How can a school based mindfulness intervention help teenage girls who have experienced school related anxiety within the last year?

**A thesis submitted in partial fulfilment of the requirements of the University of East London for the Professional Doctorate in Educational and Child Psychology**

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**STUDENT DECLARATION**

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# Declaration

This work has not previously been accepted for any degree and it is not being concurrently submitted for any degree.

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# Abstract

This research aims to explore if the implementation of a mindfulness based stress reduction (MBSR) intervention with teenage girls increases levels of mindfulness and well-being and decreases anxiety, as measured by the Mindfulness Attention Awareness Scale (MAAS), Warwick-Edinburgh Mental Well-being Scale (WEMWBS) and The Spence Children’s Anxiety Scale (SCAS), respectively. An exploratory mixed methods design was used, involving sequential data collection. Quantitative data was collected pre and post intervention, qualitative data was collected following the intervention and after the quantitative phase of the study was completed. Combining both qualitative and quantitative data provided a better understanding of intervention impact and generated a rich picture of both process and outcomes. The mindfulness intervention incorporated MBSR techniques and some exercises which were based on Biegel’s (2009) stress reduction workbook for teens.

The key findings from this study indicate a significant difference on the students’ levels of mindfulness and well-being as measured by the MAAS and WEMWBS after the intervention took place. There were slight decreases on the SCAS scores however it was not significant. In the semi-structured interviews students highlighted a range of benefits from using mindfulness including: lower levels of stress, improved levels of concentration and attention and higher levels of self-esteem and self-efficacy. These findings are largely consistent with existing literature regarding the use of mindfulness with children and young people.

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# List of terminology and abbreviations

Terminology

**Anxiety:** anxiety is a natural response and a necessary warning adaptation in humans. Anxiety can become a pathologic disorder when it is excessive and if it is uncontrollable, requires no specific external stimulus and it can manifest with a wide range of physical and affective symptoms as well as changes in behaviour (Diagnostic and Statistical Manual of Mental Diseases (DSM-v, 2013)

**Bodyscan:** The body scan is a formal type of mindfulness practice in which the body is systematically scanned with the attention. Through this process mindful awareness is brought to different regions of the body (Kabat- Zinn, 2005; Segal, Williams, & Teasdale, 2002).

**Mindful movement:** Mindful movement is a general term for practices that involve bringing awareness to the detailed experience of movement, such as when walking or doing yoga (Baer & Krietemeyer, 2006; Kabat-Zinn, 2005).

**Mindfulness:** “Mindfulness is 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, 2003, p.145). A sense of purpose (intention) is required to sustain one’s attention (attentional control) in the present moment (content of attention) with an open, