TASC)	.64 [.25] (C) .61 [.26] (NC)	.084	.774
Anxiety Control (ACQ-C)	1.81 [.91] (C) 1.78 [.98] (NC)	.008	.930
Mindfulness (CAMM)	21.29 [8.50] (C) 19.18 [8.30] (NC)	.449	.508

*Note.*  $p < .05$

### 4.3.2 Exploratory Data Analysis

Data was checked visually for normality using visual inspection of histograms.

There were no extreme scores or outliers for any of the aforementioned outcome measures, and the data was approximately normally distributed at each time point, as assessed by boxplots, histograms and the Kolmogorov-Smirnov (K-s) tests (all  $ps < .05$ ), respectively. The assumption of sphericity was met for all outcome measures, as assessed by Mauchly's test of Sphericity.

Further analysis of the data was carried out to explore skewness and kurtosis of the data, and was found to fall in the average range ( $2.58 > t > -2.58$ ). Results are illustrated in Table 10 below.

Table 10

*Skewness and Kurtosis for Main Outcome Measures*

Measure	Pre (T1)		Post (T2)		Follow-Up (T3)	
	Skewness	Kurtosis	Skewness	Kurtosis	Skewness	Kurtosis
Child Adjustment (SDQ)	.48	-.07	-.21	-.92	-.17	-.98
Anxiety (SCAS)	.72	-.43	1.00	.72	.76	.29
Test Anxiety (TASC)	-.32	-.92	-.15	-.57	-.41	-.76
Anxiety Control (ACQ-C)	-.01	-1.36	-.38	-.17	.32	-.49
Mindfulness (CAMM)	.15	-1.24	.33	-.81	.02	-.87

Further analysis was undertaken applying K-s tests to examine that outcome measures were normally distributed. K-s tests revealed that the assumptions of normality were not violated and were all non-significant for the main study variables at all three time-points. The results are presented in Appendix 14.

As assumptions of normality were met across all data sets across the three time points, suitability of the data for parametric statistical analysis was established. Repeated Measures (ANOVAs) were conducted to investigate the influence of time (pre-intervention, post-intervention and follow-up) on anxiety symptoms, test anxiety, mindfulness and attention control.

#### **4.4 Impact of the Intervention on Outcome Measures**

The results of the quantitative statistical analysis for all outcome measures, including anxiety (SCAS), child adjustment (SDQ), mindfulness (CAMM,) test anxiety (TASC) and anxiety control (ACQ-C) are displayed below. In order to interpret the effect sizes, the following guidelines are adhered to: 0.01 = Small; 0.06 = Medium; 0.14 = Large (Cohen, 1988). The  $p$  value is interpreted as statistically significant when  $p = <0.05$ , thereby obtaining a result which is unlikely to have occurred due to chance alone, and therefore increases the probability of rejecting the null hypothesis.

##### **4.4.1 Intervention Impact on Anxiety Symptoms and Child Adjustment**

There was no significant main effect of time on participants' anxiety levels (SCAS scores);  $F(2, 30) = .935, p = .404, \text{partial } \eta^2 = .059$ .

Likewise, there was no significant main effect of time on child adjustment (SDQ scores);  $F(2, 30) = .341, p = .714, \text{partial } \eta^2 = .022$ .

##### **4.4.2 Intervention Impact on Test Anxiety and Anxiety Control**

There was no significant main effect of time for the test anxiety scores as measured by the TASC scale, with  $F(2, 30) = .725, p = .493, \text{partial } \eta^2 = .046$ .

There was no significant main effect of time for levels of anxiety control as measured by the ACQ-C scale, with  $F(2, 30) = .419, p = .662, \text{partial } \eta^2 = .027$ .

##### **4.4.3 Intervention Impact on Mindfulness**

There was a significant change in young people's levels of Mindfulness over time as assessed by the CAMM measure, with  $F(2, 30) = 5.182, p = .012, \text{partial } \eta^2 = .257$ . Bonferroni adjusted pairwise comparisons follow-up tests

revealed that young people's levels of mindfulness significantly decreased from pre-intervention to post-intervention (mean difference 4.00,  $p = .045$ ;  $M_s = 21.06, 17.06$ ), but not from post-intervention to follow-up (mean difference = -1.94,  $p = .217$ ;  $M_s = 17.06, 19.00$ ).

#### 4.5 Statistical Analysis of Mindfulness Techniques

The participants were asked to rate their most frequent application of the mindfulness techniques outside of session time at T2 and T3. This data was analysed using SPSS, and the frequencies and percentages are presented below in Table 11. Mindful Breathing was reported as the most popular and frequently used technique by participants at both T2 and T3.

Table 11

*Mean Percentages (%) and Frequency of Applied Mindfulness Techniques at Post and Follow-Up*

Technique	Post (T2) frequency [%]	Follow-Up (T3) frequency [%]
Mindful Breathing	7 [21.2]	7 [21.2]
Mindful Eating	3 [9.1]	2 [6.1]
Mindful Listening	3 [9.1]	5 [15.1]
Remaining in the Present	0 [0]	1 [3]
Positive Affirmations	0 [0]	1 [3]
General Mindfulness	1 (3)	1 (3)

Participants provided ratings on a 10-point Likert scale on a number of questions in the T2 and T3 questionnaires assessing the usefulness of the intervention programme, and self-reported ratings of anxiety levels pre- and post-intervention. These results are shown in Table 12 below.

Table 12

*Ratings of Change in Anxiety Levels and Intervention Effectiveness for T2 and T3*

Question	Post (T2) Mean [SD]	Follow-Up (T3) Mean [SD]	Range	
			T2	T3
Usefulness of Programme 1-10 (1=least useful and 10=most useful)	6.11 [2.08]	7.11 [1.45]	8	6
Frequency of Mindfulness-Based Practice (Daily/1-2 times weekly/3-4 times weekly/5-6 times weekly/rarely)	4.11 [1.81]	4.21 [1.72]	4	5
Completion of Mindfulness-Based Practice in Relation to Exams (when anxious/before exam/during exam/after exam)	1.35 [.61]	1.68 [.75]	2	3
Usefulness of Programme Techniques (1-10) for Emotional Well-Being	6.38 [2.60]	6.32 [1.73]	9	8
Usefulness of Programme Techniques (1-10) for Acceptance	6.88 [1.54]	5.79 [1.48]	6	5
Usefulness of Programme Techniques (1-10) for Focus	7.18 [1.47]	6.32 [1.49]	5	6
Usefulness of Programme Techniques (1-10) for Attention	7.18 [1.47]	6.16 [1.74]	5	7

*Ratings of Change in Anxiety Levels and Intervention Effectiveness for T2 and T3*

Usefulness of Programme Techniques (1-10) for Compassion for Self and Others	5.65 [2.18]	5.84 [2.04]	8	8
Usefulness of Programme Techniques (1-10) for Emotional Self-Regulation	6.19 [2.20]	6.26 [2.18]	8	8
Level of Anxiety Pre-Programme (1-10)	6.22 [2.34]	7.00 [2.21]	9	7
Level of Anxiety Post-Programme (1-10)	6.06 [2.16]	6.26 [2.40]	8	8
Completion of Homework Activities (Yes/No)	27.8% [No] 72.2% [Yes]	15.8% [No] 84.2% [Yes]	1	1
CAMM: Awareness and Acceptance of Events in Present Moment (1=Never; 10=Always)	6.31 [1.25]	6.79 [1.27]	4	4

#### 4.6 Interviewee Quantitative Data

The quantitative data of the five participants who volunteered to be interviewed from each intervention group was visually inspected for each outcome measure at T1, T2, and T3, against the quantitative data for the non-interviewees, to explore if the self-selecting interviewees markedly differed in their levels of anxiety, mindfulness and test anxiety compared with participants who were not interviewed, to ensure an accurate representation of qualitative data. Visual inspection of the means of the total factors for the main outcome variables for interviewees compared with non-interviewees at all time points were visually the same, and within +/- 1 standard deviation of the overall mean.

## 4.7 Qualitative Analysis

This chapter reports the core themes and the sub-themes subsumed within them. The themes will be introduced, followed by an outline of each sub-theme. In order to illustrate the narrative behind the data, quotes will be presented to evidence each sub-theme. Two thematic maps are displayed below to pictorially illustrate the main themes and relevant sub-themes for both the young people and staff analyses. Venn diagrams are used throughout the chapter to illustrate each theme and interrelating sub-themes when reporting each theme in turn. Example coded young person and staff interview transcripts are listed in Appendix 16 and 17, and an example interview code list is included in Appendix 18.

The qualitative data from the young person semi-structured interviews provided an insight into the personal factors that either contributed to the effectiveness of the experience, or posed as barriers to practice for young people following attending the group intervention programme. Young people discussed the cognitive and affective aspects of mindful practice. Whereas, staff interviews included perspectives regarding the feasibility of the delivery of such interventions from an operational school perspective and school perceptions of young people change following participation in the intervention programme. Staff evaluations informed findings relevant to the practicalities and logistics of running such group interventions in the school setting, including key stakeholder perspectives. The common elements of analysis from the data included overlaps in perceived benefits and facilitative factors, barriers to practice, and the sustainability of adopting such an approach and delivery of the intervention

in schools. Any overlap in the data and links between the two thematic analyses were explored where appropriate.

#### **4.7.1 Thematic Analysis – Young People Participants**

Results of thematic analysis of young people's individual interviews are presented below, in order to address research questions 3 and 4 regarding the implementation, effectiveness and feasibility of the delivery of this programme. Transcripts of the five young people were closely analysed, coded and collated, as outlined in the Methodology. Young people's perspectives were uniformly positive regarding the intervention. The themes refer to self-reported post-intervention changes, the use of coping strategies and techniques, suggested ways to improve the programme, and the factors contributing to, or preventing, the sustainability of techniques. The analysis of the young people interviews revealed four core themes: 'perceived benefits and facilitating factors of intervention programme'; 'perceived barriers influencing intervention effectiveness'; 'perceived changes in thoughts, feelings and behaviour', and 'sustainability of techniques'.

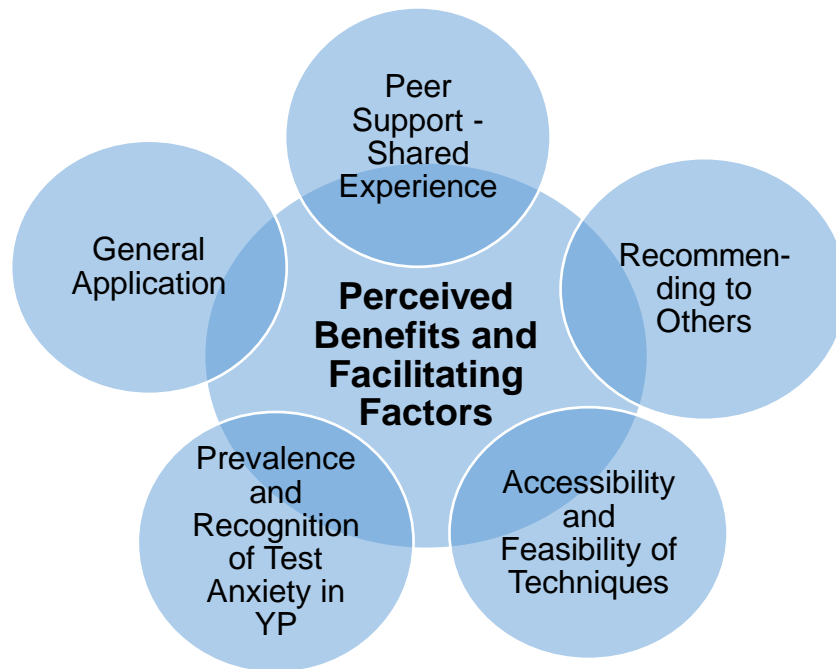
Participants' identifying codes, transcript pages, and line numbers are noted in brackets following each extract.

#### **4.7.2 Theme One: Perceived Benefits and Facilitating Factors of Intervention Programme**

This first theme arising from the young people's interviews, describes the core areas that contributed to the perceived enjoyable elements of the programme,



and outlines any discussed promoting factors that facilitated the effectiveness of the intervention programme. The thematic map below provides a visual representation of the four main themes and corresponding sub-themes.



**Figure 2: Theme One and Interrelated Sub-themes from YP Data**

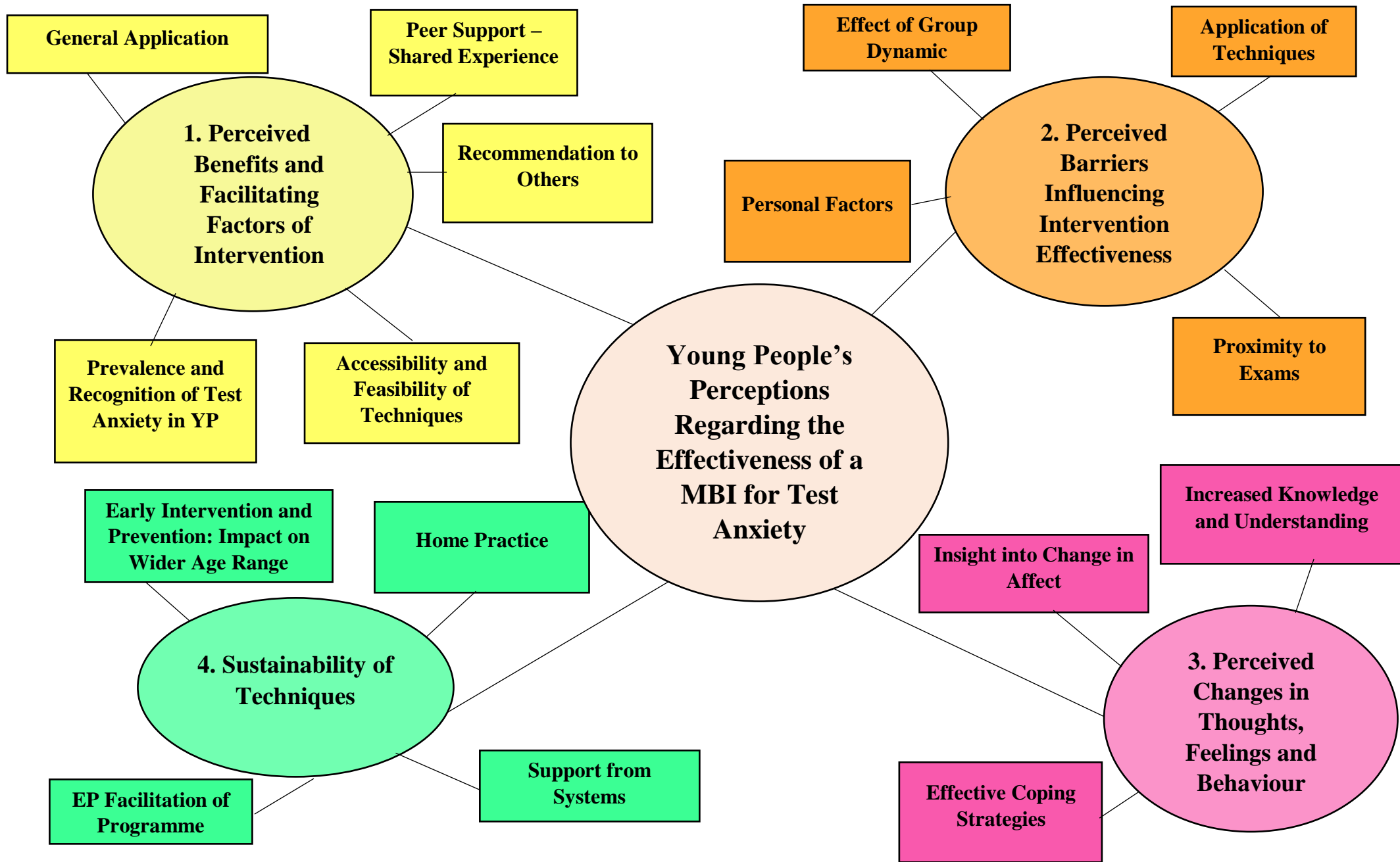


Figure 3: Thematic Map Illustrating Themes Emerging from YP Data

Within the first sub-theme, 'general application', all participants referred to the techniques that they use most frequently, which activities they found most beneficial and targeted which area of difficulty, and the timing of the application of techniques. For example:

*"If I'm upset about something, uh I'd actually take part and use one of the techniques, which would instantaneously allow me to, you know, get back to where I was previously. And it has helped in other contexts as well". (P015, p.1, 9:11)*

This provides an interesting insight into the immediacy of the techniques' impact, the reflection of life prior to experiencing anxiety, and the use of the techniques in varied contexts. This was reflected within other's interviews:

*"Yeah, they calm me down before, if I do the breathing exercises, I feel less stressed and more concentrated...It does help in the exam, if I'm struggling with something, I just take a minute to concentrate and breathe". (P013, p.1, 8:9)*

*"...when you just relax and you just think about every like part of your body and just calm everything down like step by step...they're the ones that work really". (P003, p.2, 39:40)*

*"They helped me before exams or when I was revising, if I got freaked out...". (P021, p.1, 5)*

*"...it's more mindful listening...sometimes doing that, it helps me kill the stress of what I might have done, even though I've done the exam". (P003, p.2, 58:60)*

*“...There’s no way they’ve had a negative effect on what I was doing.*

*There’s only positive effect it’s had on me...”* (P030, p.1, 4:8)

*“The obvious one is exams, but I suppose just everyday problems that you might face that would cause you to feel stressed in any way...it*

*helped with all that”*. (P030, p.1, 16:17)

*“Yeah I mean, especially for kids of our age, all around the UK, it should be more or less essential. So many people hide feelings and keep problems to themselves, and it eventually breaks them, and you need something like mindfulness to allow them to release it, to calm”*. (P015, p.6, 205:208)

Young people additionally spoke of the impact of the techniques on their attention levels in class and in exams following participation in the group:

*“Um well now I can actually focus my attention, because usually I was distracted quite easily...But now with mindfulness I can focus it on a particular frame of mind, which is to work. I don’t now have any third party distractions”*. (P015, p.2, 65:68)

*“Erm, well before, I used to get quite distracted, erm, but now I, I stay more focused on like the task, on what I’m meant to be doing”*. (P013, p.3, 70:71)

This suggests the potentially wide-reaching effects that mindfulness can achieve for individuals who are receptive to adopting the approach. The responses indicate the young people’s views regarding the application of mindfulness; they discussed how they have received and applied the

techniques, and their positive impact, interestingly not solely at the onset of anxiety associated with exams, but also in relation to everyday stressors.

The second sub-theme, 'peer support-shared experience', encompasses young people's responses regarding the positive impact of being part of a mindfulness group with others who are experiencing similar feelings of anxiety, particularly in relation to upcoming exams, within school. A sense of belongingness arose from the interviews, characterised by young people's sense of being united in shared experience and the realisation that any difficulties they were experiencing had been recognised, and in turn had been offered support to assist with combatting such issues. This appeared to bring some individuals a sense of value at being selected to take part in the group. The following selected quotes represent this sub-theme across all five interviews:

*"I was actually very comfortable. It's not a stressful environment, it's very relaxed...I expected everything from it really and it's helped me a lot".*

(P015, p.5, 167:168)

*"...when you're in the sessions, they like, help you, reassure you that it's gonna be ok".* (P013, p.3, 86:87)

*"I think the group has helped a lot. I think it's one of the main reasons. But also like talking to teachers, talking, just talking...Because I didn't think that talking was a good way, in which I guess the group has helped me discover".* (P003, p.7, 207:210)

*"...I mean, I'm not very good with groups, but everyone was in the same boat...". (P021, p.9, 294:297)*

*"Well, you can obviously talk to the teacher, but you can't...like someone your own age...he's going through the same thing". (P030, p.11, 386:387)*

The responses reflected the supportive nature of attending the groups with peers, and the sense of relatedness and connectedness with others in a similar position.

The third sub-theme, 'recommendation to others' reflects all young people's views about the impact of the intervention and application of mindfulness, and therefore the rationale for recommending it to others who are experiencing test anxiety.

*"...I would recommend it to someone else feeling this way...". (P015, p.5, 154)*

*"Yeah I think if someone is struggling with anxiety and stuff, then this is really good...". (P013, p.1, 32:33)*

*"I know it's definitely not for everyone. But for some people who may be on their last legs you know, really struggling, I think they'd probably benefit from it...". (P021, p.3, 85:87)*

*"I'd definitely recommend it...there's only been a positive impact...I mean it will vary from person to person how much they're willing to go in for the whole mindfulness thing...but if you just say I think this is going to be beneficial for me, then it will be beneficial". (P030, p.2, 60:63)*

The interviews are insightful, as they reflect the young people's thoughts about the flexibility of the techniques, the applicability of the approach to individual preferences, and interestingly, as evidenced in two interviews, that it may not be an approach suited to everyone. It is of importance to recognise the variability in how mindfulness may be received depending on individual preferences.

The fourth sub-theme, 'accessibility and feasibility of techniques', includes participants' views about the accessibility of the techniques, with particular reference to certain contexts and suitable times of practice which act as mediating factors to engagement. This sub-theme arose in all five interviews. For example, the participants stated:

*"Breathing exercises have helped me with exams...that's the one that had the most effect on me, because it's not difficult and it's an easier way of calming yourself". (P015, p.1, 29:31)*

*"...there's all different types so, if one doesn't work for you, there will be one that does". (P013, p.1, 33:34)*

*"...I didn't realise it was so simple". (P003, p.1, 32)*

*"They were quick, and also the simplicity of them; you read it and go, ok that's what I need to do". (P021, p.8, 253:254)*

*"When you were just eating something...you could just take a minute...which was quite good...Mindful listening as well I found quite helpful, because once again, it's quite easy to do...you can just kind of stop and take a second just to listen to everything...". (P030, p.2, 44:47)*

Participants reported thinking about the application of mindfulness techniques from the group setting to real life situations. The participants' responses alluded to particular techniques that they found helpful, and also the 'active ingredients' as to why they felt they were beneficial; for example, the ease of application, and the minimal interruption to daily routines.

The fifth sub-theme relates to 'prevalence and recognition of test anxiety in YP'. It was felt that this emergent theme is an important part of the overall narrative of the analysis, and appeared to have an impact of young people's engagement with the intervention programme. It brings together the participants' experiences of the factors that influenced them, and captured their perceptions regarding the applicability of the intervention for test anxiety and their awareness of its prevalence for the young people in the exam years. This sub-theme emerged from three different interviews. One participant articulated his views regarding the impact of the stress and anxiety experienced across his peer group. For example:

*"Yes I mean especially for kids of our age, all around the UK, it [mindfulness] should be more or less essential. So many people hide their feelings and keep problems to themselves, and it eventually breaks them, and you need something like mindfulness to allow them to release it, to calm". (P015, p.6-7, 205:208)*

Another young person expressed views about the wider impact of test anxiety on his peers:



*“It [mindfulness] could be a good thing for them, especially during, you know, exams, because they’re going to constantly have exams through their life...”. (P021, p.8, 263:265)*

A further participant showed an awareness of the impact of stress on peers, the relevance of mindfulness for these young people, and the importance of tailoring techniques to individual needs:

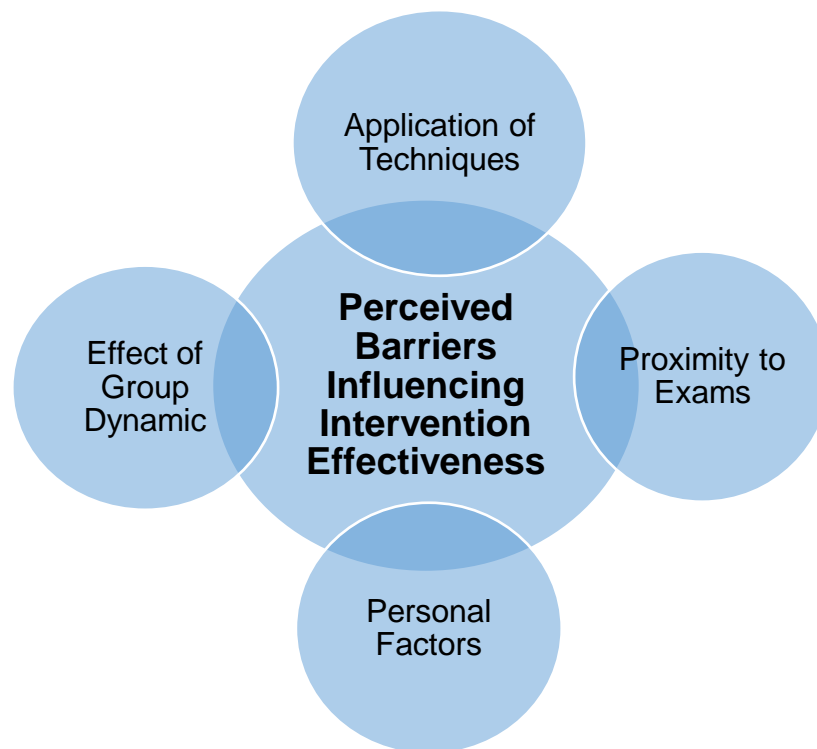
*“I think especially young people don’t really know that there’s a simple way to control your stress...So I think if everyone has like, an insight on just little techniques that could work for them, you find out what works best to help”. (P003, p.3, 63:67)*

As the above quotes illustrate, some young people possessed an acute awareness of the wider impact of test anxiety on their peer group, therefore implementing a rationale and timeliness of the intervention targeted at this specific difficulty during particularly pressured exam years.

### **4.7.3 Theme Two: Perceived Barriers Influencing Intervention**

#### **Effectiveness**

This theme combines aspects of the differing factors which may have affected feasibility, implementation and programme effectiveness for the young people. Factors ranged from structure, timing, dynamics, and factors external to the intervention.



**Figure 4: Theme Two and Interrelated Sub-themes from YP Data**

The first sub-theme, ‘application of techniques’ refers to the possible barriers to practice that young people came across, and ways they felt the programme could be improved. Despite many citing enjoyment of the programme, possible prohibiting factors to engagement were also identified. There were some young people who did not describe the techniques as being specifically inaccessible or unhelpful, but rather they reported feeling unable to embrace the ideas of mindfulness into their personal belief system and life. One participant described his overall experience of anxiety, and how the premise of mindfulness relates to his current emotional state:

*“...I’m not anxious about you know, most of the things I do in my life. But every now and then I will get some anxious things, like exams or doing*

*something new...But otherwise I personally didn't get anything else from it, like overall feelings or emotions". (P021, p.6, 198:201)*

This demonstrates that the effectiveness and application of mindfulness is dependent on numerous factors and may not be an approach suited to everyone; not only a young person's routine or schedule, but also the individual's current perceived emotional state of mind, and personal belief system.

Another participant described his experiences of the techniques, and in particular, the ways in which additional techniques could be incorporated into the programme in order to further his experience and knowledge:

*"Other ways/activities you could use to combat stress. You could try each one...". (P015, p.2, 42:43)*

Participants also spoke of techniques which they feel would further their experience of adopting mindfulness-based practice, by increasing their understanding of the physiological aspects of anxiety, and developing a meta-cognitive perspective related to experiencing anxiety:

*"...the reasons why you feel the way you are". (P015, p.2, 48:49)*

*"I guess now I find it more interesting of how it all works". (P003, p.3, 89:90)*

*"...it was touched upon...why the brain is doing it. And learn what I'm trying to, you know, stop from happening. Because right now it's like, oh yeah; do this and you won't get stressed. But it's like why am I getting stressed in the first place?". (P021, p.4, 124:128)*

This highlights the curiosity the young people developed throughout the programme, related both to the techniques, but also their meta-cognitive capacity to understand the changes that occur physiologically and the reasons for this, and their hopes to build an understanding of the mechanisms of mindfulness to assist in combatting these changes.

Three participants described their feelings about the length of time spent learning the techniques, and how the process of learning them impacted upon their ability to retain the information:

*“Spending more time going over some of the exercises...we went over them, but I feel we could have spent a bit more time because some of them I didn’t remember all of them...”*. (P013, p.2, 37:41).

*“Because it’s four sessions...these are very short, brief sessions and...it’s quite a lot of information to handle and stuff...”*. (P021, p.3, 98:99)

*“...the stuff that I’d change...more notice about meetings...more rigid practicing times to be told to do at home. Longer sessions maybe...and slightly more people”*. (P030, p.11, 408:410)

One young person also described techniques which she perceived as unhelpful for her personally:

*“I didn’t really like the food one, where you did the mindful eating, it actually didn’t do that much for me, so I didn’t really use that one”*. (P013, p.4, 109:110)

The second sub-theme, ‘proximity to exams’ refers to a pattern that emerged from the data in relation to young people’s perceptions to the timing of the

intervention and the potential block to practice that this posed. For example, one participant wrote of his reflections regarding the preventative aspects:

*“One time I had a mock straight after, so I couldn’t really remove that from my mind the first week before I became used to it...So it caused more or less a block before becoming completely mindful to how I’m feeling and relaxed...that infringed it”. (P015, p.3, 102:105)*

Two further participants described the negative aspects of attending the intervention close to exams:

*“It’s not easy, especially when you do it slap bang in the middle of exams, or just before exams, people’s minds are everywhere else...”. (P021, p.3, 99:102)*

*“...At the start of the mindfulness group I had my exams, which made me very stressed...”. (P030, p. 8, 273:280)*

This highlights the importance of the timing of delivery of the intervention, and the impact that it has on their ability and capacity to engage and meaningfully participate, and reflects the pressure that YP are under today in relation to academic performance and attainment.

One young person also described the difficulty of the timing of attending the group sessions during the school lunch break, and how this may have affected his engagement levels:

*“Well the problem was, because we had them at lunch...what happens is someone gets there late, then it goes to about 35 minutes. If someone’s getting lunch, it’s probably about 30 minutes. And then we were all setting out, so maybe like 20 minutes...most of our sessions were about*

*30 minutes long...you need the full 40 minutes...45 minutes". (P030, p.11, 412:416)*

Furthermore, two young people described how they had been selected and informed about the group intervention. This may have had an impact upon young people's understanding of the intervention, and on their willingness and readiness to engage:

*"Erm, I had a dyslexia test and the lady asked me if I was, if I ever get anxious and I said yeah and then I was asked, asked to come here".*

(P013, p.7, 214:215)

*"Well...aside from being invited to the mindfulness sessions I've never really...thought I needed it...". (P030, p.13, 484:486)*

This helpfully highlights the implications of timings, length of sessions, format, recruitment and setting to engagement, participation and effectiveness of the intervention.

A key area within this superordinate theme, and the third sub-theme, was the individual 'personal factors' that potentially conflicted with the practice and application of mindfulness techniques, and the preconceptions of the course and expectations that each individual had of the intervention programme and of the programme leader. Despite participants stating that the programme had exceeded their expectations post-intervention, some cited other factors occurring within their personal life as being possible reasons for disengagement and de-motivation at times, and also feeling unsure about what the intervention was or why they had been selected for it.

*“Yes there’s been quite a few occasions when I’ve had personally, I’ve had issues with various people, and they’ve taken over my mind and not allowed me to concentrate as easily”. (P015, p.4, 126:128)*

One young person intimated the other factors in different contexts that were occurring alongside the programme, and referred to the support systems from whom he would be able to seek support.

*“When stuff has happened at home and like social, I guess I just talk to whoever...”. (P003, p.7, 196:199)*

One further young person highlighted that his current experience of exams may have affected his ability to engage in the intervention programme:

*“I mean the only thing which might have added to stress levels is the fact that I am doing my exams right now”. (P021, p.7, 240:242)*

These examples demonstrate that the different expectations and preconceptions that young people had prior to the programme regarding intervention content and participant selection, may have had an impact on their ability to engage and meaningfully invest in the sessions. The illustrative quotes suggest that for mindfulness to have a positive effect, then the content of the course needs to be relevant for each individual, and pupils need to be fully clear regarding the purpose of the programme and techniques, in order to increase pupil engagement and intrinsic motivation.

The fourth sub-theme, 'group dynamics' refers to the conflicting views held by young people about the perceived benefits and potential drawbacks of being part of a group. For example, one young person noted:

*"At times it was a bit awkward 'cos not everyone said anything, and it was a bit quiet. Like, a couple of minutes into the session then people started becoming more confident...". (P013, p.5, 169:171)*

A further young person specifically refers to the dynamics of the group, and how this may have incurred a direct impact on engagement:

*"...well the group that I was in was very...I guess maybe it was too big...because not many people liked to say their opinion. Maybe it was because we don't all get on, we don't know each other that well". (P003, p.3, 71:73)*

Another young person made reference to group size as being a barrier to effective participation:

*"There was meant to be about eight of us, I think that would have been completely manageable as a group size...Four felt a bit too small". (P030, p.4, 128:129)*

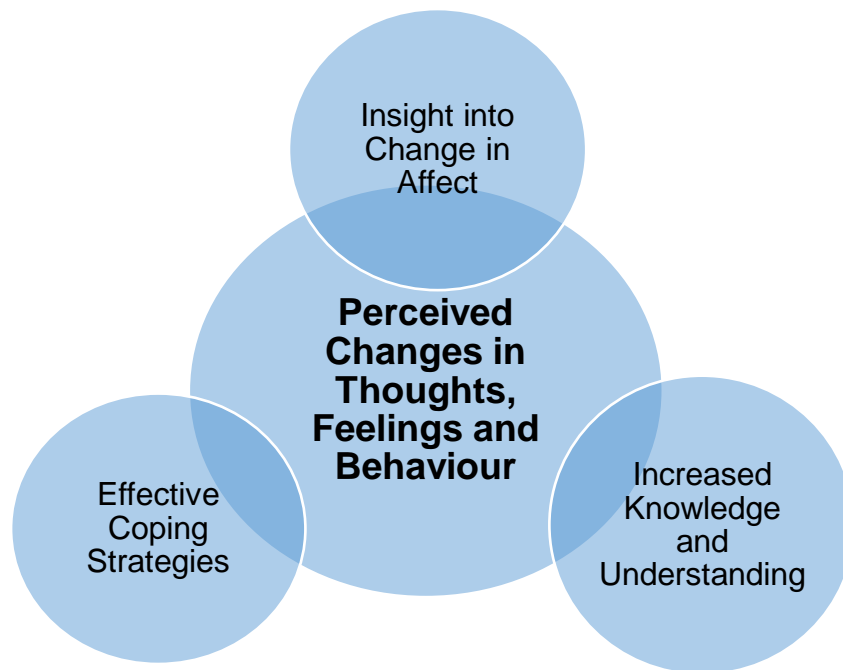
This participant referred to how the amount of young people in the group increased the potential of feeling 'pressurised' to perform and participate.

#### **4.7.4 Theme Three: Perceived Changes in Thoughts, Feelings and Behaviour**

This theme reflects the participants' reflections regarding how their individual thoughts, feelings and emotions impacted upon them during participation in the



intervention programme. The theme also elucidates the coping strategies that young people are employing to support themselves to combat psychological and emotional difficulties which they are experiencing in response to academic pressures and exams.



**Figure 5: Theme Three and Interrelated Sub-themes from YP Data**

The first sub-theme, 'insight into change in affect', refers to all five young people's perceptions regarding changes in their thoughts and emotions over the course of the programme, and their insight into the feelings that were evoked when adopting the techniques. Participants spoke of the ways in which mindfulness has equipped them with knowledge of their physiological, emotional and cognitive responses to anxiety, for example:

*"Um since starting Mindfulness, I've actually come to realise I can actually scale how I'm feeling...now I can actually locate why I'm feeling this way...". (P015, p.2, 53:57) "...it allows me to be cheerful, more*

*confident, less hopeless, less you know regretful. So yeah it does help a lot, and people around me, because I'm a less grumpy person". (P015, p.5, 152:154)*

*"...after using the techniques and you can focus more and like, just don't get as worried 'cos you know that... it's actually ok". (P013, p.3, 74:77)*

*"They definitely got better, definitely, because before...you don't even notice yourself kind of drifting away and being unfocused. But now...you just bring yourself back...you can do the work...". (P003, p.5, 126:129)*

One young person referred to the impact that he felt the mindfulness intervention has incurred on the stress that he experiences:

*"I'd describe emotions as easier to monitor now...I mean I'm more in control...And now, after going to it...less stress...it's almost as simple as that". (P030, p.6, 201:203)*

Furthermore, the following extract highlights the young person's grasp of a core tenet of mindfulness, being able to acknowledge and accept our thoughts without judgement.

*"I mean my ability to control emotions...monitor emotions...and radiate them and...not...block out negative emotions. Just to kind of...accept everything". (P030, p.1, 5:7)*

One participant recalled new emotions that he had developed and recognised since beginning the group, such as 'relaxation' and explained that this brought him a sense of 'pleasure'.

The second sub-theme refers to young people's accounts of their 'increased knowledge and understanding' of particular techniques and newly acquired information which they can apply when they feel particular responses to anxiety.

For example:

*"Umm well yeah if I'm annoyed or regretful, I tend to do it then. That's the time that I'm needing it most and it's better". (P015, p.4, 115:116)*

*"like your brain takes the same routes everywhere and you have to sort of make a new route so you think about things differently. So instead of thinking, I'm going to always fail that exam...so think I'm going to not do as well as I've always wanted, but I can do better than I did last time, to try and keep your brain to think that way instead of...the same old route". (P021, p.3, 77:81)*

One participant interestingly highlighted that he is equipped with the knowledge that sometimes it is just as effective to simply remember the premise and function behind the application of mindfulness, as opposed to employing a particular technique.

*"Well when I started getting stressed and stuff it...even if I don't do any mindfulness, I always remember what mindfulness is trying to do and sometimes that's enough...think about mindfulness and try and keep yourself there...". (P021, p.5, 139:143)*

Another participant interestingly showed a particular insight into the stress response, including the helpful nature of experiencing a degree of anxiety to increase performance:

*“you should always have a little bit of anxiety. It would be pointless to be completely calm about everything”. (P030, p.6, 213:214)*

The third sub-theme, ‘effective coping strategies’, relates to young people’s use of techniques to increase a sense of control over their emotional regulation, and demonstrates their insight into adopting psycho-education on cognitive behavioural principles. This appeared to provide some young people with a sense of empowerment.

*“Well now they’re in my ability to control. So I’ve now more or less got the feeling to control, if I can decide and if I’m going to allow them to stay or not...it has helped me um to realise my abilities over how I’m feeling, how I’m able to combat them”. (P015, p.3, 79:82)*

*“Especially when I get into...you know, just like a zone of panic, so I just quickly think, there is a way to prevent this”. (P003, p.6, 1776:177)*

One participant spoke of his personal strategy to cope with feelings of anxiety and stress, and why this is a helpful technique at such times:

*“Yeah, I mean since the Mindfulness, for once I’ve actually written down the reasons, well what happens when I do feel anxiety or stress...now I’m aware of it, and I can see why I’m doing it”. (P015, p.2, 60:62)*

Coping strategies that were used to ameliorate situations which were deemed as anxiety provoking, such as exams, were valued by the young people:

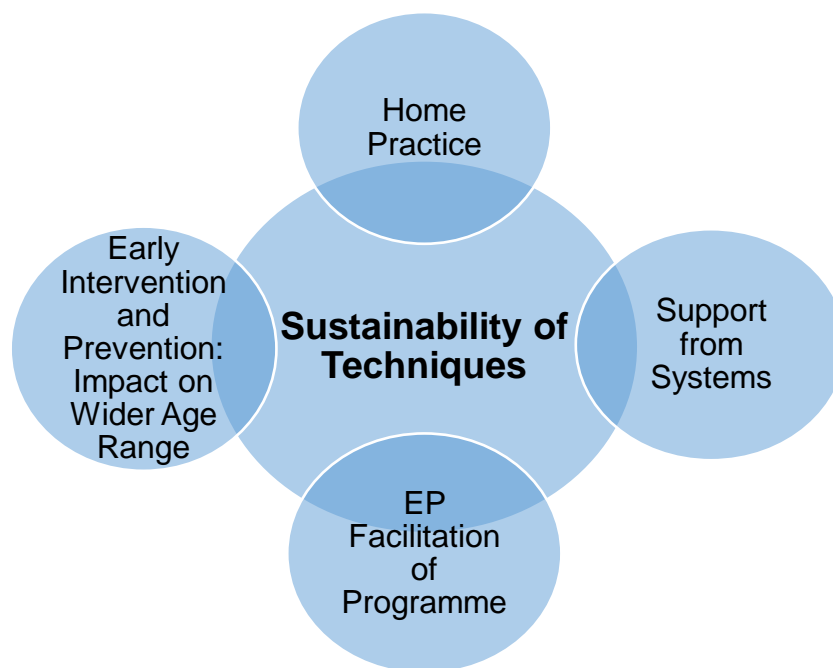
*“Erm, it does help in the exam, if I’m struggling with something I just take a minute to concentrate and breathe”. (P013, p.1, 26:27).*

This theme suggests that the majority of participants are motivated to adapt their behavioural responses to anxiety provoking situations. The young people's responses indicated an emergent conscious application of adaptive coping strategies. The theme encompasses the affective changes young people have experienced following participation in the programme, and summarises the increased knowledge that young people have acquired to assist them in their response to anxiety in relation to their upcoming exams. The theme also captures the perceived increased sense of control and related experience of empowerment that has led to behaviour adaptations.

#### **4.7.5 Theme Four: Sustainability of Techniques**

This theme considers both the facilitative factors and possible barriers to the sustainability of mindful practice following completion of the mindfulness intervention. Participants spoke of support from peers, home, school and other professionals, such as EPs, as being helpful to aid and facilitate continued practice, but considered the factors which may have posed as possible barriers to home practice. Some young people also considered the delivery of the programme to a wider remit of ages, and how targeting earlier ages may be beneficial in terms of equipping young people with the resources and skills to

cope with academic pressures throughout their school lives.



**Figure 6: Theme Four and Interrelated Sub-themes from YP Data**

The first sub-theme, 'home practice', refers to young people's ability to maintain weekly practice of mindfulness activities and undertake homework tasks between weekly sessions. Home practice and use of worksheets, common to many cognitive behavioural interventions (Milligan et al., 2013) were viewed slightly less positively, and were considered by some participants as more challenging to complete due to environmental distractions, lack of time, and level of motivation.

*"Some of them I did, not all of the ones we did in the session, but some of them... I found that they were the easiest to help keep concentrated".*  
(P013, p.3, 94:97)

*“I think it was slightly harder because when we’re doing it here, it’s nice and quiet and no-one’s like talking and when you’re doing it when you’re at home, it’s kind of hard to get quiet”. (P013, p.5, 141:143)*

One participant spoke of his lack of intrinsic motivation for continued practice of the techniques following sessions:

*“it would get harder to remember to use them if you're not thinking I've got the mindfulness session on Thursday...It's a bit harder to remain diligent when you're...when you haven't got that drive that you know you're going to be continuing with mindfulness. (P030, p.7, 235:239)*

Interestingly, the same participant talked of practicing at home and using the provided worksheets to aid practice in a positive way. However, he highlighted that some activities were more personally applicable and appealing than others:

*“Well there's not much...I found practicing at home beneficial, I've done it quite often...we were given quite a few worksheets on the yoga side of it. But I didn't really use those as much...”. (P030, p.9, 323:328)*

Despite some young people highlighting difficulties with home practice, others stated beneficial aspects of the worksheets provided to encourage home practice between sessions:

*“It was all right. It was...clearly laid out. It wasn't...hidden or sort of you know...plain English, you could do it...”. (P013, p.8, 247:250)*

A further participant spoke of the impact the intervention had on his ability to cope with stressors, both connected with exams and the home context, to be able to facilitate home practice and revision:

*“...it's been beneficial to me because I'm - you know been more relaxed and stuff, especially at home during revision. I'm not getting...angry or worried or...by my parents and you know siblings and stuff at home”.*

(P021, p.8, 259:261)

Some young people discussed the support that they receive from their ‘support systems’ at school and home, forming the second sub-theme, which both enables and encourages their practice of mindfulness. There were also reflections about possible barriers connected with their support systems, and their knowledge of therapeutic interventions being offered to young people in schools.

Participants talked of the impact of having familiar members of staff supporting young people in schools.

*“I like to talk to someone who's not that close...someone who's like...who gets...just I can talk to”.* (P003, p.7, 196:199)

One participant spoke of the support and recognition of change from family members who know the young person in context, which served as an additional motivating factor:

*“When you're...when you know, especially when people around you know how anxious and panicky you can get, and then notice the difference in you. So I think that's worth, it's definitely worth it”.* (P003, p.8, 227:229)

It was noted by one participant whom he feels he could approach in school to talk about his feelings:



*“Umm I think it’s one-to-one pastoral, which is the only one I know of. Which allows you to talk to someone, allow you to confess. I’m aware of who I can speak to in school.” (P015, p.6, 196:198)*

The third sub-theme, ‘EP facilitation of programme’ includes perceptions of the role of the EP in encouraging young people to maintain a continued practice following the end of the intervention programme, and to be able to generalise the skills learnt to real-life scenarios external to the group setting. One participant discussed the helpful aspects to EP facilitation in encouraging him to practice the techniques at home:

*“It’s helpful, as they guided me through it. The EP allowed me to see what I needed to do and the techniques...so they were a big factor in that and were useful to allow me do it at home”. (P015, p.4, 135:137)*

*“Erm, well they gave us lots of, like, helpful sheets and we made a poster and bookmark, so it’s just like, reminders, so that you think about doing it”. (P013, p.3, 89:90)*

One young person referred to factors that may have helped to maintain continued practice of mindfulness techniques:

*“The actual every day. Having meaning to work, meaning to concentrate for longer periods of time...which has actually reminded me when I’m off topic that I should be doing Mindfulness to bring me off...So that’s helped me to continue doing it”. (P015, p.3, 91:93)*

Two young people highlighted the importance of interventions such as this, and the desire for an increased frequency of therapeutic interventions in schools to support young people’s emotional well-being:

*“So yeah it should be done more regularly in schools”. (P015, p.7, 219)*

*“Yeah, I guess a bit more regularly...because the more you practise it...the more it works...the better you get at it”. (P003, p.10, 306:308)*

Another participant elucidated thoughts around the format of future delivery of MBIs in schools, demonstrating a knowledge and enthusiasm regarding the rationale of the delivery of such interventions:

*“I think it would be helpful. And maybe do the universal sessions as a kind of starter and then have maybe a gap and then, if anybody expresses an interest, they could do the more...focused, tailored groups as smaller group sessions...it helps regulate emotions...helps the exam anxiety”. (P030, p.14, 513:517)*

Three young people made statements about delivery of the intervention to younger years, leading to the fourth sub-theme, ‘early intervention and prevention: impact on wider age range’ to be able to provide early intervention for anxieties in young people. For example:

*“...because just right before the exams in Year 11, that's...people's minds are everywhere else. If you did it like maybe either Year 10 or the start of Year 11, it would probably be better”. (P021, p.4, 101:103)*

*“Because, erm, it's gonna help them, in future, and if there's younger years that do it as well, then they can be more prepared for when their exams come”. (P013, p.7, 222:223)*

One young person provided important reflections about making MBIs accessible to a wider remit of young people, including CYP with SEN and differing levels of

needs, and the possible impact such preventative work may have on the school system:

*“...because this was a small group and....not everyone will be doing mindfulness, not everyone will be you know trying to help themselves; but...you will have a lot more children doing it so you'd get a lot better results from that school. The children will be less stressed so there'd be less strain on you know...if like a child is SEN then the SEN staff have less strain with them coming in needing help because they're getting really stressed with revision and stuff”. (P021, p.10/11, 349:355)*

The qualitative findings demonstrate that there are several factors which have impacted upon the engagement and motivation of young people. Each theme captured young people's differing views regarding their unique experience of the MBI, and the factors that either facilitated their experience, or acted as potential barriers to effective practice. There were commonalities within the feedback from all participants, which were drawn into the outlined themes within this section to ensure a representative exploration on the qualitative data.

#### **4.7.6 Thematic Analysis – Staff Participants**

Transcripts from the staff interviews ( $n=3$ ) post-intervention were transcribed and analysed, as outlined in the methodology, to determine staff perceptions of the overall impact of the intervention, addressing research question 3 and 4.

Analysis of staff responses from interviews revealed four main themes:

‘perceived benefits of intervention on young people's emotional well-being’;

'factors contributing to effectiveness of intervention programme'; 'perceived barriers to effectiveness of intervention programme'; and 'facilitation and sustainability of MBIs in schools'. A summary of the themes from the analysis are presented in the form of a thematic map displayed below. Staff participant identifying codes, transcript page numbers and lines are stated in brackets following each extract.

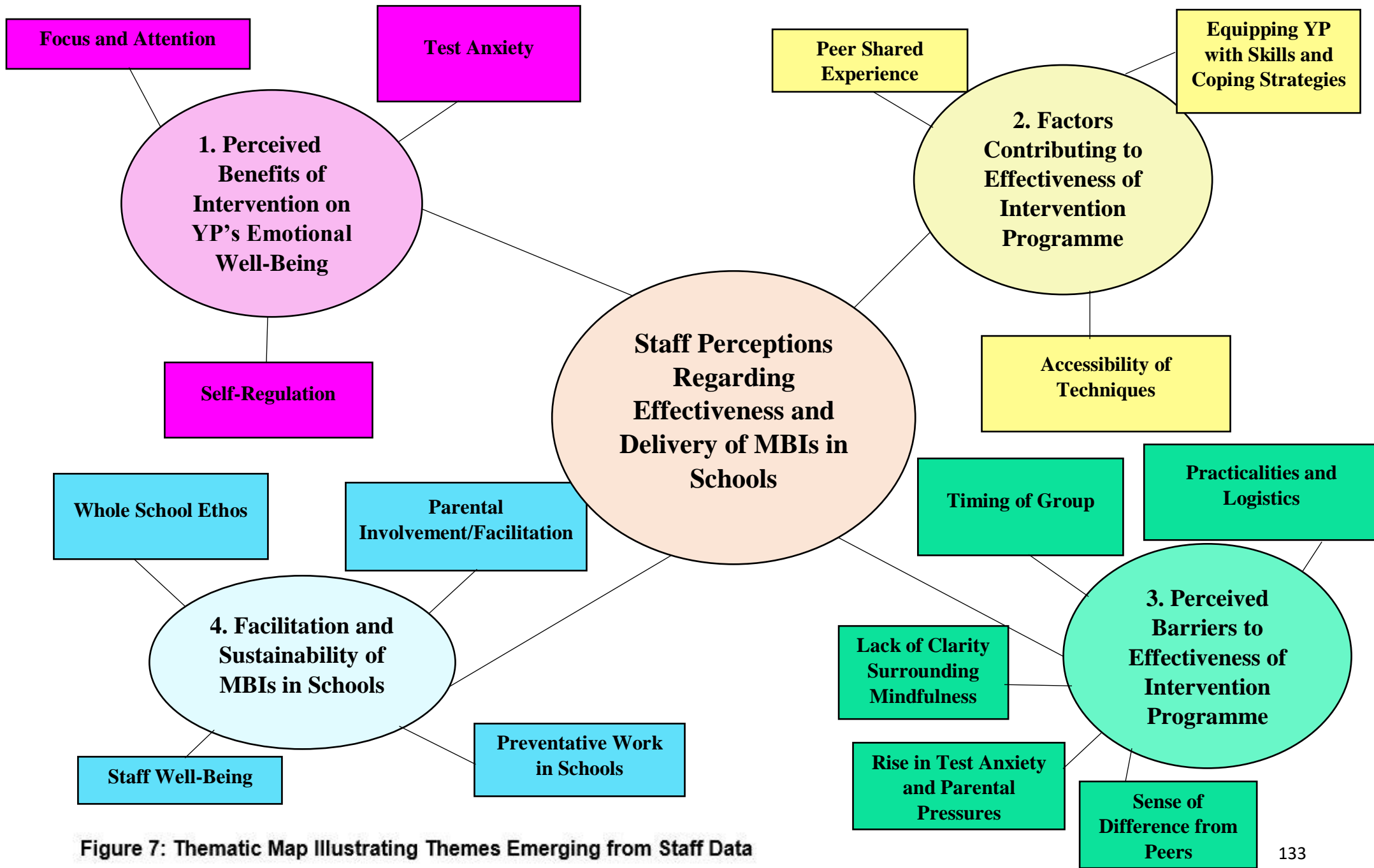
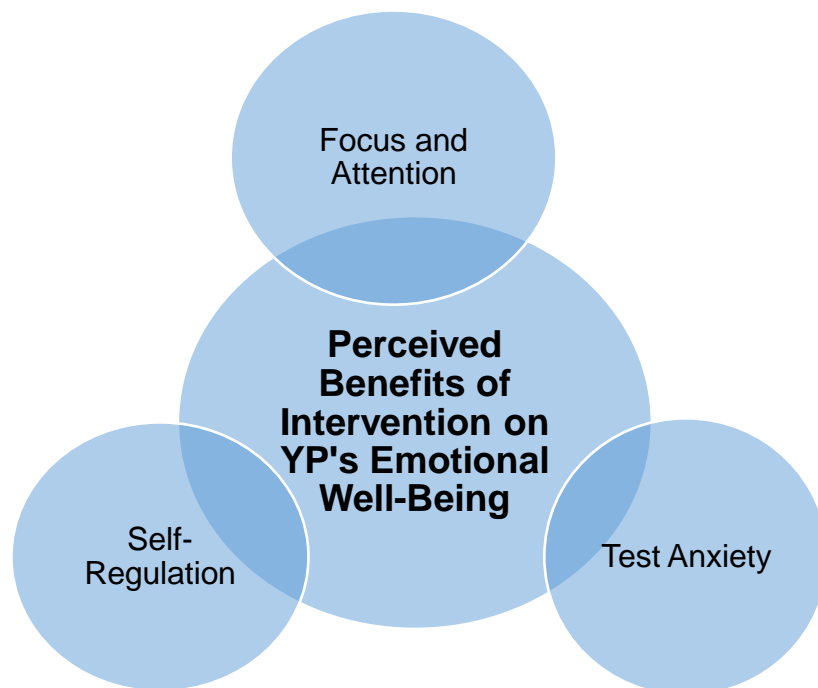


Figure 7: Thematic Map Illustrating Themes Emerging from Staff Data

#### **4.7.7 Theme One: Perceived Benefits of Intervention Programme on Young People's Emotional Well-Being**

This overarching theme brings together staff's views about the perceived changes in affect and emotional well-being on the young people for whom they are familiar, following participation in the intervention groups.



**Figure 8: Theme One and Interrelated Sub-themes from Staff Data**

Staff explored the ways in which the intervention may have emotionally, physiologically and cognitively impacted the young people, one of which was related to the first sub-theme, 'focus and attention'. One member of the pastoral staff team reflected on the ways in which the techniques taught in the

intervention, may help young people to focus and attend to tasks, during the fast pace of life involving competing demands:

*“...I mean personally, myself, I think really positively about mindfulness and therefore I think I would recommend it to as many people as possible. I think we'd recommend it to other schools as well...kids don't have ages to sit down...But a quick couple of minutes to help them focus...and if teachers are reinforcing that in the classroom...parents are reinforcing that at home, it's all going to work a lot smoother as it were...”* (SI2, p.6, 200:208)

A staff member commented on the perceived beneficial changes that she felt had taken place in the girls that had taken part in the group intervention, consisting of all three sub-themes, ‘focus and attention’, ‘test anxiety’, and ‘self-regulation’.

*“...I think it's been a really good practical group. And I think all of the girls...have taken something away from it, whether it be that they feel more focused on their lessons, or they feel more ready to attempt exams, or they just understand how they can re-centre themselves. I think it's been really beneficial to them all”*. (SI1, p.3, 85:88)

A member of staff explained the differences she felt that the intervention programme had made to young people in the Secondary school, in particular relation to individuals’ experience of anxiety, forming the sub-theme ‘test anxiety’. For example:

*“...I've seen a massive step forwards in how they've done. You know Z particularly, her anxiety has decreased a lot...So as the exams have approached it's kind of heightened again. But she was like, no, no; this is what I need to do to be able to reduce that. So certainly I think that's in part due to some of the skills she learnt in the group”. (SI2, p.1, 23:30).*

Two members of staff discussed the particular strategies and skills that young people employed to assist them with self-regulation of their emotions and ongoing anxieties:

*“...they still get anxious, but I think it's about, OK; yes I can use these skills to calm myself down. Whereas before what we were noticing is we were having a lot of students who...whipped themselves up into such a frenzy that they weren't able to even write in the exams...Whereas now I think you know they've got some of the techniques to be able to you know, at the start of the exam... And they were able to say, yeah; I can do this...they obviously reflect on their anxiety... So a lot more proactive thinking and you know trying to solution focus I think”. (SI1, ps.1-2, 33:50)*

*“I think it's definitely helped them. I think those that recognise what you're trying to do with mindfulness and understand how mindfulness works, they use it...”. (SI3, p.15:7)*

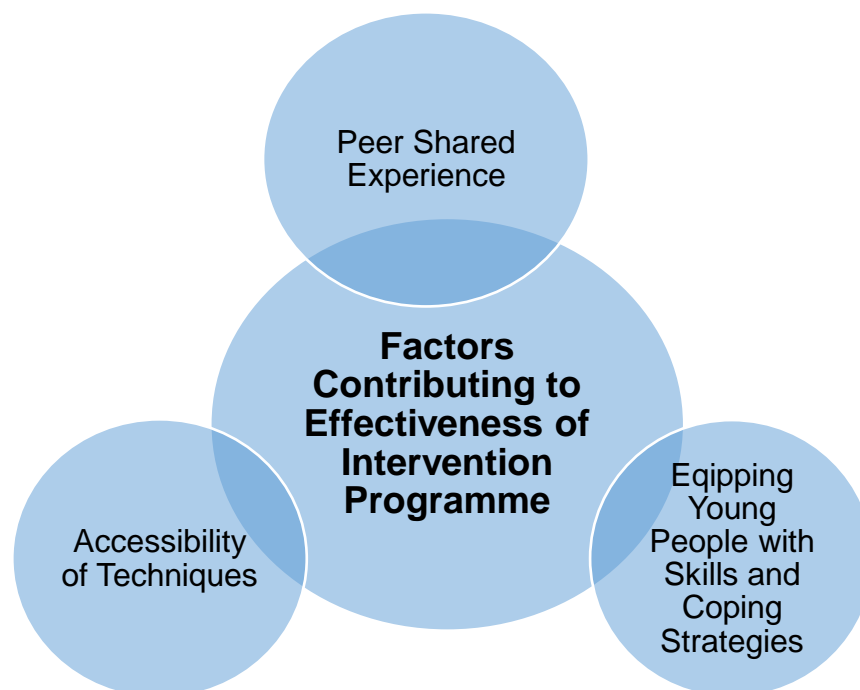
This theme highlights the potentially wide-ranging effects that mindfulness techniques can have if young people are invested and have an understanding of the concept of mindfulness. Staff intimated that the practical skills were particularly helpful at assisting young people to recognise and manage their



anxieties, equipped them with strategies to increase their emotional literacy and self-regulation skills, and enabled a cognitive shift from problem to solution-focused thinking to help ameliorate anxiety.

#### **4.7.8 Theme Two: Factors Contributing to Effectiveness of Intervention Programme**

This overarching theme encompasses staff's viewpoints regarding the components of the intervention programme that contributed towards effective outcomes for the young people, including peer support, building coping and resilience skills, building an awareness of the basic tenets of mindfulness, as well as the accessibility and applicability of the taught techniques.



**Figure 9: Theme Two and Interrelated Sub-themes from Staff Data**

The first sub-theme pertains to views on the 'peer shared experience' that arose from two different staff member's interviews, and aligned with a number of young people's perceptions of their experience of the intervention alongside their peers:

*"But that kind of small group and actually being able to sit with other students who are in a similar situation...And I think that's been important for them to know they're not alone in the way they're feeling." (SI1, p.2, 60:66)*

*"...it's that recognising that someone else around you is in a similar position...That is really powerful for them so I think that peer support is crucial and that's why I think group work is really important". (SI2, p.7, 254:260)*

This highlights the importance of the support systems within the peer groups, and how this may serve as a supportive strategy to assist with building young people's coping and resiliency throughout the pressurised exam years at school.

Staff reflected on the skills which young people had learnt throughout the programme, and their utilisation of these techniques to support themselves. These views are captured in the second sub-theme, 'equipping young people with skills and coping strategies'. For example:

*"I think all of the girls have improved since starting the course. I think they've got more skills and techniques that they're able to go into lessons or into assessments and use the techniques they've been taught to calm*

*themselves down before having to leave the room or having to find a member of staff to help sort of calm them down". (SI1, p.1, 5:8)*

One member of staff reflected upon ways that she felt that the programme material could be expanded, highlighting the helpful nature of employing study skills alongside mindfulness techniques in order to increase productivity:

*"The only thing that I could think of that maybe could be added...is some study skills so that they know how to revise and then they can use those techniques alongside revision". (SI1, p.5, 146:148)*

All three members of staff spoke of the positive aspects of the techniques and their accessibility for young people's frequent use, pertaining to the third sub-theme, 'accessibility of techniques'.

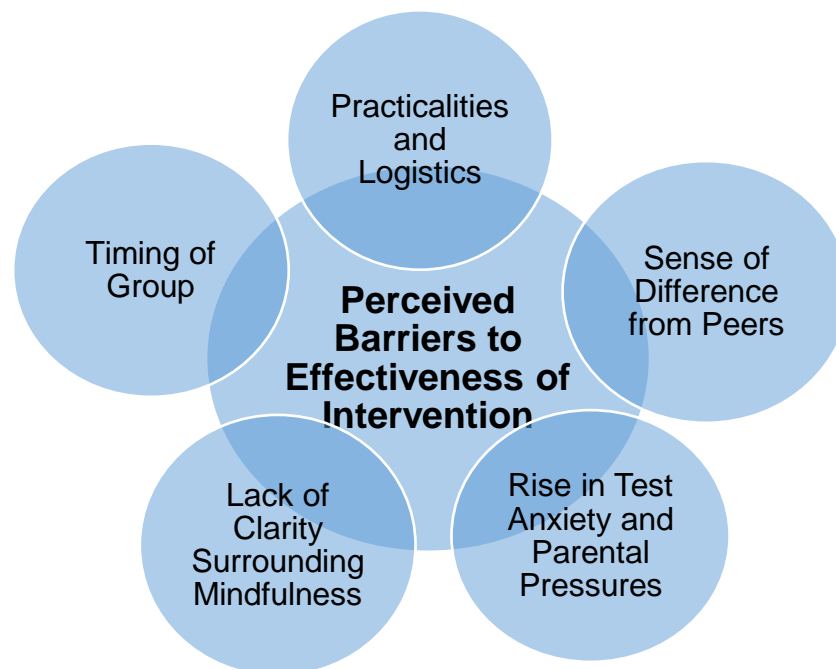
*"I think it's been really good...they've had a lot of skills and being able to practise those skills in the sessions and having things like the cds to take home and practise them at home". (SI1, p.1, 26:29)*

One staff member explored the concept of utilising technology to enable access to a wider number of young people and their parents, in the hope that channelling mindfulness techniques in an accessible and modern format, will appeal and open up increased opportunities to utilise the techniques at the onset of anxiety:

*"Is there something that we can put on our website that all parents can download a little thing for kids to listen to, parents to listen to?...But something that's easier for them...the night before an exam, you could use this to listen to. The morning of the exam; what about listening to this on the bus...". (SI2, p.10, 373:380)*

#### 4.7.9 Theme Three: Perceived Barriers to Effectiveness of Intervention

Within this overarching theme, there were five sub-themes: ‘practicalities and logistics’; ‘sense of difference from peers’; ‘rise in test anxiety and parental pressures’; ‘lack of clarity surrounding mindfulness’, and the ‘timing of the group’. The theme reflects the staff’s viewpoints regarding the young people’s capacity to change throughout the programme, and the experiences of participants that related to both the specific aspects of the intervention programme and any coinciding external factors, which potentially impacted upon the young people’s ability to fully engage and participate.



**Figure 10: Theme Three and Interrelated Sub-themes from Staff Data**

The first sub-theme outlines the ‘practicalities and logistics’ that staff cited as difficulties when organising and implementing the delivery of the programme in

schools, and additionally, the feasibility of the content and expectations of the course.

*“One that I can think of is students practising the techniques...some of them probably leave them in the sessions and don't necessarily revisit them outside of the sessions, so I think that could be one of the barriers...”* (SI1, p.3, 97:101)

An interesting sub-theme, ‘*sense of difference from peers*’, comprises views regarding the possible experience of other young people’s preconception of the intervention, and how this may have affected their ability to respond to the intervention. For example:

*“Some of them were quite reluctant...That has to be managed very carefully. You get some students who are more than happy to be withdrawn and in groups...We've got other ones who are very, very shy about things like that...Obviously with the boys that didn't work so well...I think they're a bit butch...I guess it comes back to the whole school approach...”* (SI2, p.7, 237:247)

One member of staff alluded to the ongoing stigma surrounding mental health, and how this narrative of deficit and mental *illness* may have impacted upon the participating boys’ engagement in the group:

*“...there is a stigma with mental health. And...the boys are very aware of it. And...the first thing they wanted to know when they came here was, why me?”* (SI3, p.1, 26:29)

The third sub-theme, 'rise in test anxiety and parental pressures', relates to staff perceptions about how the rise in prevalence and potential external systemic pressures placed upon young people may have impacted upon their engagement with mindfulness:

*"... with the Year 10s I think definitely noticed it a lot earlier this year than with the Year 11s...it's definitely happening earlier..."*. (SI1, p.4, 130:132)

*"...if they're then going home and parents are saying, no, no; you've got to revise for ten hours and you've got to do that, and it's like, that's not helpful"*. (SI2, p.4, 131:132)

The fourth sub-theme, 'lack of clarity surrounding mindfulness' encompasses one member of staff's views about young people's levels of understanding of mindfulness. Although this arose in one interview, it was deemed an important theme, and may have been attributed to the significant reduction in mindfulness levels detected by the quantitative measures between T1 and T2.

*"I think there's a lack of understanding about what it is and what it means...they have a lot of different interpretations...Because anything different to a teenager is, and I think at the moment for a lot of them it is different. Whereas we need to get it more mainstream more...this is kind of what we do as a school"*. (SI2, p.6, 218:230)

This interesting perspective provides an insight into making mindfulness an accepted approach, which is viewed positively by peers, and is delivered in a universal format within schools to assist with young people's clarity regarding its application.

The fifth sub-theme, 'timing of the group', focused on staff's views about both the length of the weekly sessions and overall five-session intervention, and the timing of the course in relation to the school years, which may have been a contributory factor to engagement.

*"...with the Year 10s I was worried it would be a bit early. But actually I think it's been a really good time to do it, and I think the techniques have been really good". (SI1, p.2, 44:47)*

A different member of staff echoed these views and stated when particularly anxiety provoking and pressured times arise in the school year, and in turn, when may be best to deliver the intervention so as to prevent a clash between the delivery of the intervention and the onset of exam-related anxiety:

*"Year 10s we need to hit them early because actually the stress starts quite early in Year 10...And we're finding less and less can cope with stress...the more it's common practice throughout the school, I think that's going to make it easier...I think it gets a bit too close to the exams". (SI2, p.9, 342:351)*

Another member of staff discussed the timing of the sessions in the school day. Each group was delivered at a perceived feasible time during the school day for the students and each particular school context; this extract highlights one reason for young people's reduced anxiety regarding attending the group at lunchtimes.

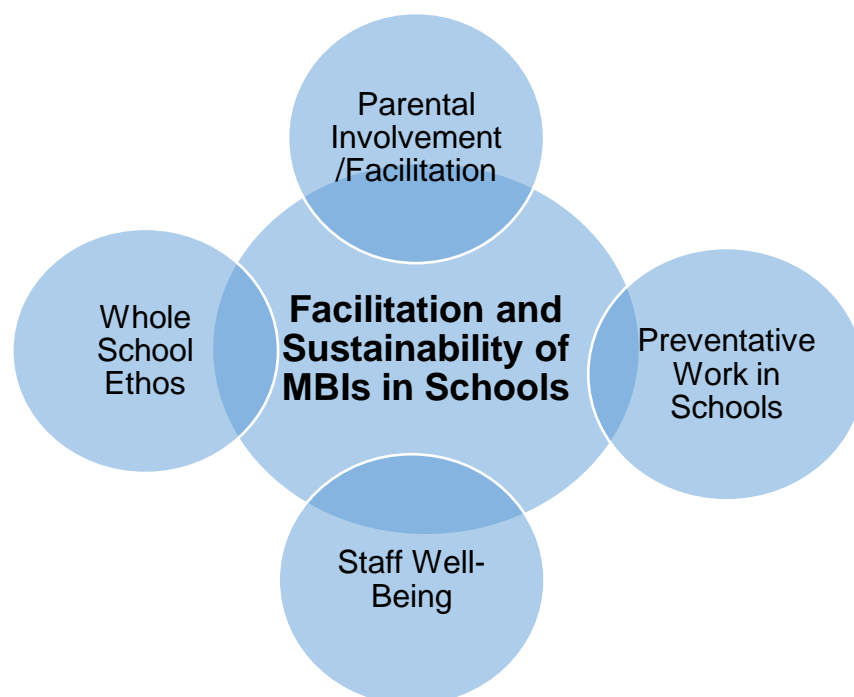
*"Because originally as well we tried doing it out of lessons; that made some of them more anxious because...they were then missing a lesson. So I think doing it at lunchtime was better". (SI2, p.3, 98:101)*

A different member of staff offered an alternative and negative view about the length of the course, and how this acted as a perceived barrier to peer cohesiveness and effectiveness:

*“For me it was just not long enough. It didn't get embedded...we didn't get to know those kids well enough...They didn't trust each other within the group to share personal stuff, because it simply didn't go on for long enough”. (SI3, p.4-5,147:156)*

#### **4.7.10 Theme Four: Facilitation and Sustainability of MBIs in Schools**

This theme consists of staff views about the development and implementation of MBIs in schools, and the facilitative factors which are felt to be important in the introduction of mindfulness into the core school ethos in order to support young people's SEMH needs.



**Figure 11: Theme Four and Interrelated Sub-themes from Staff Data**



The first sub-theme, 'parental involvement/facilitation', includes staff views about ways in which to assist young people in sustaining practice of mindfulness, by involving key support systems to aid facilitation at home:

*"I think maybe contacting families, letting them know that they've got the cds. And...maybe making them aware that it might be good for them to have some space to practise them". (S11, p.3, 104:105)*

*"I think it's about...getting the parents on board". (S12, p.10, 368)*

The second sub-theme includes perceptions about 'preventative work in schools', and the importance of being attuned to young people's needs, and equipped to support them from earlier ages:

*"I think it would be good to have some further follow-up sessions for the girls...And also to run more groups for Year 10..." (S11, p.2, 67:69)*

*"Because sometimes they may not get flagged up with us until further down the line...Whereas I think if we get them that first wobble...I think the early intervention is the key". (S12, p.8, 276:281)*

One member of staff referred specifically to EP facilitation and delivery of MBIs in schools, as cost effective and valuable:

*"I think it is a really valuable use of time, and particularly around the group work...when I go to my managers saying how many EP hours are we buying...I think in terms of value for money...And having things like this that are a rolling programme is really important, because actually*

*that's going to hit the most students as opposed to the one-to-one". (SI2, p.8, 284:288)*

The third sub-theme, 'staff well-being', encompasses staff's references to school staff in relation to their facilitation of mindfulness, and also their own well-being:

*"I think what's good is if you get...user friendly staff then they can cascade it down and then it kind of spreads through...". (SI3, p.12, 438:440)*

*"...staff stress is a massive issue with the way education is going and the pressures that are put on teachers. And I think it's a vicious cycle, isn't it, because the more stressed staff are, the more stressed they are with the kids...giving staff the opportunity to have that mindfulness practice and...reduce their stress levels as well. I think it's a crucial thing". (SI2, p.5, 118:195)*

This staff member's views highlights the importance of supporting the well-being of staff, in order to increase emotional stability, promote productivity, and reduce the risk of burnout.

The final sub-theme is entitled, '*whole school ethos*', to reflect staff's, seemingly opposing, views regarding developing 'mindful schools', and making mindfulness a more predominant feature of the school culture and community.

One member of staff described how teachers could adopt a mindful practice in their classrooms:

*“I think they'd be good as starters or plenaries to set the tone for a piece of work that you want to get the students focused...it would be good in tutorials...so that the girls can have those techniques for when they're doing revision or homework at home”.* (SI1, p.3, 78:80).

A further member of staff reflected upon the assumed barrier to adopting mindfulness in their school context, due to historic hierarchical challenges and the inherent school culture which has developed due to this.

*“...you know the ethos of our school almost doesn't lend itself to it”.* (SI3, p.8, 274)

In direct comparison, another member of staff frequently reported hopes for the school to adopt a mindful ethos, and plans to weave mindfulness into their school culture at a systemic level:

*“It is becoming more popular but...we would like it very much to be a whole school approach”.* (SI2, p.4, 156:157)

#### **4.8 Summary of Quantitative and Qualitative Findings**

In summary of the quantitative findings, there were no significant changes found for any outcome measures at pre, post and follow-up stages, aside from one significant decrease in mindfulness, as assessed by the CAMM measure, for participants between T1 and T2.

The qualitative dimension of the study aimed to gather a deeper understanding of the impact of the intervention on the young people, identify any changes that may not have been detected by the quantitative measures, and explore factors associated with implementation and feasibility from the points of view of young people and staff. These findings alluded to the facilitative factors of the intervention, and the perceived barriers to the young people's experience of the intervention. The specificities of the course content, accessible techniques, the positive impact of the support from peers, and internal and external support systems all appeared to be important factors to the young people, and assisted in their engagement with the programme. Young people were also able to reflect upon perceived barriers prohibiting motivation and engagement with the programme, including some reporting the timing of the sessions in relation to the proximity to exams was a stressor, techniques which were not considered as helpful or relevant, and the effect of group dynamics on their ability to participate. Participants also reported difficulties with home practice, and external life events which contributed to difficulties at times engaging with mindfulness.

Staff perceptions regarding the effectiveness of the programme were helpful in elucidating perceived benefits for the young people who participated, including the positive impact of the intervention on young people's emotional regulation, attention and concentration levels, and levels of test anxiety. Staff also spoke of other factors contributing to the perceived effectiveness of the intervention, including peer support and shared experience, the development of tailored coping strategies and the accessibility of the techniques. Factors which were

cited as more challenging aspects of the programme, included timing of the sessions and course length, impact of external pressures, young people's perceptions of mindfulness, and the potential stigma surrounding therapeutic interventions. Furthermore, staff explored ways in which to sustain delivery of MBIs in their schools; such as, linking with home, facilitating a mindful school ethos, and providing early intervention, and its associated efficacious impact. The findings have important implications for school staff who wish to deliver MBIs in schools, and they will be explored in the subsequent Discussion chapter.

## **Chapter Five: Discussion**

### **5.1 Overview of Chapter**

This chapter explores the implications of the research findings in relation to the research questions, hypotheses and literature, to examine the feasibility and effectiveness of a brief MBI for young people in the exam years experiencing exam-related anxiety in mainstream secondary school settings. Factors associated with accessibility, feasibility and implementation are considered. The main intervention outcome variables are considered in relation to the research questions and in the context of the existing psychological theories and literature examined in the literature review, and themes arising from qualitative analysis are explored. The qualitative data derived from a sub-sample of young people and stakeholders regarding the intervention, including any barriers and facilitative factors to implementation of the programme, are explored in relation to the contribution to academic knowledge and implications for future professional EP practice.

### **5.2 The Impact of the Intervention on Anxiety Symptoms and Child Adjustment**

Research questions one and two relate to results from this phase of the study, and are also complemented by data provided in the qualitative phase of the study. Quantitative results do not support the hypothesis that participants will report a reduction in their feelings of general anxiety following completion of the mindfulness intervention programme. These findings are not consistent with previous research. Other small-scale studies, such as, Semple et al., (2009);

Raes et al.,(2014); Gregor (2005) have elicited significant improvements in young people's self-report measures of general anxiety, and have indicated positive perceptions held by young people. Similarly to the research presented here, the studies took place in mainstream schools utilising small homogenous groups of young people, and involved MBIs.

However, differences in findings may be due to a number of factors, including: differences in the severity and young people's perceived experience of anxiety; differences in the intervention programme's content and format; the settings in which the interventions are delivered; the level of training held by therapists; and the frequency and timings of intervention sessions. Although these studies adopted similar content, for example, programmes utilising a mixed-methods approach utilising CBT and mindfulness-based principles, there were notable differences in the frequency and length of the programmes, ranging from four weeks to twenty-four weeks. Longer interventions appeared to provide increased time to build meta-cognitive reflective skills, problem-solving skills and build emotional regulation and responses to problematic situations. Interventions which span a longer period of time, additionally allow participants to practise newly acquired skills and become fluent in applying such skills, both within the intervention setting and in real-life contexts. Therefore, the current intervention may not have achieved significant improvements in anxiety and mindfulness due to the brief nature of the intervention.

In alignment with this view, the young people's perceptions arising from the qualitative data in this study suggest that the length of time of both the weekly

sessions and of the intervention programme were highlighted as being a negative factor for some, and may have contributed towards the level of effectiveness of the programme and to the quantitative findings capturing change over the intervention time period. Therefore, the brevity and short nature of this programme may account for inconsistencies in findings with this research and the existing literature. MBIs have demonstrated significant reductions in alleviating anxiety (Semple, 2005, 2009; Kuyken et al., 2013; Willis & Jones, 2014) and in depressive symptoms compared with a control group at 6-month follow-up (Raes et al, 2014) therefore suggesting that longer periods between collecting follow-up data may allow increased time to practise techniques and develop mindfulness skills in order to have an overall impact of detecting significant change in anxiety over time post-intervention.

### **5.3 The Impact of the Intervention on Test Anxiety and Anxiety Control**

Research question one relates to the quantitative data, and is further supported by qualitative perceptions of change on these outcome variables. Quantitative results do not support the hypothesis that participants will report a reduction in their feelings of test anxiety following completion of the mindfulness intervention programme. These findings are not consistent with previous research. The participant group did not experience a significant reduction in either test anxiety or in their levels of anxiety control. However, qualitative perceptions provided by those interviewed, offered reflections regarding elements of their experience of anxiety that had changed, including their increased ability to self-regulate their emotions, manage the onset of anxiety by utilising learned techniques, and



apply coping strategies when experiencing anxiety in relation to school exams. Two participants reflected upon external pressures and factors related to home and friendship groups that may have impacted upon their ability to engage with the techniques and home activities. Furthermore, the small sample size, possible lack of sensitivity of measures, differing levels of perceived test anxiety experienced within the participant group, the length of the intervention, and a possible lack of engagement and motivation in completing mindfulness techniques both in and outside of the sessions, may account for the different outcomes from the quantitative and qualitative strands of the study.

Previous exploration and evaluation of test anxiety interventions have indicated that young people who have participated in brief programmes targeted at test anxiety and MBIs with test anxiety an outcome, have found significant reductions in test anxiety, and increased attention levels (for example, Weems et al., 2015; Napoli et al., 2005). The study by Napoli et al. (2005) supported the effect of mindfulness on alleviating test anxiety and enhancing performance outcomes. In comparison to the current study, it involved sessions over a considerably longer number of weeks and employed a control condition to be able to compare intervention effects, however the intervention content is comparable. The quantitative results from the current study do not support findings found in this study as the change in self-reported test anxiety and anxiety control were not significant, however qualitative data suggests that participants were able to utilise techniques at times of stress and anxiety before, during and after exams.

The insights provided by qualitative analysis suggest that the intervention was helpful in reducing participants' experience and self-management of test anxiety. Parallels can be drawn between the qualitative findings from this study with previous research, such as that of Gregor (2005) who examined the effects of different interventions on the self-management of test anxiety for pupils in Year 11. Findings showed that the mixed relaxation/CBT group improved in their exam results compared with no improvement in the other intervention groups, and anxiety levels in the groups with the highest recorded anxiety levels pre-intervention, decreased significantly post-intervention. The intervention content compares with the current intervention in terms of employing psycho-education, relaxation and CBT techniques, however the quantitative results of the current study do not support this finding, as there was no significant change for test anxiety or anxiety control for the participant group across time.

This could suggest that the intervention programme does not have an impact on test anxiety and anxiety control over the intervention time period, or perhaps that the self-report measures lacked the sensitivity needed to detect the change in young people's ability to cope with the demands of exams and the associated anxieties before, during and after exams, that had been reported by the participants who engaged in interviews. Furthermore, it may be that qualitative accounts are consistent with previous research, due to employing a sub-sample of interviewees, perhaps experiencing lower levels of anxiety. Further exploration of reasons accounting for the disparity between quantitative and qualitative findings are examined in section 5.8.

#### **5.4 The Impact of the Intervention on Mindfulness**

Research question two corresponds with quantitative data on this outcome variable, and questions three and four relate to the qualitative phase of the research assessing the intervention impact on levels of mindfulness. The quantitative findings do not support the hypothesis that participants will report an increase in their mindfulness, emotional well-being and ability to attend and focus in school following completion of the mindfulness intervention programme. The results in this study showed one significant reduction in levels of mindfulness between T1 and T2 for the participant group, and no other significant change between T2 to T3.

The qualitative findings of this study support previous research highlighting that MBIs may be introduced to different populations with no prior experience of such techniques (Davis, 2012) as in the current sample group, with both young people and staff reporting the merit of adopting mindfulness as a technique to support test anxiety. Although the qualitative data suggests that there were many aspects of the programme that were deemed beneficial to young people, and particular techniques and practices that young people embraced and valued, it is perhaps possible that the significant reduction in levels of mindfulness from T1 to T2 could be explained by young people's lack of clear understanding about the mindfulness approach at the early stage in the intervention, a realisation that they may not be mindful in their daily lives (Huppert & Johnson, 2010) or perhaps that the questions in the CAMM measure may not have held clarity, or picked up on subtle changes experienced by participants.

Findings from a meta-analysis of studies which evaluated the impact of therapeutic interventions on anxiety, aggression and emotional well-being, provide support regarding implementing tailored and mixed interventions. Programmes comprising individually-orientated interventions with relaxation and CBT elements, appear to further contribute to intervention effectiveness, by reduction of stress and anxiety and increase of focus of attention (Hoogsteder, 2015). In support of this, Mendelson et al., (2010) found that yoga interventions have a positive impact on emotional self-regulation and responses to stress, and emotional arousal. Qualitative data provided by participants suggested that the yoga activities featuring in session 5 of the intervention programme were well received by some, but others viewed them as less feasible to carry out at home and when revising to aid concentration, compared with short breathing meditations or mindful eating and listening. This therefore implies that young people will engage with the programme in very individual ways, and may find some aspects of practice more beneficial than others.

Although not specifically measured within this research study, it appears that pupils with higher levels of engagement, motivation and investment in mindfulness, may incur the largest changes in anxiety, in line with Kuyken et al., (2013) findings that the degree to which students in the Mindfulness in School Project intervention group practiced the mindfulness skills was associated with greater levels of well-being and reduced stress at three-month follow up. This may indicate that the interviewed participants were those experiencing lower anxiety levels inherent with higher motivation. Although the findings presented

here do not indicate that the mindfulness intervention had a significant impact on levels of mindfulness, awareness and attention control, qualitative findings provide tentative support for the benefits of a MBI which incorporates differing yet complementary techniques.

### **5.5 Young People Perceptions of the Efficacy of the Intervention**

Research questions three and four are answered by the qualitative phase of the research, exploring the perceptions of a sub-sample of young people and staff regarding the level of feasibility and effectiveness of MBIs in schools, and the factors surrounding the sustainability of mindfulness techniques. The results of this pilot intervention evaluation offer initial support and insight into the further development of MBIs delivered to young people in schools. Quantitative group data did not find significant changes for any of the main outcome variables, aside from one significant reduction in mindfulness from T1 to T2. However, the qualitative data from semi-structured interviews captured a range of different factors affecting implementation, and offered a deeper insight into the specific details affecting both the programme's feasibility and effectiveness.

Staff perceptions of the changes made by pupils supported some of the conclusions drawn from the quantitative dimension of the study. For example, staff reflected upon some perceived barriers affecting implementation, such as logistical difficulties in school; facilitating home practice; engagement in the programme despite possible stigma and a sense of difference; external pressures outside of the group; a lack of clarity surrounding mindfulness and the timing and length of the programme.

However, staff also reported that the young people generally seemed better able to understand and take control of their anxiety following participation in the intervention, and were able to utilise the learned techniques. Staff articulated views surrounding the effectiveness of the intervention, and hopes for ongoing delivery of MBIs in schools. Staff accounts of the proposed changes to school culture and ethos and the possible impact of MBIs at a whole-school level, provide valuable evidence towards the implementation of the programme for the future. Overall, despite a degree of scepticism at the outset for one staff member regarding the perceived barrier to adopting mindfulness due to inherent school culture and stigma, staff evaluation of the changes and impact of the intervention for young people were generally positive and insightful, in order to contribute towards knowledge about programme delivery and implementation.

#### **5.5.1 *Perceived Benefits and Facilitating Factors of Intervention***

The core areas that contributed to the perceived beneficial and enjoyable elements of the programme and factors that were important in facilitating the effectiveness of the intervention programme arose from the young people's interviews. Factors which contributed to the perceived beneficial aspects of the course, included the application of techniques which were found to be particularly suited to their needs. This was highlighted throughout the interviews, and implies the importance of recognising that different techniques are suited to individuals for differing reasons. The accessibility and functionality of the different techniques were described by young people as being particularly helpful, and their ability to apply the techniques easily as part of their exam

revision or leading up to or during exams. Young people were also able to reflect upon the helpful notion of others recognising their anxiety, and seemingly appeared reassured that there was support in their school to assist in combatting the difficulties which they were facing.

Support from adults and peers was reflected upon, and participants' highlighted the positive impact of having a shared experience with peers who were also experiencing anxiety in relation to upcoming exams; this appeared to serve a helpful and comforting purpose, and contributed to engagement levels for the young people. Support from adults outside of the group was also considered as important to help the pupils to engage with the sessions and intervention as a whole. Interestingly, peer group support both helped and hindered young people's ability to access sessions. Despite a number of young people reflecting upon the positive aspects of experiencing the intervention with others experiencing similar difficulties, they also cited group dynamics and relationship difficulties as a possible barrier to engagement. This supports the qualitative study conducted by Wisner (2013) who ascertained that peer pressures and awareness of others was a key factor to level of engagement and practice in young people.

### ***5.5.2 Perceived Barriers Influencing Intervention Effectiveness***

This theme captured the more challenging factors which may have affected feasibility, implementation and programme effectiveness for the adolescent participants. Factors cited involved reference to content, structure, timing, dynamics, and aspects external to the intervention as being perceived barriers.

Additionally, the relevance of the course and techniques to the young people and how they were feeling at the time appeared to feature as an important factor related to levels of engagement with practice in sessions and at home. This supports the findings by Wisner (2013) who explored the view that mindfulness needs to be flexible, tailored to the individual, and relevant to the participants in order to increase participation, motivation and personal benefit. It is also important to recognise that whilst mindfulness can be made accessible to all, it may not be suited and experienced positively by everyone.

A strong theme to arise from the interviews was the proximity of the intervention to exams themselves, and therefore the challenges that young people faced with attempting to adopt the practices, whilst experiencing possible higher levels of anxiety due to close proximity of exams. Young people cited this as a possible conflict to engagement at times, and it appeared to impact their level of motivation.

### ***5.5.3 Perceived Changes in Thoughts, Feelings and Behaviour***

Participants' relayed reflections regarding the impact of their individual thoughts, feelings and emotions during the intervention programme, how strategies were applied, and the effect of the techniques on their cognitive and emotional processing. The theme also elucidated the particular coping strategies and mechanisms that young people are utilising both at school and at home to support their psychological and emotional difficulties in response to academic pressures and exams. Participants showed insight into the changes they experienced throughout the intervention, and applied the techniques to



particular difficulties which they were facing. For example, one participant spoke of his difficulties with anxiety before exams and in relation to school pressures, and how he was able to utilise the short meditations, and also use scaling to identify his feelings, to be able to self-regulate and manage his changing emotions. Participants' also relayed thoughts about acquiring an increased understanding regarding their responses to stress, both emotionally and physiologically, and how this equipped them with knowledge about the changes in affect which they were experiencing, particularly in response to exam pressures. This often resulted in the use of positive affirmations, as a helpful way of reframing unhelpful thoughts regarding anxiety provoking situations.

#### ***5.5.4 Sustainability of Techniques***

Factors which facilitated and hindered the sustainability of mindful practice following completion of the intervention and for home practice were considered by the young people. Participants spoke of support from peers, home, school and other professionals, such as EPs, as being helpful in supporting their continued practice. The aspects which were considered as more challenging and posed as barriers to home practice included practical factors, such as; time, environmental distractions, level of motivation, and applicability of techniques, which negatively impacted upon how young people engaged with mindfulness sessions, and with extending their practice outside of the sessions. This was reflected in the research, whereby Huppert & Johnson (2010) found that levels of mindfulness increased for participants who engaged in regular home practice. This was further supported by Kuyken et al., (2013) who reported that

the degree to which students practised mindfulness skills was associated with an increase in emotional well-being and a reduction in stress levels. Some participants reported using the techniques at home in this study, however the quantitative results do not support this finding, as there was no significant increase in mindfulness. Quantitative self-report likert scales showed that participants did not regularly use the techniques outside of the sessions, with the mindful eating technique appearing not as relevant for test anxiety. This may suggest that the strategies in the intervention were not specifically focussed sufficiently on managing test anxiety.

It is possible that the young people who felt that the programme was of most relevance to them were more motivated to engage in home practice. When related to the quantitative findings for mindfulness, this may account for why a significant change was found at the beginning of the intervention. Moreover, in line with other studies, beneficial outcomes of mindfulness appear stronger in studies whereby more mindfulness engagement and home practice has been evident (for example, Weare, 2013; Huppert & Johnson, 2010; Burke, 2010). The qualitative findings from this study suggest that some participants found engaging in regular home practice beneficial, however the quantitative findings do not appear to support this overall, as no change was found in levels of mindfulness from T2 to T3 following the intervention. This provides an important implication for the implementation of MBIs in schools; flexibility in approach and ways to engage CYP in practising techniques outside of sessions should be considered, such as arranging a suitable space and time in school to practice, which may yield an increase in effectiveness on main outcomes.

Challenges also involved the length of the course, as this was felt too brief by some to be able to cement the practices in mind and become skilled at applying the techniques in other contexts external to the intervention sessions. Other studies that have found significant improvements lasted from four to twenty-four sessions, evidencing a disparity in intervention outcomes (for example, Huppert & Johnson, 2010; Napoli et al., 2005). Another factor to sustainability and application of the techniques involved reflection regarding competing demands that the young people were experiencing, and they reported that they perhaps did not have the time and energy to devote to mindful practice alongside their schoolwork and coursework, as highlighted by one young person.

Some young people also considered the importance of early intervention, and the importance of reaching out to a wider remit of ages in a preventative capacity, in order to equip young people with the resources and skills to cope with academic pressures throughout their school lives. This was reiterated by staff members, and the importance of early intervention in school was recognised.

## **5.6 Staff Perceptions of the Feasibility of the Intervention**

Staff perceptions were insightful regarding the implementation and feasibility of delivering a MBI in school settings, and the perceived associated positive and negative factors related to this. Staff discussed the notable differences in emotional presentation which they had witnessed the intervention to make on the young people who they support in school, as also evidenced in previous

research (Kuyken et al., 2013; Napoli et al., 2005). Staff reflected upon the changes in young people's ability to utilise the techniques and coping strategies to support their emotional well-being, as their understanding of mindfulness increased.

Challenges identified included the practicalities and logistics of finding a suitable space in school, liaising with home, the timing of the groups, recruitment for the groups, and competing demands. For future delivery of the intervention, the identified challenges may be overcome by increasing communication with home to facilitate application of the techniques outside of the sessions; paying careful consideration to the dynamics of the group; ensuring a suitable space in school is used, and giving particular attention to the timing of the intervention in the school year, to avoid other conflicting stressors such as exams.

Staff discussed the importance of embracing mindfulness at a whole school level, and in order for it to be embraced and effective, it must be part of the whole school ethos. This view is supported by the research, which states that in order for mindfulness to have maximum impact, it must be embedded into the school culture, with commitment from teachers and staff (Wisner, 2013) and interventions need to be adopted at a policy making systemic level (Weems, 2010). Careful consideration should be given to programme implementation and ecological factors on outcomes. These may include: programme fidelity; intervention quality and quantity; participant responsiveness; uniqueness of the programme; content adaptation; controlling for extraneous factors; and representativeness of participants (Durlak & DuPre, 2008). Furthermore, the

organisational context and functioning of schools and the availability of experienced staff, have been viewed as having an impact on the support system and the quality of intervention implementation. The contextual factors at community, school and individual levels have a significant impact on the quality of implementation of evidence-based interventions (Domitrovich et al., 2008). This provides implications for future delivery of the intervention, and highlights the importance of the consideration of contextual factors on implementation effectiveness.

Despite acknowledging challenging aspects of the intervention, it appeared that the intervention was received uniformly positively across staff in different schools. Staff alluded to the importance of also supporting the well-being of staff and the associated benefit of engaging in mindfulness for their own well-being (Napoli et al., 2005). In addition, they spoke highly of the accessibility and feasibility of both EPs and school staff delivering the intervention to a wider remit of ages and needs in school in order to support the growing prevalence of social, emotional, and mental health difficulties in school. It may be that once steps are taken such as, careful consideration of programme facilitation and implementation to ensure participant engagement, greater benefits of MBIs for anxiety may prove beneficial.

## **5.7 Summary of Quantitative and Qualitative Findings**

The findings from the current study provide preliminary support towards understanding the positive properties of mindfulness as an intervention, as well as barriers to its success, identifying a range of factors associated with

feasibility and implementation. Previous research has suggested that MBIs delivered in mainstream schools have the capacity to support young people experiencing high levels of anxiety (Semple et al., 2005; 2009) particularly in relation to test anxiety, focus and attention (Napoli et al., 2005). The current study provides mixed evidence regarding whether young people undergoing pressures associated with exams in the UK, can experience positive change and benefits from MBIs for anxiety.

The quantitative and qualitative data provide some differing results, which offer insightful implications for future evaluative intervention studies utilising a mixed methods approach. For example, the quantitative results did not yield significant results for the sample measured during the intervention period, however, the qualitative results suggested that young people received the intervention positively. Although young people and staff were able to identify potential barriers and aspects of the intervention which may be improved, they suggested that there had been a change over the course of the intervention, and all participants were able to identify a mindfulness technique or aspect which they found to be beneficial. Some of the explanations attributed to the differences in quantitative and qualitative results will be discussed in turn.

The lack of significant changes found for primary outcome measures were perhaps attributable to the small sample size. Dattalo (2008) argued that the determination of sample size is an important and complex stage in the planning of an empirical study, and considered efforts to obtain appropriate sample size 'remain an important and viable component of social science research'. It may

be that if the researcher had carried out a power calculation on the power of the sample of 16 participants, improvements of any size may have been detected.

Possible individual changes over time may have been masked by the whole group analyses carried out on the overall outcome measures, in order to ascertain change at a group level. Individual analyses may have allowed an insight into any consistent patterns of intervention effect at the individual level. Changes arising from both strands of the research may have been attributable to everyday stressors, and personal and familial factors, external to the group intervention.

An alternative explanation for the lack of significant findings may relate to the breadth and content of the techniques in the intervention. The intervention employed relaxation, mindfulness and CBT-based techniques, however perhaps an additional emphasis on increased behavioural techniques including study skills and further meta-cognitive elements may have increased the applicability and effectiveness of the intervention. This was echoed by one member of staff, who explained that she thought that the intervention content could be enhanced with the use of study and revision techniques for the young people. This aligns with research examining test anxiety interventions, which highlights the effectiveness of CBT, combined, and behavioural-skill based approaches, and proposes an increased need for targeted and individualised techniques for test anxiety (Von de Embse et al., 2013).

The marked lack of significant changes on the main outcome variables may indicate that the intervention was not successful at targeting test anxiety in young people and perhaps yielded no positive notable effects. However, this interpretation is inconsistent with the young people and staff's qualitative post-intervention data, whereby strong evidence is provided of young people's capacity to change, and the positive impact mindfulness has had on young people's ability to engage, self-regulate and understand emotions, and build coping and resilience support techniques. However, a sub-sample of participants was employed, therefore it is recommended to use a random selection of participants in the future.

Furthermore, the methodological issues of gaining young people's views should be acknowledged. It is a possibility that the qualitative results appear more favourable with regards to the impact of the intervention, and may explain the contradictions between the quantitative and qualitative results. For instance, the 'Hawthorne Effect' may have been a contributing factor impacting upon the participants' responses. That is, 'behavior during the course of an experiment can be altered by a subject's awareness of participating in the experiment' (Jones, 1992). The very effect of being observed as an active participant in a research study may have incurred results which may have subconsciously been altered by the environment and context. A further consideration given for the positive qualitative data in contrast to the quantitative results, may be due to the potential occurrence of 'demand characteristics' (Orne, 1962). It is a valid possibility that participants provided the researcher with answers which they perceived as being the responses desired by the researcher in order to support



the research hypotheses, and were not independent and objective from the experimenter expectations.

The lack of significant findings may be due to the small sample size, and the structure, content, and frequency of the intervention sessions. Favourable qualitative results may have been attributable to methodological limitations intrinsic to a research study. Limitations with the study and intervention may be resolved by recruiting a larger sample, and paying closer attention to methodological procedures, programme implementation, and school contextual factors, to increase the likelihood of achieving significant reductions in test anxiety and improvements in mindfulness in the future.

## **5.8 Methodological Critique and Research Limitations**

A mixed methods design was adopted in this study, allowing the qualitative constructionist approach and the quantitative positivist approach to be combined in order to answer the research questions (Robson, 2011, p.30).

Despite the study possessing strengths, such as increased validity by employing both quantitative and qualitative methods to evaluate the implementation and effectiveness of the intervention, limitations to the design of the study must be acknowledged in order to shape future research in this area.

### **5.8.1 Sampling Size and Procedure**

The sample was selected opportunistically by the schools, and participants were perceived as experiencing test anxiety by school staff. Although five different schools took part in this research, it would have been beneficial to

have a wider range of schools orientating from different areas included in the study. Furthermore, the intervention was implemented during exam season, which may have had an impact on participants' ability to engage with the programme. In order to overcome this in the future, careful consideration should be given to the timing of intervention delivery in the school year.

Participants were recruited by the schools to take part in the intervention, therefore young people were not provided with the option to 'opt-in' to the intervention programme. The recruitment method used may have in turn affected the young people's level of engagement, and understanding of why they had been selected for the group programme. Therefore, this implies that it is important to ensure that all young people have an understanding of the approach and are given a clear choice to opt-in to the intervention. It may also be beneficial for there to be inclusion of a diagnostic interview to ascertain participant levels of anxiety at the beginning of the intervention, in order to increase intrinsic motivation and level of engagement. Furthermore, those interviewed volunteered to take part, therefore this may have created a possible bias as they are more likely to have been engaged in the programme.

The small sample size means that it is not possible to generalise to pupils of different ages, genders, socio-economic and cultural backgrounds. All participants had English as their first language and the majority were white, middle class British, meaning that results cannot be generalised to youth from more disadvantaged backgrounds and other ethnicities and cultures.

Furthermore, there was a smaller proportion of males within the sample.

However, this is unsurprising given that females demonstrate almost twice the risk of developing anxiety than males (Rapee, 2009) and females reportedly possess higher prevalence rates of anxiety regarding tests (McDonald, 2001) therefore this sample may be an accurate representation. The small sample size may also mean that it is difficult to detect significant changes following the intervention due to a lack of statistical power.

Any improvements in performance or outcomes following participation in the intervention may be attributable to practice or treatment, and a decline may be due to either treatment or fatigue. Therefore, due to the linear order effects of treatment, it is difficult to predict whether the outcome can be associated with the effect of the intervention alone or to a 'carry-over effect' of the prior treatment. The order effects may be counterbalanced and minimised by lengthening the time periods between intervention treatments (Girden, 1992).

The fidelity of the delivery of the intervention had variability across groups, in relation to the number of activities covered in each session, and the length and consistency of the timings of sessions. High rates of fidelity were noted by EPs for four groups, however one EP reported only 46% fidelity due to shorter sessions, practicalities in the school setting, involving room availability, student absence, timing of the groups in the school day, and the timing of the intervention during exam season at the end of the school year. This provides implications for the delivery of future interventions in schools, highlighting the importance of considering the timing and length of sessions, and the impact of this on student engagement.

### **5.8.2 Control Group**

The limitations of the absence of a control condition for this study have been carefully considered. It is not possible to conclude that any improvements that occurred were due to the programme alone. It is possible that improvements in cognition and affect may have occurred naturally over time, and cannot be attributed solely to the participation in the group.

However, due to the vulnerability and presentation of anxiety in all participants, it was felt that having a waiting-list control group may not have been ethical, and may warrant undue anxiety. Furthermore, as all participants were experiencing a level of test anxiety and were due to take exams near the time of the intervention, it was expected that a waiting-list control condition may not be feasible, due to impending exams. An RCT is considered the optimal study design to reduce bias, and to provide accurate estimation of intervention benefits, however it is recognised that there are circumstances when adopting this design is not possible or advisable. The stage of this research is of preliminary exploration, whereby it seeks to develop an understanding of the intervention and its possible effects (Medical Research Council, 2000). As this research is interested in feasibility of a new intervention, and there appears a lack of research on mindfulness for test anxiety, it felt appropriate to consider feasibility, implementation and initial evidence for effectiveness, prior to a more resource intensive RCT.

### **5.8.3 Attrition Rate**

Twelve young people dropped out of the intervention, therefore there was a moderately high attrition rate for this intervention. A significantly greater number of participants in Year 11 ( $n=10$ ) dropped out of the intervention, and through exploration of the data and feedback from school staff, it emerged that this appeared to mainly be due to the timing of the intervention and the proximity of the intervention to the onset of the exam season. This therefore highlights that the timing of the intervention is crucial for pupil engagement, participation and attendance, particularly for Year 11 students undertaking G.C.S.E. examinations. It is recommended that the intervention is delivered early in the school year prior to the examination season, to encourage optimum engagement levels and to minimise additional possible anxiety.

Furthermore, as this study took place within the 'real world' (Robson, 2011) certain practical and logistical issues arose over the course of the intervention. For instance, a particular challenge was faced within one group, whereby four completed questionnaires at T2 were mislaid by the EP delivering the group, therefore those particular participants could not be considered in the overall completers' analysis. This process did however highlight the practical difficulties faced when conducting research in busy school settings, and when liaising with numerous professionals, and offers a helpful insight into pre-empting possible difficulties and how to overcome them when completing future research evaluating interventions in real world settings.

#### **5.8.4 Validity and Reliability of Measures**

The lack of significant change in outcome measures from pre- to post-intervention may be attributed to a number of possible explanations. It may be hypothesised that the measures used are not sensitive to short periods of re-testing. However, the internal consistency for the measures was high, and measures including the SCAS, SDQ, TASC and the ACQ-C have previously demonstrated sensitivity to detecting the positive effects on interventions aimed at reducing anxiety in youth (Weems et al., 2010; Spence, 1998; Goodman, 1997; Goodman, 2001). The CAMM is a relatively new measure (Greco, Baer, & Smith, 2011) and may not yet have demonstrated sensitivity to treatment.

As this study took place in the context of 'real world research' (Robson, 2011) the intervention was delivered within the familiar school environment, therefore this posed some barriers to participant engagement and the consistency of the length of some sessions, due to practicalities and logistics, and therefore it was not possible to control for any extraneous variables.

#### **5.8.5 Trustworthiness and Researcher Bias**

Throughout the planning and implementation of this research study, all attempts were made to maintain integrity and trustworthiness of the data. In order to minimise the potential of researcher bias, the researcher kept a research diary in which reflections, notes of interest, questions and interpretations were recorded. The researcher also engaged in regular discussions in supervision sessions regarding each stage of the research, and themes were shared and reflected upon with one supervisor. Amendments were made following critique

and emerging themes were developed and refined when provided feedback. However, it is possible that themes may have been overlooked, and the researcher's personal experience and investment in mindfulness may have impacted upon the personal interpretations of the findings. This in turn may have posed an increased risk for researcher bias when interpreting the qualitative data, due to the researcher's positive views about mindfulness, and therefore this may have meant the interviews were interpreted through a positive lens.

Therefore, the researcher ensured that the interview schedule and interpretation maintained a balanced and objective stance by checking questions and thematic analysis with supervisors in supervision sessions, and comparing with the existing literature in the field before meeting with participants to undertake the interviews. In line with the epistemological positioning of the research, the social constructionist stance (Burr, 2003) seeks to explore participants' personal experiences of the intervention, and centres on the belief that all individuals view the world individually and subjectively, and the pragmatic perspective works best for the research problem and aims lying at the heart of the research process. Therefore, this suggests that it is not possible to eradicate the views and beliefs of the researcher from the topic that is being studied, thus it is acknowledged that the results presented within this study are an approximate level of reality, rather than an absolute truth.

### **5.8.6 Delivery of Mindfulness Programmes**

The UK Good Practice Guidelines (2011) were considered and addressed, in order to ensure competence to design and deliver a mindfulness course. The researcher considered how the guidelines were met; this included ensuring that the programme leaders possessed relevant training and experience as outlined in the Methodology chapter, and had knowledge of working with populations that the mindfulness-based intervention was delivered to. Concern regarding the potential dilution of quality and authenticity of mindfulness programmes due to the recent surge in popularity has been muted within the literature. It is acknowledged that the EPs delivering the programme varied in their level of personal and professional training and experience, and that this is an important implication for evaluative studies. It is important to highlight that this may have been a contributory factor towards the outcome of the evaluation, however every effort was made to ensure programme fidelity and integrity.

### **5.9 Strengths of the Research Study**

The participant sample was more susceptible to experiencing anxiety for the purposes of suitability for the intervention, therefore it was expected that they would rate perhaps higher than average scores on the anxiety measures. The participants' levels of anxiety did not appear to markedly change during examination time based on the quantitative findings, therefore this may indicate that the intervention itself is a containing process, and is able to provide a source of support for anxious young people. However, it is difficult to measure this without a comparison group, therefore it would be beneficial to include a control condition in order to assess this in future studies.



This study aimed to contribute understanding of test anxiety and interventions targeting this difficulty. The study explored the young people's experience of anxiety, and has built an understanding of the cognitive, affective and physiological aspects of anxiety. The research questions assessed changes in general anxiety, test anxiety, and emotional well-being for young people. Furthermore, it explored the sustainability and implementation of MBIs in schools, by expanding upon the existing knowledge of young people's experience of test anxiety and the growing evidence-base by eliciting self-reports from young people and staff in a cross section of mainstream secondary schools. The effectiveness of the MBI to support test anxiety was assessed by employing a mixed method approach to be able to report an evaluation of the implementation of the intervention. Methodological limitations discussed and outlined in this chapter may have contributed to the lack of significant intervention effects over time on the main outcome variables. However, there were insightful and positive accounts of the intervention made by a sub-sample of young people and staff post-intervention, alluding to the successful elements of the programme in raising young people's understanding of anxiety, elevating their resiliency and equipping them with coping strategies and skills to support their experience of exam-related anxiety.

This evaluation of a MBI targeted at young people experiencing test anxiety, can offer tentative positive appraisal of the potential for techniques utilising psycho-educational, relaxation and cognitive restructuring elements to have a

positive and transformative benefit for young people experiencing test anxiety throughout their school lives.

## **5.10 Suggestions and Implications for Future Research**

This section highlights the areas which future research should consider exploring in light of the findings and implications arising from the current study, in order to gain a further understanding of the factors contributing towards the feasibility and implementation of MBIs for test anxiety.

### **5.10.1 Use of a Control Group**

Initial indications from this feasibility study, suggest sufficiently promising results anecdotally from young people and school staff, however have not elicited statistically significant results, and therefore warrant further exploration of the intervention and implementation in order to inform a larger RCT design in the future. A control group matching the participants on key criteria, such as gender, ability and baseline outcome variables, should be implemented in future research, to be able to compare the young people who received the mindfulness intervention with those in a comparison group in the same setting in order to ascertain a more robust and accurate measurement of change over time. Larger robust studies, using well validated measures and active controls are advised, as MBIs carry the promise of improving learning skills and resilience (Zenner et al., 2014).

### **5.10.2 Methodological Approach**

Future research may wish to consider employing a mixed-methods approach, as in this research study, to assess outcome and acceptability across a range of stakeholders, by adopting numerous methods, such as teacher reports, individual interviews, observations, student questionnaires and parental reports, in order to be able to triangulate information from a wide variety of sources. It is recommended for future research not to exclusively rely solely on self-report data and questionnaires, and to triangulate measures with qualitative data and behavioural measures, in order to gain a representative and accurate picture. Moreover, there is heterogeneity in the findings, therefore further studies to locate the origin of the heterogeneity are advised. This may be further investigated by exploring the heterogeneity of difficulties to understand the implications of the selection of participants for such interventions.

### **5.10.3 Sample Size**

Further research should include a larger population in order to increase the generalisability of findings, increase statistical power, and therefore conduct further statistical analysis to explore any change over time. Whilst this evaluation adopted a mixed methods approach, the only sources of information involved either self-reported data by young people, or a small number of school staff ( $n=3$ ) who knew the young people well. In order to gather information from wider sources to enhance data triangulation, it would be of interest to interview both parents and other members of the school community, such as Head teachers, to aim to understand further about perceptions of the programme and the feasibility of delivering such interventions. As the sub-sample of interviewed

participants also completed the standardised measures, it was expected that there may be a degree of congruence between the conclusions of the quantitative and qualitative strands of the study, however a degree of difference was noted in the participant responses in semi-structured interviews, and the quantitative results. It is acknowledged that this may be explained by social desirability bias created by researcher effects, as the researcher carried out the interviews, and it may be that the young people answered with perceived desirable answers.

Furthermore, a stringent and robust method of measuring change across genders may increase the generalisability of results, and employing a random sample of interviewees may ensure that the young people who participated in interviews had not experienced the most benefits from the intervention programme, so as minimise any potential skewness of the qualitative results.

#### **5.10.4 Gathering Follow-Up Data**

Due to the absence of longer-term follow-up data, it is not possible to make definitive conclusions about the maintenance and sustainability of the techniques learned. Future studies should aim to gather follow-up data for all sources over a longer period of time, to enable researchers to ascertain if any effects were maintained long-term. However, it should be noted that this is a pilot study, and therefore a long-term follow-up would not be the primary focus of such a design. The current study uncovered the factors which contribute to sustainability of the learnt techniques and practices over time, by asking participants how much home practice they engage in and the usefulness of the

worksheets and home practices provided. Further research using designs to address such issues is recommended, however the results from this study provide a foundation to build on.

#### **5.10.5 Employing a Sub-Sample of Interviewees**

It is possible that participants in the sub-sample of interviewees group may have demonstrated particular characteristics, such as compliance, enthusiasm, or willingness to please, which may make them more likely to become susceptible to demand characteristics (Putwain et al., 2014). Therefore, if such effects were present, then a reduction in test anxiety may have been expected in the group of participants who were interviewed, irrespective of their level of test anxiety at pre, post and follow-up stages. However, as the overall pattern of quantitative findings appeared consistent for both the interviewees and non-interviewees on the mindfulness and test anxiety outcomes, and the researcher additionally collected qualitative data from school staff to be able to triangulate findings, the researcher is cautiously hopeful that such possible effects did not have a great impact on the findings of this study. However, it would be helpful for future studies to employ a control condition, and facilitate control and intervention group comparisons to assist in ruling out any placebo effects, demand characteristics or other changes associated with the passage of time.

#### **5.10.6 Implications for Future Research Arising from Analysis**

Gender was not controlled for in the current study, however the qualitative data provided some indication of differences in test anxiety experience and prevalence within each gender, such as staff perceptions regarding a general

pattern of boys finding it difficult to recognise their anxieties and accept help. A number of reflections provided an insight into the perceived coping and resilience of males and females, and the differing ways each gender may relate to and receive an intervention such as this. Although this research did not include gender as a focus of the study, it is an interesting area to explore to further contribute to our understanding of test anxiety and intervention. Putwain et al. (2015) stated that there is a reported higher prevalence of test anxiety in female students and lower academic buoyancy than male students. They found no statistically significant difference when controlling for gender variability on G.C.S.E. exam scores, therefore gender was omitted from the analysis, in line with the current study. However, future research featuring an RCT design could allocate an equal proportion of males and females to the treatment and control groups, therefore controlling for any gender differences in test anxiety and academic motivation (Putwain, 2014).

In addition, the research in the field suggests that the use of IT has been a notable development in the provision of test anxiety interventions. Computer-based interventions have been developed and trialled using compact-disc and internet-based modes of delivery for clinical anxiety. (Putwain, 2014, p.424). This finding corresponds with one qualitative staff interview, whereby she discussed using technology to ensure that test anxiety interventions are made more appealing, accessible and effective for YP, and in turn, target a greater population who are experiencing wide-ranging needs. Traditional cognitive, behavioural, and skills-focused psychological interventions for test anxiety typically rely on specialist practitioners (e.g. EPs) for the delivery of

interventions, which may pose a drain on school resources and can be time consuming for schools. Putwain et al. (2013) highlighted the merit in developing alternative modes of delivery that do not rely on face-to-face and can be deployed flexibly to schools utilising an interactive IT-mode of delivery.

#### **5.10.7 Future Research**

Research examining the effectiveness of MBIs for CYP is growing at a fast pace, and studies are being developed to further broaden our understanding of the tenets of interventions aimed at addressing social, emotional and mental health difficulties in CYP. One large-scale significant trial is due to be undertaken in late 2016 to explore the impact of mindfulness training on teenagers' mental health (Wellcome Trust, 2015) involving almost six thousand students in classrooms across 76 mainstream schools in the UK. This three-part study involves the first large scale RCT of mindfulness teaching in school, and seeks to provide a significant contribution to understanding and informing future research and applications of MBIs for CYP in the UK.

#### **5.11 Implications for Professional EP Practice**

This study sought to explore the feasibility of EPs delivering MBIs in schools by utilising both quantitative and qualitative methods. The strong positive views from young people and staff regarding the intervention were expressed in qualitative data to support the effectiveness of the MBI for test anxiety as a psycho-educational therapeutic intervention in schools. This qualitative data also provided valuable reflections regarding the challenging aspects of both implementation and practice in order to inform future delivery of MBIs to young

people in schools. EPs are well placed to deliver such interventions in schools, given their position in the community and schools (Iyadurai, Morris & Dunsmuir, 2014). Qualitative evidence from the current study supports this, as staff felt that the delivery of an MBI would be a good use of their EP time in schools. This intervention offers an additional accessible therapeutic intervention which EPs can utilise directly as a targeted intervention, or bring their knowledge of therapeutic work to consultations to guide thinking around support and intervention.

Utilising the psychological knowledge of theory and understanding of the evidence-base, EPs are in a strong position to be able to identify CYP who may benefit most from a mindfulness-based approach to intervention. The qualitative interviews with staff alluded to the issue of the cost and commitment of EPs delivering therapeutic intervention programmes over time, therefore EPs may also be able to advise schools regarding how to implement the intervention effectively. EPs may be able to work with schools to help to identify the most vulnerable CYP whose difficulties may be suited to a targeted intervention of this kind, and to help to identify any increases in anxiety and to be able to work with staff and families to ensure the most appropriate provision is in place. In line with the SEN Code of Practice (2015) keeping the CYP's views and needs at the centre, and working collaboratively with those who know the young person best and are the agents of change, therefore sharing information from the intervention with young people's permission, may assist in the generalisation of learnt skills into other contexts, and assist the young person to utilise the coping skills into their daily lives.



It will be important for EPs to consider tailoring the session content, pace of delivery, and format of the programme for CYP experiencing test anxiety, and appropriate modifications may be required for vulnerable CYP which consider difficulties in emotional presentation, differing level of language and learning, group dynamics and relationships within a group format, and in understanding emotions (see Donogue, Stallard & Kucia, 2011). Furthermore, environmental stimuli, practicalities and organisational factors in the school setting should be carefully considered, and flexibility in approach maintained to suit YP's unique needs (Wisner, 2013), in order to contribute to EPs' successful delivery of the programme. In light of the findings from the current study, recommendations are made to minimise practical challenges in the school setting, and to tailor the programme delivery to individual needs.

#### **5.12 Dissemination of Findings and Key Implications for Stakeholders**

The findings from this research study will be presented to three TEP cohorts and the core academic tutor and staff teams at the UCL Institute of Education. Additionally, a summary paper of the research will be written and included in the professional placement assessed portfolio. Within the Local Authority, the key findings of the research will be presented at a team meeting, and a summary document will be made available for the EPS teams.

The participating schools will be provided with a summary of the main research findings, and will be given the opportunity to discuss these with the researcher and/or the link EPs in their schools who delivered the intervention. The results from the study will add weight to their growing bank of evidence regarding the

benefits of mindfulness as a therapeutic intervention, over other interventions, and will help them to decide whether to utilise their EP time and staff resources and skills to deliver such interventions in their schools. The results and evidence from this study provide key stakeholders with information regarding appropriate recruitment of students to the intervention, which students would access and benefit from the intervention content, and ways to meet challenges and facilitate ways to solve difficulties in implementation and sustainability of techniques, for example, connecting with parents to aid facilitation of techniques and promote practice in the home context. Evidence acquired from this study, can assist schools in their decision making process regarding commissioning, planning and implementing therapeutic intervention work. When considering implementation of the intervention, it is of importance for schools to consider providing a supportive network to young people, to be able to express their views, and as a means of supporting young people who may be experiencing difficulties across the school and home context and may not result in benefiting positively as hoped from the intervention.

### **5.13 Reflections of Researcher**

The researcher maintained a reflective practitioner standpoint and personal view and practice of mindfulness throughout the research process, and thus remained mindful of the effect that the researcher's preconceived views and beliefs could have on the research process, and similarly the effect that the research could evoke on the researcher. In order to actively engage and remain thoughtful about these issues, the researcher facilitated reflexivity by using a research diary throughout the process, and engaged in reflective

discussions about the research process and progress in supervision sessions, and frequently considered the implications for the delivery and implementation of future mindfulness interventions, whilst critiquing and engaging with the literature in the field.

Some additional issues were also considered in light of the researcher's previous experience and events throughout the research process. The researcher has historically worked in a secondary school background with young people to support their learning, behavioural and emotional development. The researcher has also taught A-Level Psychology modules to young people undergoing examinations, and has a personal interest in promoting mental health and enhancing emotional well-being, therefore personal reflections and viewpoints may have incurred some bias when interpreting the data.

Furthermore, the researcher joined the first sessions in order to introduce the research and to gather the completed questionnaire packs pre-intervention. This may have had an impact on the young people's self-report data and they may have felt more inclined to offer positive reflections of the course. This did mean that the researcher was able to ensure that the participants felt fully informed and clear about the research, to ensure the questionnaires were completed with participants who attended, and the researcher was on hand to answer any questions about the research process and questionnaires. In addition, the researcher worked closely alongside the EPs delivering the groups, who had good relationships with their schools, in order to aim to protect against logistical and organisational issues, and to maintain an ongoing liaison

regarding the intervention and research process. The researcher visited all schools with the link EP, and coordinated with the EP to be able to contact parents, and arrange to meet the young people and staff.

#### **5.14 Summary and Conclusions**

This research study aimed to explore the feasibility and effectiveness of a brief new targeted mindfulness intervention for young people in Years 10 and 11 experiencing exam-related anxiety, and explored factors influencing implementation and its impact on a range of outcome variables, including general anxiety, child adjustment, anxiety control, mindfulness and test anxiety. A mixed methods design was employed to gather pre, post and follow-up quantitative data, and qualitative data at follow-up stage, representing perceptions of a sub-sample of young people who attended the programme, and pastoral and student support staff who work in a supportive capacity in the schools.

The quantitative findings are not consistent with those reported in the literature (for example, Putwain, 2014; Von de Embse et al., 2013; Gregor, 2005; Ergene, 2003) however, qualitative findings provide evidence for the usefulness of psychological interventions for test anxiety. However, a sub-sample of participants were interviewed in the current study, who were perhaps most motivated towards change. The qualitative findings also alluded to the challenging aspects of delivering a therapeutic intervention in the school setting and the challenging factors to adopting mindfulness as an approach, leading to barriers to engagement (Milligan et al., 2013; Wisner, 2013). The research did

not capture a significant impact over time on mindfulness and anxiety (Raes et al., 2014; Kuyken et al., 2013) and test anxiety outcomes (Weems et al., 2015; Gregor, 2005; Weems et al., 2010; Napoli, Krech and Holley, 2005) as in previous studies evaluating MBIs in schools. However, post-intervention emotional changes were captured in the qualitative data.

The findings from this research study contribute to and build on existing research in the field of MBIs, in order to provide therapeutic targeted support for young people experiencing anxiety, particularly in relation to exams and school pressures. The study builds on awareness of the feasibility of mindfulness for young people experiencing anxiety, particularly in relation to exams within school settings, and contributes to knowledge surrounding factors affecting sustainability of mindfulness techniques.

The study investigated both the facilitating factors to the programme's effectiveness, and conversely, the perceived obstacles to student engagement and intervention effectiveness, including course content, length and timing of sessions, peer and adult support, external factors and home practice. This research explored factors contributing to the implementation and effectiveness of a mindfulness-based intervention designed to target test anxiety. It provides implications and suggestions for future research, in order to further inform EP practice of therapeutic interventions which support young people's emotional health and promote their potential to achieve.

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## Appendices

### Appendix One: Information Sheet for Young People

#### RESEARCH INFORMATION SHEET

**Evaluating the effectiveness of a mindfulness-based intervention for exam-related anxiety in a secondary school setting.**



**Leading education  
and social research**  
Institute of Education  
University of London

**Start Date:** Start of Spring Term 2015    **Anticipated End Date:** End of Autumn Term 2015

#### Information for Student Participants

**Please will you help with my research?**



I would like to invite you to take part in my research, and you should only take part if you want to. Before you decide if you would like to take part, it is important for you to read the following information carefully. Please ask questions if anything is not clear, or if you would like some further information.

#### **What is the research about?**

This project aims to find out about whether attending a mindfulness-based group can help young people who are experiencing some difficulties in school to develop ways of coping with their anxiety and stress.

## **What will happen if we take part?**

I will be collecting data from young people who take part in the project at different times throughout the intervention and afterwards. Informed consent will be sought from parents and young people prior to the data collection process.

- I will be asking young people to complete some questionnaires in a session approximately one week before the intervention, one week after the four-week programme and in a follow-up session six weeks after the intervention, so that I can assess how helpful the programme has been for you.
- I will also be conducting some interviews at the follow-up stage after the intervention with a selection of young people who participated to find out about their perceptions of the programme, and how the mindfulness techniques have affected them.

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

- A brief summary about the group findings arising from the research will be available once the researcher has collected information from everyone taking part.
- The findings will also be written up into a report as part of a doctoral thesis.
- Any data collected will be completely anonymous and will be collected and stored in accordance with the Data Protection Act 1998.
- Participants can withdraw from the project at any time without providing a reason.
- All participants will be assigned a code when reporting the findings to ensure that any information provided remains anonymous and you will not be identifiable in any way in the research report.
- You can withdraw any information/data that you have provided at any time prior to its inclusion in the final report.

It is up to you if you decide to take part. If you are happy to take part in the research, please inform your school at the same time as signing up to the Mindfulness group intervention.

Please contact me on the e-mail address below if you have any queries regarding the research.

Sophie Casson

Institute of Education

**Email:** [scasson@ioe.ac.uk](mailto:scasson@ioe.ac.uk)

**Thank you for taking the time to read through this information sheet.**



## **Appendix Two: Information Sheet for Parents**

### **RESEARCH INFORMATION SHEET**

**A mixed methods pilot study evaluating the effectiveness of a  
mindfulness-based intervention for exam-related anxiety in a secondary  
school setting.**

**Start Date:** Start of Spring Term 2015

**Anticipated End Date:** End of Autumn Term 2015

#### **Information for Parents**

#### **Please will you help with my research?**

I am a Trainee Educational Psychologist undertaking a doctoral professional training course in Educational, Child and Adolescent Psychology at the Institute of Education (IoE) and work as a Trainee Educational Psychologist in the London Borough of X. Over the next 18 months I will be undertaking a research project as part of my doctoral thesis in order to fully qualify as an Educational Psychologist.

#### **Why is this research being done?**

A brief 4-week mindfulness-based intervention delivered to young people in Years 10 and 11 who are experiencing exam-related anxiety, is currently being offered to Secondary Schools in the borough. The intervention is based on mindfulness techniques and draws upon Cognitive Behavioural Therapy principles, and it is hoped that it will help young people to develop coping strategies and manage their anxiety in relation to their upcoming exams.

If your child is part of the group intervention delivered in the school by your Educational Psychologist (EP), this research is intended to run alongside the programme and evaluate its effectiveness.

**The aim of the project is to provide an evaluation and exploration of:**

- The effectiveness of a mindfulness-based intervention to reduce feelings of anxiety and stress, particularly in relation to exams.
- The extent to which a targeted brief mindfulness-based intervention increases emotional well-being, attention and focus of young people undertaking exams.
- The factors that act as barriers or contribute to young people's ability to use these mindfulness techniques.
- The feasibility and effectiveness of Educational Psychologists' delivering such interventions in schools as part of their practice.

### **Who will be in the project?**

- Young people in Years 10 and 11 experiencing exam-related anxiety and stress.
- School staff (such as pastoral staff, form tutors and Head teachers) that are willing to be interviewed regarding their perceptions about the feasibility and effectiveness of EPs' delivering mindfulness-based interventions in schools.

### **What will happen during the research?**

I will be collecting data from your son/daughter at different times throughout the intervention and afterwards. Informed consent will be sought from all parents and young people prior to the data collection process.

- I will be asking your son/daughter to complete some questionnaires in a session approximately one week before the intervention, one week after the four-week programme and in a follow-up session six weeks after the intervention, so that I can assess how helpful the programme has been for the young people in the groups.
- I will also be conducting some interviews at the follow-up stage after the intervention with a selection of young people to ascertain their perceptions of the programme, and how the mindfulness techniques have affected them.
- A sub-sample of willing school staff (e.g. pastoral staff, Head teacher, form tutors) will also be approached to be interviewed regarding their perceptions of EPs' delivering such programmes in their schools, and explore both the potential benefits to the young people's emotional well-being, and to adopting a mindful school approach and ethos.

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

- A brief summary about the group findings arising from the research will be available once I have collected information from everyone taking part.
- The findings will also be written up into a report as part of my doctoral thesis.

- Any data collected will be completely anonymous and will be collected and stored in accordance with the Data Protection Act 1998.
- Participants can withdraw from the project at any time without providing a reason.
- All participants will be assigned a code when reporting the findings, and will remain anonymous and will not be identifiable in any way in the research report.

If you're happy for your child to take part, then you will be able to withdraw at any time and you do not need to give a reason. This will not affect your child's participation in the intervention group.

The EP delivering the intervention and I will be in contact with you to check that you are happy with your child's participation in both the intervention and the research, and to answer any queries that you may have. Your contact details will only be used for communication purposes regarding the Mindfulness group and will not be shared in any way.

Please contact me on the e-mail address below if you have any queries regarding the research.

Many thanks for your support.

Sophie Casson  
Trainee Educational Psychologist  
Institute of Education  
**Email:** [scasson@ioe.ac.uk](mailto:scasson@ioe.ac.uk)

**Thank you for taking the time to read through this information sheet**

## **RESEARCH INFORMATION SHEET**

**A mixed methods pilot study evaluating the effectiveness of a  
mindfulness-based intervention for exam-related anxiety in a secondary  
school setting.**

**Start Date:** Start of Spring Term 2015

**Anticipated End Date:** End of Autumn Term 2015

### **Information for Schools**

#### **Please will you help with my research?**

I am a Trainee Educational Psychologist undertaking a doctoral professional training course in Educational, Child and Adolescent Psychology at the Institute of Education (IoE) and work as a Trainee Educational Psychologist in the London Borough of X. Over the next 18 months I will be undertaking a research project as part of my doctoral thesis in order to fully qualify as an Educational Psychologist.

#### **Why is this research being done?**

A brief 4-week mindfulness-based intervention targeted to young people in Years 10 and 11 who are experiencing exam-related anxiety, is currently being offered to Secondary Schools in the borough. The intervention is based on mindfulness techniques and draws upon Cognitive Behavioural Therapy principles, and it is hoped that it will help young people to develop coping strategies and manage their anxiety in relation to their upcoming exams.

If you decide to have the intervention delivered in your school by your Educational Psychologist (EP), this research is intended to run alongside the programme and evaluate its effectiveness.

**The aim of the project is to provide an evaluation and exploration of:**

- The effectiveness of a mindfulness-based intervention to reduce feelings of anxiety and stress, particularly in relation to exams.
- The extent to which a targeted brief mindfulness-based intervention increases emotional well-being, attention and focus of young people undertaking exams.
- The factors that act as barriers or contribute to the sustainability of the mindfulness techniques.
- The feasibility and effectiveness of Educational Psychologists' delivering such interventions in schools as part of their practice.

### **Who will be in the project?**

- Young people in Years 10 and 11 experiencing exam-related anxiety and stress.
- School staff (such as pastoral staff, form tutors and Head teachers) that are willing to be interviewed regarding their perceptions about the feasibility and effectiveness of EPs' delivering mindfulness-based interventions in schools.

### **What is the inclusion/exclusion criteria for the groups?**

**Exclusion Criteria:** If young people are currently receiving a tier 3 CAMHS intervention. Participants will be experiencing sub-clinical levels of anxiety.

**Inclusion Criteria:** If a young person is willing to attend; has a need for anxiety and emotional well-being improvement, particularly in relation to exams; and has the ability to participate in a group.

### **What will happen during the research?**

I will be collecting data from all those who take part in the project at different times throughout the intervention and afterwards. Informed consent will be sought from parents and young people prior to the data collection process.

- I will be asking the young people to complete some questionnaires in a session approximately one week before the intervention, one week after the four-week programme and in a follow-up session six weeks after the intervention, so that I can assess how helpful the programme has been for the young people in the groups.
- I will also be conducting some interviews at the follow-up stage after the intervention with a selection of young people to ascertain their perceptions of the programme, and how the mindfulness techniques have affected them.
- A sub-sample of willing school staff (e.g. pastoral staff, Head teacher, form tutors) will also be approached to be interviewed regarding their perceptions of EPs' delivering such programmes in their schools, and

explore both the potential benefits to the young people's emotional well-being, and to adopting a mindful school approach and ethos.

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

- A brief summary about the findings arising from the research will be available once I have collected information from everyone taking part.
- The findings will also be written up into a report as part of my doctoral thesis.
- Any data collected will be completely anonymous and will be collected and stored in accordance with the Data Protection Act 1998.
- Participants can withdraw from the project at any time without providing a reason.
- All participants will be assigned a code when reporting the findings, and will remain anonymous and will not be identifiable in any way in the research report.

If your school is happy to take part in the research and the intervention, please inform your link EP at the same time as organising for the intervention to be delivered.

Please contact me on the e-mail address below if you have any queries regarding the research.

Many thanks for your support.

Sophie Casson  
Trainee Educational Psychologist  
Institute of Education  
**Email:** [scasson@ioe.ac.uk](mailto:scasson@ioe.ac.uk)

**Thank you for taking the time to read through this information sheet**



**Appendix Four: Young Person Consent  
Form**



**Leading education  
and social research**  
Institute of Education  
University of London

Thank you for taking the time to read the project information sheet and for agreeing to take part in the research. If you have any questions arising from the information sheet, please ask the researcher before you decide whether to join. Before contacting you, the researcher will have sought permission from your parent/guardian and school for you to participate in the project.

- I have read the information sheet and the project has been fully explained to me. I have had the opportunity to ask any questions, and discuss any queries about the project.
- I understand what this research study involves.
- I understand that I am able to withdraw from the project at any time without giving a reason.
- I know who I can contact in school if I have any further queries about the project.
- I give my consent for the processing of my personal information for the purposes of this study. I understand that an audio recording will be made of an interview with me, if I am taking part in the interview stage. I understand that all information will be treated as strictly confidential and will be abided by in accordance with the terms of the Data Protection Act 1998.
- I understand that the information that I have supplied will be published in a report, and it will not be possible to identify me.
- I consent to the collection of information from my parents and school regarding how I am getting on.

I give my permission to take part in the research study, to be asked about:

- 1) My personal experiences of anxiety and in relation to exams.
- 2) My experiences regarding the Mindfulness programme.
- 3) My perceptions regarding the effectiveness of such programmes carried out in schools.

YES

NO

Name of School .....
----------------------

Year at School (Please circle):    Year 10        Year 11

Name .....

Signature .....                      Date  
.....

**Contact Details:**

Phone .....                      Email  
.....

Please give a preferred time/day for interview (if applicable):

.....THANK YOU FOR TAKING  
PART.....

If you have any queries regarding the research please contact Sophie Casson:  
Email: [scasson@ioe.ac.uk](mailto:scasson@ioe.ac.uk)

**Appendix Five: School Staff Consent Form**



**Leading education  
and social research**  
Institute of Education  
University of London

Thank you for taking the time to read the project information sheet. Before contacting you, the researcher will have sought permission from the school for you to participate in the project. I would like to invite you to take part in the interview stage of the research.

- 1) The individual interview will be arranged at a time that is convenient for you following the Mindfulness group programme and will take approximately 40 minutes.

The interview will be audio recorded in order to support the analysis of the data. All information gathered will be anonymised and is strictly confidential to the IOE research project team. It will not be possible to identify individual members or schools. You have the right to withdraw from the project at any time and for any reason. Any data collected will be stored in accordance with the Data Protection Act 1998.

I give my permission to be interviewed by the researcher about:

- 4) My thoughts regarding the potential beneficial or prohibiting elements associated with young people taking part in the programme.
- 5) My perceptions regarding the effectiveness and feasibility of such programmes being delivered by Educational Psychologists in schools.

YES

NO

Name of School .....
Role.....
Name .....

Signature .....Date .....

**Contact Details:**

Phone .....

Email .....

Please give a preferred time/day for interview:

.....THANK YOU FOR TAKING  
PART .....

If you have any queries regarding the research please contact Sophie Casson:  
Email: [scasson@ioe.ac.uk](mailto:scasson@ioe.ac.uk)

## Appendix Six: Parent Opt-Out Consent Form



Leading education  
and social research  
Institute of Education  
University of London

Dear Parent/Carer,

Thank you for taking the time to read the project information sheet. Before contacting you, the researcher will have sought permission from the school for the research to be carried out, which involves evaluating the group intervention which your child has been selected to take part in. I would like to invite your son/daughter to take part in this research, involving:

- 2) Questionnaires which will be administered at 3 different time points: One week before the Mindfulness programme, one week after the 4-week programme and 6 weeks later at follow-up.
- 3) An optional individual interview which will be arranged at a time that is convenient at follow-up and will take about 35/40 minutes.

A sub-set of young people and staff will be interviewed, so your child is under no obligation to be interviewed, as it is a voluntary stage of the research. The interview will be audio recorded in order to support the analysis of the data. All information gathered will be anonymised and is strictly confidential to the IOE research project team. It will not be possible to identify individual members or schools. You have the right to withdraw from the project at any time and for any reason. Any data collected will be stored in accordance with the Data Protection Act 1998.

Young people will be asked to give their views about:

- 6) The potential beneficial or prohibiting elements associated with young people taking part in a Mindfulness-based programme.
- 7) His/her perceptions regarding the effectiveness and feasibility of such programmes being delivered by Educational Psychologists in schools.

If you **DO NOT** wish for your son/daughter to take part, please sign the slip below and return it to the school as soon as possible.

Please feel free to contact me if you require any further clarification or information.

**Sophie Casson**

**2<sup>nd</sup> Year Trainee Educational Psychologist**

**Institute of Education**

**Email: [scasson@ioe.ac.uk](mailto:scasson@ioe.ac.uk)**

**Re. Intervention Programme**

I DO NOT wish my child..... (child's name) to take part in this research.

Your Name .....

Signature .....Date .....

## Appendix Seven: Young Person Semi-Structured Interview Schedule

### Key Interview Themes:

- Perceptions of programme components and delivery.
- Outcomes associated with participation.
- Sustainability of mindfulness-based techniques.
- Positive and challenging/negative aspects of the programme.
- Effectiveness and feasibility of EP intervention delivery.

### Introduction and Scene Setting:

Thank you very much for agreeing to be interviewed to be part of my research project. The purpose of this interview today is to explore your perceptions of taking part in the sessions – I would like to know what the experience was like for you.

Your responses will be confidential and your perceptions will remain anonymous.

Depending on the amount of information that you are happy to provide, the should take no longer than approximately 30/45 minutes.

Research Questions/ Themes	Interview Question	Prompts
<b>RQ 1:</b> Does the mindfulness-based intervention reduce feelings of anxiety, particularly in relation to exams?	<b>1.</b> Have the mindfulness techniques helped you to manage your feelings of stress and anxiety and if so, in what ways?	Different contexts.
	<b>2.</b> Have the mindfulness techniques helped you in relation to your exams, and if so, in what way?	Particular activities that you found enjoyable and accessible?
	<b>3.</b> Are there particular aspects of mindful practice that will help you to cope better in relation to exams, and, if so,	

	could you please explain what they are?	
	<b>4.</b> Would you recommend mindfulness to others as a useful coping strategy/practice to help with exams, and could you please give your reasons why?	
	<b>5.</b> Which aspects of the programme do you feel could be improved?	
	<b>6.</b> Were there particular aspects of the programme that you would have liked to have learnt more about?	
<b>RQ 2:</b> Does the mindfulness-based intervention increase emotional well-being, attention and focus of young people?	<b>7.</b> In which ways do you feel that you've become more aware of your thoughts and feelings in relation to what you do/how you act?	Are you more aware of what you're thinking/feeling?  Are you more conscious of thoughts and sensations?
	<b>8.</b> How would you describe your attention levels in class and in exams following participation in the group?	Particular helpful strategies?
	<b>9.</b> How would you describe your overall feelings and emotions now that you have attended the weekly intervention group?	
<b>RQ 3:</b> What factors inhibit or contribute to the sustainability of mindfulness techniques?	<b>10.</b> What do you think has helped you to maintain continued practice of mindfulness techniques, if applicable?	
	<b>11.</b> What elements have prevented your use of the techniques learnt during the programme, if applicable?	
	<b>12.</b> Other than the mindfulness group, can you please explain if there has been anything else happening that may have either helped or exacerbated your stress and anxiety levels?	E.g. Any changes in personal/home life.
	<b>13.</b> How did you find practising at home and using the worksheets provided?	



<p><b>RQ4:</b></p> <p>What is the perceived level of feasibility and effectiveness of Educational Psychologists' delivering such interventions in schools as part of their practice?</p>	<p><b>14.</b> Have you noticed any beneficial effects of this intervention both on you and the other important people in your life? If so, would you recommend taking part in this group to a friend or sibling who may be experiencing anxiety in school?</p>	<p>Changes in yourself and others?</p> <p>Aspects of the programme that have helped you to make changes?</p>
	<p><b>15.</b> How did you feel when attending weekly group sessions run by an Educational Psychologist? Were you comfortable being part of a group? Were there any effects that you did not anticipate?</p>	<p>Beneficial or unhelpful?</p> <p>Comforting to be with others?</p> <p>Able to say what you really felt?</p> <p>How was the experience?</p>
	<p><b>16.</b> Based on your experience, is there anything that you would add or change to the delivery and content of the programme?</p>	
	<p><b>17.</b> What were your expectations at the start of the course, and do you feel that they've been met?</p>	<p>Achieved goals and targets set at the start?</p>
	<p><b>18.</b> What other therapeutic interventions are you aware of that are currently available in schools?</p>	
	<p><b>19.</b> Would it be helpful to run mindfulness-based programmes more regularly in schools, and if so, can you please explain your reasons why?</p>	<p>Anticipated hopes and expectations.</p>

Many thanks for your help and for taking part in my research.

## Appendix Eight: School Staff Semi-Structured Interview Schedule

### Key Interview Themes:

- Perceptions of programme components and delivery.
- Outcomes associated with young person participation.
- Sustainability of mindfulness-based techniques.
- Positive and challenging/negative aspects of the programme.
- Effectiveness and feasibility of EP intervention delivery.

**Introduction and Scene Setting:** Thank you very much for agreeing to be interviewed to be part of my research project. The purpose of this interview today is to explore your perceptions of the young person's overall emotional well-being after taking part in the sessions – I would like to know your views. Your responses will be confidential and your perceptions will remain anonymous. Depending on the amount of information that you are happy to provide, the interview should take no longer than approximately 30 minutes.

Interview Questions
1. In which ways do you feel that the programme may have helped X's overall emotional well-being, and ability to focus and attend lessons and exams?
2. Have you noticed any changes in how X copes with exams, and if so in what way?
3. How would you rate the programme in terms of effectiveness, and can you please elaborate?
4. What elements of the programme do you feel could be improved?
5. What were your initial thoughts regarding this intervention when you first learnt of it? Do you have any concerns or questions?
6. How do you think that young people can sustain an interest and practice of mindfulness-based techniques?
7. How do you feel it might benefit teachers to adopt a mindfulness-based approach in their classrooms, and if so please explain why?
8. Would you recommend this intervention to other students and teachers, and if so, for what reasons?
9. What do you think might be some of the barriers to the programme's effectiveness?
10. In what ways do you think that school can further support the effectiveness of the programme?
11. Would you say that therapeutic interventions such as this are an effective and valuable use of EP time in schools?
12. What are your thoughts regarding mindfulness-based programmes in schools and their scope and frequency?

## Appendix Nine: T1 Demographic Questionnaire

### BACKGROUND QUESTIONNAIRE – T1

Confidential

ID number: \_\_\_\_\_



#### About You

1. What is your gender? Male / Female (please circle)
2. What is your age? \_\_\_\_\_ (years)
3. What year at school are you in? Year 10 \_\_\_\_\_ Year 11  
\_\_\_\_\_ (please tick)
4. How would you describe your ethnicity?

- |  |  |
|--|--|
| <input type="checkbox"/> White British                 | <input type="checkbox"/> Mixed White & Asian |
| <input type="checkbox"/> White Other                   | <input type="checkbox"/> Asian – Pakistani   |
| <input type="checkbox"/> Black British (Born in UK)    | <input type="checkbox"/> Asian – Bangladeshi |
| <input type="checkbox"/> Black British / Caribbean     | <input type="checkbox"/> Asian – Indian      |
| <input type="checkbox"/> Black British / African       | <input type="checkbox"/> Chinese             |
| <input type="checkbox"/> Mixed White & Black Caribbean | <input type="checkbox"/> Other:              |
| <hr/>  |  |
| <input type="checkbox"/> Mixed White & Black African   |  |

5. What phrase best describes your family?

Two Parent

- Single Parent**
  
- Step/Blended Family**
  
- Other:** \_\_\_\_\_

**6. What is your parent/guardian's highest level of education?**

- Left school before 16 years**
- University course not completed**
- Left school at 16**
- Professional qualification without degree**
- Further secondary; 16-18 years**
- BTech/NVQ levels 1-3**
- Degree**
- Other:** \_\_\_\_\_

**7. Are you entitled to free school meals?**

- Yes**
- No**

**8. Have you ever suffered from mental health difficulties?**

**Appendix Ten: T2 and T3 Post-Intervention and Follow-Up Questionnaire**

**Confidential**

**ID number:** \_\_\_\_\_



**1. How useful overall do you feel the programme has been on a scale of 1-10?**

.....

**2. How often have you completed mindfulness-based practice?**

- Daily**
- 1-2 times per week**
- 3-4 times per week**
- 5-6 times per week**
- Weekly**
- Rarely**

**3. In relation to exams, when have you completed mindfulness-based practice?**

- When you noticed you were anxious**
- Before an exam**
- During an exam**
- After an exam**

**4. In which area have you found the mindfulness techniques to be most useful? Please scale between 1 and 10 for:**

**Emotional Well-being** .....  
(How you feel; e.g. happy or confident)

**Acceptance** .....

**Focus (directed attention on a task)** .....

**Attention (concentration or listening)** .....

**Compassion for Self and Others** .....

**Emotional Self-Regulation** .....  
(Ability to understand and manage emotions)

**5. Where do you feel your level of anxiety was on a scale of 1-10 before the first session?**

.....

**6. Where do you feel your level of anxiety is on a scale of 1-10 now?**

.....

**7. Have you completed the homework activities?**  **Yes**

**No**

**8. Which strategies/techniques are you currently using?**

.....

**Appendix Eleven: Programme Fidelity Checklist**  
**MINDFULNESS GROUP - Programme fidelity checklist for group leaders.**

As the effectiveness of this intervention is being researched, it is important to try to ensure an appropriate level of programme fidelity. Please complete the brief checklist at the end of every session – simply place a tick next to each of the key session elements you have covered - and return to Sophie Casson at the end of the intervention so that this information can be considered when analysing the data. If, for whatever reason, you change any of the key aspects of the sessions, please record this and also include in the comments section if any resources other than those provided have been used: this information will contribute to the development of the programme.

Session 1	Session 2	Session 3	Session 4	Follow-up session
Introduction to programme	Mindful practice: eating or breathing	Mindful practice: breathing	Mindful practice: body stretch	Warm-up: rounds
Discussion of stressors	Reflections on home practice	Reflections on home practice	Reflections on practice	Mindfulness practice from CD
Scaling of stress levels now and expected progress	Introduce CBT concept (thoughts-feelings-behaviour)	Fawlty Towers video clip	'Doing schoolwork mindfully' handout	Distribute copies of handout to each pupil
Eliciting behavioural indicators of progress	Illustrate CBT cycle using Kung Fu Panda sheet	Introduction to the concept of helpful and unhelpful thoughts and thoughts being under our own control with practice.	Mindfulness posters	Work through handout, including at least: <ul style="list-style-type: none"> <li>- Past exam experiences</li> <li>- Preparation list activity</li> <li>- One brief mindfulness practice</li> <li>- 1 positive affirmation each</li> <li>- Introduction to Pleasant Events Diary</li> </ul>
Introduction to what mindfulness is	Pupils fill in table for stressor	Creating powerful thought cards	Distribute and explain content of CDs	
Kung Fu Panda clip	'Managing stress' video clip	Mindful listening to music	Any practice from the CD	
Mindful Eating	Breathing practice	Discussion to identify practice over next week		
	Affirmations for practice			Scaling activity
Comments:	Comments:	Comments:	Comments:	Comments:

Dr Jennifer Head – Senior Educational Psychologist

## Appendix Twelve: Mindfulness Group for Year 10 and 11s: Attendance Log

For EP to complete and send to Sophie Casson at the end of the intervention.

Please tick/cross after each session – where a participant misses a session but a catch up session is provided at an alternative time please indicate.

Name	Session 1	Session 2	Session 3	Session 4	Follow-up session

If there are any participants who drop out of the intervention, where possible, please indicate the reason why.



**Appendix Thirteen: Mindfulness Group for Year 10 and 11s: Participant Information**

Pupil name	Reason for inclusion in group	Parent/carer name/s & contact number	Parent consent? (please tick)	Any other current interventions/relevant information (e.g. counselling, CAMHS involvement, diagnosed conditions, etc)	Key contact person in school

## Appendix Fourteen: Kolmogorov-Smirnov Test of Normality for Main Outcome Measures

Measure	Pre (T1)		Post (T2)		Follow-Up (T3)	
	Statistic	Sig.	Statistic	Sig.	Statistic	Sig.
SDQ TOTAL	.19	.11	.21	.07	2.00	.09
SCAS TOTAL	.20	.08	.14	.20	.12	.20
TASC TOTAL	.16	.20	.14	.20	.12	.20
ACQ-C TOTAL	.174	.20	.10	.20	.16	.20
CAMM TOTAL	.12	.20	.19	.15	.13	.20

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## Appendix Fifteen: Example Inter-rater Coding of Transcript

**Participant Interview 1    Participant 015**

1    **Ok, so this is interview one and participant 015. So question one is: Have the**  
 2    **mindfulness techniques helped you to manage your feelings of stress and**  
 3    **anxiety and if so, in what ways?**

4    *Umm yes they have actually. Originally I was rather stressed with exams coming up,*  
 5    *so taking part in the mindfulness has helped me to de-stress, calm myself and*  
 6    *realise that I can become calm in situations like this, so it has helped a lot.*

7    **That's really interesting. And have you found that it's helped you in different**  
 8    **contexts and settings aswell?**

9    *Yeah. If I'm upset about something, uh I'd actually take part and use one of the*  
 10    *techniques, which would instantaneously allow me to, you know, get back to where I*  
 11    *was previously. And it has indeed helped in other contexts aswell, yeah.*

12    **Good, that's good to know.**

13    **Second question: Have the mindfulness techniques helped you in relation to**  
 14    **your exams, and if so, in what way?**

15    *Yeah, so in terms of my exams, I have a lot of stress with impeding subjects that I*  
 16    *have to take part in, so I have to, I do um, breathing exercises, and the listening one,*  
 17    *which allows me to revise and concentrate better. But I'm going off topic here...It put*  
 18    *me back on track, and allows me to revise. It just completely de-stresses me for the*  
 19    *whole situation, yeah.*

20    **Excellent. Are there any other techniques that you found helpful?**

21    *Yeah. I like when you write down what you're thinking and feeling, and how it makes*  
 22    *you feel. The one that was useful aswell was the chocolate eating - it lets you focus*  
 23    *on one particular subject and brings your attention back to where you want it to go.*

24    **So you feel it's helped you to re-focus?**

25    *Umm, yes.*

26    **Excellent. So question three: Are there particular aspects of mindful practice**  
 27    **that will help you to cope better in relation to exams, and, if so, could you**  
 28    **please explain what they are?**

29    *Umm well breathing exercises have helped me with exams, just before, to focus on*  
 30    *my breathing. Slow, calm and de-stress. Because that's the one that had the most*  
 31    *effect on me because it's not difficult and it's an easier way of calming yourself. So*  
 32    *those ones very much helped me in relation to the exams.*

1



That's good. Excellent. Question four: Would you recommend mindfulness to others as a useful coping strategy/practice to help with exams, and could you please give your reasons why?

Yeah I would actually. Because at the moment many young people have lots of stress and their own problems taken in different directions, and mindfulness would indeed allow them to combat these and take them on board and not be crushed by the weight of the stress they're undergoing. I would advise it.

Impact of stress on age group.

Recommendation of programme.

Impact: Stress for YP.

Absolutely. That's really good to know. Question five: Which aspects of the programme do you feel could be improved?

I don't think there are many aspects. Umm...maybe umm other ways, activities you could use to combat stress. You could try each one. But other than that, no I don't believe there are.

Ways to improve programme: Combat stress.

Ok brilliant, that's really good to know. Question six: Were there particular aspects of the programme that you would have liked to have learnt more about?

Umm...mainly ways in which um your body combats stress. The reasons why you feel the way you are. Um that's it.

Ways to improve programme: physiological change/response.

Ok you'd like to know a little more about that. Thank you. Question seven: In which ways do you feel that you've become more aware of your thoughts and feelings in relation to what you do/how you act?

Um since starting Mindfulness, I've actually come to realise I can actually scale how I'm feeling...I've been able to broaden the different feelings I'm undergoing, and actually see how I'm feeling and actually realise it. Because before, prior to it, it didn't really cross my mind, and now I can actually locate why I'm feeling this way, and where it is...the reasons.

Increased Recognition of feelings.

Change: Empowering.

Thank you. So do you feel like you're more conscious of your thoughts and your bodily sensations?

Yeah, I mean since the Mindfulness, for once I've actually written down the reasons, well what happens when I do feel anxiety or stress. It never used to really cross my mind, and now I'm aware of it, and I can see why I'm doing it.

Increased sense of control + awareness of stress/anxiety.

Ok great. Question eight: How would you describe your attention levels in class and in exams following participation in the group?

Um well now I can actually focus my attention, because usually I was distracted quite easily...single sounds, or if I'm tired. But now with Mindfulness I can focus it on a particular frame of mind, which is to work. I don't now have any third party distractions.

Change: increased focus + decreased distractions.

That's brilliant. Did you find that it was quite soon after you'd learnt the skill? Did you find that you were able to put the skill into practice quite quickly?

Yes. **Strongly actually**, the mindfulness activities, **I became able** to do it. I've seen a **quick effect**. - Instant Impact ~ Immediacy.

Oh that's brilliant. Do you find that you're able to concentrate in a lesson in its entirety now, or if you find your mind wondering, are you able to bring it back?

Yes I'm able to **bring it back**, so yes. - Increased focus.

Question nine: How would you describe your overall feelings and emotions now that you have attended the weekly intervention group?

Well now they're **in my ability to control**. So I've now more or less got the feeling to control, if I can decide and if I'm going to allow them to stay or not. So yeah it has um, since Mindfulness, it has helped me um to realise my abilities over how I'm feeling, how I'm **able to combat them**. - Ability to combat stress/anxiety. - Change: Empowering. - Increased sense of control.

That's brilliant. Do you feel a particular emotion now that perhaps you didn't since before the group?

Yes **relaxation**. - Change: Acquiring new skills/techniques.

So in turn has that made you feel a particular way? That maybe the stress or anxiety maybe prevented you from feeling before the group?

**Pleasure** really.

Question ten: What do you think has helped you to maintain continued practice of Mindfulness techniques, if applicable?

**The actual every day. Having meaning to work, meaning to concentrate for longer periods of time...which has actually reminded me when I'm off topic that I should be doing Mindfulness to bring me back...So that's helped me to continue doing it.** - Renewed outlook - Bringing meaning. - Increased focus.

Is there anything else?

Umm mainly the continuation of stress I have...So if I'm feeling lots of stress, which is quite often, my mind now automatically thinks of Mindfulness during stress and realises that I'm able to combat this, and using Mindfulness techniques my stress won't remain. - Mindfulness: Ability to combat stress.

Question eleven: What elements have prevented your use of the techniques learnt during the programme, if applicable.

Umm think about...One time I had a mock straight after, so I couldn't really remove that from my mind the first week before I became used to it...So it caused more a **Prevention/ blocks to mindful practice: exam timings.** 3

less a block before becoming completely mindful to how I'm feeling and relaxed...that infringed it.

- Prevention: Proximity to exams.

Yes I understand that must be tricky when you've got something else on your mind that's about to happen. Is there anything else in other elements of your life that might have prevented the practice?

I was able to become relaxed and focus my attention, but it wasn't as easy as it was, as I might have been upset, or have other emotions towards something, other things in my personal life cause it to be tricky...But I was able to, for that, focus and become completely mindful.

Prevention of practice: personal factors.

Is there a particular emotion that you find helpful to engage in Mindfulness practice?

Umm well yeah if I'm annoyed or regretful, I tend to do it then. That's the time that I'm needing it most and it's better.

- Recognition of suitable time to engage in Mindfulness.

Question twelve: Other than the mindfulness group, can you please explain if there has been anything else happening that may have either helped or exacerbated your stress and anxiety levels?

Umm simple activities that are common and prominent in my life, and allow me to calm myself and not become overwhelmed by anxiety or stress.

Ability to combat stress/anxiety.

So aside from exams, as they're obviously they're a key factor for you at the moment, is there anything else that's been happening in your life, so any changes in your personal or home life that may have affected your ability to engage with Mindfulness techniques?

Yes there's been quite a few occasions when I've had personally, I've had issues with various people, and they've taken over my mind and not allowed me to concentrate as easily.

- Prevention of practice: personal factors. ↳ Relationships

Sure. So relations have been a factor. And do you find you've been able to engage with your Mindfulness techniques more during those times or less?

A bit of both. I can, I do it more when I'm feeling this way, when it's tricky I'm able to do it. So yeah.

Use of techniques.

That's great thank you. Question thirteen: How did you find practising at home and using the worksheets provided?

It's helpful, as they guided me through it. The EP allowed me to see what I needed to do and the techniques...so they were a big factor in that and were useful to allow me do it at home.

Home practice: EP facilitation.

And did they allow you to feel prepared for the next session?

Yes.

And were they enjoyable?

Yeah definitely. Enjoyable really because, you know, it allows me to have some time for myself. So yeah I enjoyed doing them. - Enjoyment of home practice.

And would you complete them on your own?

On my own yeah.

So they didn't so much feel like homework? Did they feel like an activity you wanted to do?

Yeah an activity I wanted to do.

Ok yeah, that's great to know. Question fourteen: Have you noticed any beneficial effects of this intervention both on you and the other important people in your life? If so, would you recommend taking part in this group to a friend or sibling who may be experiencing anxiety in school?

Umm yeah I mean, it allows me to be cheerful, more confident, less hopeless, less you know regretful. So yeah it does help a lot, and people around me, because I'm a less grumpy person. So I would recommend it to someone else feeling this way. Change: Recognition of change in emotions.  
→ Recommending to others.

Ok that's great. Brilliant. So do you feel from your experience, that you would then be able to pass that on to others if you identified that someone else that you were close to was experiencing anxiety?

Yes I would. I would talk them through it and show them the techniques. - Ability to pass on/share techniques.

Oh that's brilliant, that's great.

Are there particular aspects of the programme that have helped you to make these changes? Or just generally the practice?

Just the general practice. Writing down how I'm feeling and the sensations I feel. Those are what allowed me to do that yeah. - Link between thoughts, feelings + actions.

Question fifteen: How did you feel when attending weekly group sessions run by an Educational Psychologist? Were you comfortable being part of a group? Were there any effects that you did not anticipate?

Yeah I was actually very comfortable. It's not a stressful environment, it's very relaxed. I expected everything from it really, and it's helped me a lot. I wasn't daunted meeting an Educational Psychologist. - Suitability of group intervention.

Obviously with your group, you were the only one that continued. But initially how was the experience for you when you were originally part of a bigger



group? Did it seem helpful or prevent you from engaging in the first session?  
How was the experience for you?

I believe that one-to-one would be more closely relatable, closely monitored... a bigger group is harder to reach everyone individually, however it would be just as helpful. There was not really much difference with being in a group, or an individual.

- Reflections on group dynamic.

Question sixteen: Based on your experience, is there anything that you would add or change to the delivery and content of the programme?

No nothing really, no.

- Content with programme.

Particularly aspects that may be stronger, certain elements that you enjoyed perhaps and could be built on? Any other general thoughts you'd like to add?

Mainly the hot cross bun activity could be in more in depth, studied more. So look at it, when you do it, discuss more why those feelings might occur, and what affect that has on you. Delve deeper why the person is experiencing these feelings.

Improvement to techniques: deeper understanding.

Question seventeen: What were your expectations at the start of the course, and do you feel that they've been met?

Goals + expectations.

Umm my expectations have actually been exceeded. So I thought it'd help me to calm a bit, not feel as pressured. However it's allowed me to eradicate those feelings for periods of time, which I didn't think I could do.

Impact: Effectiveness of intervention.

Brilliant, that sounds very positive. So do you feel like you've achieved the goals and targets that you set at the start?

Yes definitely.

Question eighteen: What other therapeutic interventions are you aware of that are currently available in schools?

Umm I think it's one-to-one pastoral, which is the only one I know of. Which allows you to talk to someone, allow you to confess. I'm aware of who I can speak to in school.

- Knowledge of other interventions in school.

Any other interventions you're aware of that may be delivered by a member of school staff or by an external professional?

No I don't really.

Question nineteen: Would it be helpful to run mindfulness-based programmes more regularly in schools, and if so, can you please explain your reasons why?

→ Impact: Stress for YP.

\* Yeah I mean, especially for kids of our age, all around the UK, it should be more or less essential. So many people hide feelings and keep problems to themselves, and

↳ Coping mechanisms/ Strategies.

Recognition of stress/anxiety.

it eventually breaks them, and you need something like mindfulness to allow them to release it, to calm. → Impact: Mindfulness.

Absolutely. And when you say 'breaks' them, are you able to explain a little more?

Change: Reflection prior to programme/ anxiety -

→ Causes them to not be themselves anymore. Causes them to become released, not therapeutically, more that all their emotions become tangled within each other, and they are unable to go past the point of where they can become who they once were.

- Recognition of impact of anxiety.

That's really interesting. Do you think Mindfulness may have a particular benefit in terms of the pressure surrounding exams, choices and future steps?

Impact of exam stress on age group.

The pressure that they undergo is far too much, and they need structure that they can rely on, to allow them to just not feel pressure anymore, and mindfulness can do that, because it does help a lot. So yeah it should be done more regularly in schools.

→ Positive impact: Schools.

Is there anything else you'd like to add or expand on?

Not really no. I've said everything I wanted to.

Thank you so much for your participation in the research.

## Appendix Seventeen: Staff Coded Transcript

### 1 Staff Interview 1

2 This is staff interview number 1. In which ways do you feel that the programme may  
3 have helped the group or a particularly young person's, overall emotional wellbeing  
4 and ability to focus and attend lessons and exams?

5 I think all of the girls have improved since starting the course. I think they've got more skills - Positive  
6 and techniques that they're able to go into lessons or into assessments and use the change.  
7 techniques they've been taught to calm themselves down before having to leave the room or  
8 having to find a member of staff to help sort of calm them down. ~ Development of coping strategies/  
techniques.

9 Anything else you wanted to add? Any other ways you think it might have been  
10 helpful?

11 I know that one of the girls wasn't too sure about the group to start with and asked questions  
12 about being able to drop out. And I think she's one of the ones that's found it the most - Preconceptions  
13 helpful. So I think it's sort of changed her perceptions of what the course was going to be. of course.

14 I was going to ask you was there anything in particular you think may have helped  
15 that. Was it just generally finding out about the course as she went along and...?

16 Yeah, I think it's being able to practise those mindfulness techniques...and yeah, having a  
17 \* bank of techniques to use when they go out into school or exams. ~ Equipping YP with techniques.

18 Have you noticed any changes in how the young people or a particular young person  
19 copes with exams, and if so in what way?

20 So I've heard about students using the techniques before they go into exams. Or one of the  
21 girls, before she went into a music recital, used some of the breathing techniques to help  
22 calm herself before going on and playing. So yeah, I think it's been quite beneficial in helping  
23 them day-to-day. \* use of techniques in daily stressful situations.

24 That's good to know. How would you rate the programme in terms of effectiveness  
25 and can you please elaborate?

26 I think it's been really good. When we've done exam groups in the past there hasn't been as ~ Effective-  
27 much practical help. It's been a lot of theory based. Whereas the mindfulness, they've had a ness of  
28 lot of skills and being able to practise those skills in the sessions and having things like the programme.  
29 cds to take home and practise them at home. \* ~ Practical aspects of programme: Beneficial.

30 Is there anything else that you wanted to add on the effectiveness of the group?

31 I just think it's been a really good course. - Effectiveness of programme.

32 What elements of the programme do you feel could be improved?

33 I've been trying to think about this question (laughing). Because we've done it before, I think  
34 it's really improved on the exam anxiety course we did before with X, so...I can't think of  
35 anything. I really like the fact that they're practising the techniques in the thing. - usefulness of practical  
techniques.

36 How does it differ from that first course? Is it mainly the practical activities?

37 Yeah. So the first course was a lot about theory and a lot about how it affects their feelings  
38 and behaviours. But not a lot on what they can do to change those feelings or behaviours.  
39 Whereas this one, I think it's been a lot more focused on bringing the focus back to them and  
40 calming themselves down and then carrying on with things. So I think it's already improved  
41 from our first...anxiety course. → Beneficial aspects of course: Coping strategies.

42 **What were your initial thoughts regarding this intervention when you first learnt of it,  
43 and did you have any concerns or questions?**

44 I'd only done a little bit of mindfulness so I wasn't sure about the effectiveness. And...with it  
45 being Year 10s...I knew with the...when we did it with Year 11s it was too late. But with the  
46 Year 10s I was worried it would be a bit early. But actually I think it's been a really good time  
47 to do it, and I think the techniques have been really good. - Timing of group.

48 **So you think this time in school is actually ideal in terms of GCSEs in the next year.**

49 Yeah.

50 **When you say it might be too late for Year 11s, do you mean just in the school year, or  
51 because you think it's better to learn these practices as early on as possible?**

52 I think...for this...well for this school we have a lot of controlled assessments in Year 10,  
53 particularly with the exams being linear now. So they do a lot of their exams at the end of  
54 Year 11, they have a lot of assessments in Year 10 to make sure they're on track. So a lot of  
55 the girls were displaying anxiety earlier on, so the start of Year 10. And last...year we did the  
56 exam anxiety course in Year 11 and I think it was a little bit too late for them. - Timing / Year of

57 **So from their perspective and yours, you don't feel it was very effective.**

programme to aid effectiveness.

58 Yeah.

59 **They weren't able to kind of apply the techniques as much.**

60 Yeah.

61 **OK. Why do you think that might be? Just because it was...**

62 I think they were more focused on trying to do the exams and...so worried about doing them  
63 that they couldn't really... Like I said, there wasn't any techniques given to help calm them  
64 down before. So I think yeah, it makes them think about themselves. ~ Personal reflection.

65 **How do you think the young people can sustain an interest in practice of mindfulness  
66 based techniques?**

67 I think it would be good to have some further follow-up sessions for the girls that have done  
68 the group. And also to run more groups for Year 10...before the end of the year. Or maybe in continued  
69 the very first term of Year 11. Just to keep it about... → Ways to improve  
MBIs in schools.

70 **Keep it going.**

71 Yeah.

72 **Are there any other factors that you think might help them to sustain those practices?**

- 73 I think maybe if they could...bring it into school, maybe in tutorials, maybe when they start  
 74 talking about study skills...bringing some mindfulness techniques into tutorials it would be  
 75 good. Or...bringing them up in assemblies. ~ Accessibility / Engagement.
- 76 How do you feel it might benefit teachers to adopt a mindfulness based approach in  
 77 their classrooms and if so, can you please explain why?
- 78 I think they'd be good as starters or plenaries to set the tone for a piece of work that you  
 79 want to get the students focused. And I think, like I said, it would be good in tutorials...so that  
 80 the girls can have those techniques for when they're doing revision or homework at home. - Helpful techniques.
- 81 Anything else on that one?
- 82 No.
- 83 Would you recommend this intervention to other students and teachers, and if so, for  
 84 what reasons?
- 85 Yes, I would. I think it's been a really good practical group. And I think all of the girls...have  
 86 taken something away from it, whether it be that they feel more focused on their lessons, or  
 87 they feel more ready to attempt exams, or they just understand how they can re-centre  
 88 themselves. I think it's been really beneficial to them all. ~ Beneficial aspects of group.
- 89 It's really nice to hear that they've all taken something away from it. Is there anything  
 90 in particular that you think they might have taken away, or just different activities or  
 91 different skills?
- 92 I think different techniques suited different students. I don't think one of them stood out more. - Individual needs.  
 93 I think the breathing is quite easy to do in lessons, in exam situations; it's quite transferable  
 94 so it might be one that they used more commonly. But I think all of the techniques that  
 95 they've practised they can use. ~ Accessibility.
- 96 What do you think might be some of the barriers to the programme's effectiveness?
- 97 One that I can think of is students practising the techniques...at home. I think...some of them  
 98 probably leave them in the sessions and don't necessarily revisit them outside of  
 99 the...sessions. so I think that could be one of the barriers. And maybe now from stopping the  
 100 group might be worth having a check in with them just after their exams or before their next  
 101 lot of exams to make sure that they're OK and they are practising them. \* ~ Barrier.
- 102 Do you think there's another way potentially of helping them to practise at home, and  
 103 linking in with families?
- 104 I think maybe contacting families, letting them know that they've got the cds. And...maybe  
 105 making them aware that it might be good for them to have some space to practise them. ~ Linking in with parents.
- 106 In what ways do you think that school can further support the effectiveness of the  
 107 programme?
- 108 I think by continuing to run the programmes. Maybe taking some of the mindfulness  
 109 techniques and implementing them either in lessons or tutorials or assemblies...and just  
 110 taking the ethos of it. ~ Embracing - HbW in future.

111 When you say the ethos, can you elaborate a little bit more?

112 So just on focusing on the here and now and not worrying about what has happened or  
113 what's going to happen. And being able to re-centre and refocus yourself...so that you can  
114 concentrate on what you're doing. \* Mindfulness ethos.

115 Do you know of any teachers at the moment that implement a mindfulness ethos in  
116 their classrooms? Or a mindful classroom.

117 I think there are teachers that do activities like mini breaks and stuff just to get people really  
118 focused. But I'm not sure if they do like the techniques that we've done in the lesson...but  
119 maybe stretching or you know, getting up out of their seat and walking round and then sitting  
120 back down. ~ Mindfulness in the classroom.

121 So it might be slight variations...

122 Yeah.

123 But along the same theme...mindful awareness in the current moment. Would you say  
124 that therapeutic interventions such as this are an effective and valuable use of  
125 educational psychology time in schools?

126 Yeah. I think so. I think...having that...understanding of students' wellbeing before exams is \*  
127 really effective. And I think it will help schools in achieving better results. And yeah, help the  
128 students be calmer and work in a better atmosphere. ~ Benefits of programme.

129 Have you seen kind of an increase in exam anxiety in school?

130 I've, like I said, with the Year 10s I think definitely noticed it a lot earlier this year than with  
131 the Year 11s last year. So...I'm not sure if there's an increase, but it's definitely happening  
132 earlier than... ~ Increase in test anxiety.

133 Earlier on in Year 10.

134 In Year 10, yeah.

135 What are your thoughts regarding mindfulness based programmes in schools and  
136 their scope and frequency?

137 I think they're really good. I think it should be sort of a rolling programme of having...you  
138 know, finishing with one group, starting with the next group, so that more people get to use  
139 the techniques. And I think it would work, not just with people that were really anxious, but  
140 with some...everyone will have some anxiety over the exams and I think it would generally  
141 benefit all students. ~ Beneficial aspects of programme. Frequency of programme

142 So you feel that they should be run in terms of their frequency regularly...

143 Yeah.

144 So regularly in schools. And the scope of the programme...do you feel like it could be  
145 expanded in any way or tightened up in any way

- 146 The only thing that I could think of that maybe could be added, which is not necessarily to do  
147 with anxiety, is some study skills so that they know how to revise and then they can use  
148 those techniques alongside revision. \* - Suggested ways to improve programme.
- 149 And have you got any to mind, just as an example?
- 150 Just how to do a revision timetable, maybe like mind maps and how to go about doing those. - Addition-  
151 Linking in mindfully, how would they connect with the mindful practice do you think? al techniques.
- 152 I just think the mindfulness would help to focus them to do their revision. \* Yeah. Because - Benefit of  
153 some people will leave it because of their anxious feelings until the last minute, so...yeah. Mindfulness  
154 Is there anything else you'd like to add? for prepared-  
155 No. ness for exams.
- 156 Thank you...

## Appendix Eighteen: Young People Interview Code List

The codes and related themes and sub-themes identified from the five transcripts regarding young people perceptions of the intervention, are presented below.

### *Code List and Frequency Count for Young People Interviews*

Code	Interview Frequency Count	Theme (T) Sub-Theme (S)
Impact: Helpful coping strategy	5	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Effective Coping Strategies
Impact: Change in thoughts and feelings	5	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Insight into Change in Affect
Impact: Re-focusing attention	4	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> General Application
Impact: self-calming	4	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Effective Coping Strategies
Impact: effectiveness of intervention	4	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> General Application
Instant impact	1	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> General Application
Utilisation of learned techniques	5	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> General Application
Benefits of mindfulness	4	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Insight into Change in Affect
Application of techniques	5	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> Application and Feasibility of Techniques
Impact and recognition of test anxiety on age group	3	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention <b>S:</b> Contextual Factors: Prevalence of Test Anxiety in Young People



Enjoyment of techniques	5	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> Application and Feasibility of Techniques
Application of techniques	5	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> General Application
Change: Empowerment	1	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Empowerment
Change: Acquiring new skills and techniques	5	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> General Application
Change: Ability to combat stress	1	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Effective Coping Strategies
Increased recognition of feelings	5	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Insight into Change in Affect
Increased sense of control	1	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Insight into Change in Affect
Increased focus and ability to re-train thoughts	1	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Insight into Change in Affect
Increased recognition of impact of anxiety	3	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Insight into Change in Affect
Renewed outlook: bringing meaning	1	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Increased Knowledge and Understanding
Recommending to others	5	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> Recommendation to Others
Ways to improve programme: increased understanding of physiological change	1	<b>T:</b> Perceived Barriers Influencing Intervention Effectiveness <b>S:</b> Application of Techniques
Ways to improve programme: increased understanding of mechanisms of mindfulness	1	<b>T:</b> Perceived Barriers Influencing Intervention Effectiveness <b>S:</b> Application of Techniques

Blocks to practice: Proximity to exams	3	<b>T:</b> Perceived Barriers Influencing Intervention Effectiveness <b>S:</b> Proximity to Exams
Blocks to practice: Personal factors	3	<b>T:</b> Perceived Barriers Influencing Intervention Effectiveness <b>S:</b> Personal Factors
Improvement to techniques: Gaining deeper understanding	2	<b>T:</b> Perceived Barriers Influencing Intervention Effectiveness <b>S:</b> Application of Techniques
Group dynamics	3	<b>T:</b> Perceived Barriers Influencing Intervention Effectiveness <b>S:</b> Effect of Group Dynamic
Coping mechanisms	5	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Effective Coping Strategies
Goals and expectations	5	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> Recommendation to Others
Knowledge of other therapeutic interventions	5	<b>T:</b> Sustainability of Techniques <b>S:</b> Support from Systems
Home practice: EP facilitation	2	<b>T:</b> Sustainability of Techniques <b>S:</b> EP Facilitation
Home practice: Enjoyment	2	<b>T:</b> Sustainability of Techniques <b>S:</b> Home Practice
Home practice: Barriers	3	<b>T:</b> Sustainability of Techniques <b>S:</b> Home Practice
Early intervention	3	<b>T:</b> Sustainability of Techniques <b>S:</b> Early Intervention and Prevention: Impact on Wider Age Range
Shared experience	5	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> Peer Support –Shared Experience
Preparedness for exams	2	<b>T:</b> Perceived Changes in Thoughts, Feelings and Behaviour <b>S:</b> Insight into Change in Affect
Preconceptions of EP	1	<b>T:</b> Perceived Benefits and Facilitating Factors of Intervention Programme <b>S:</b> General Application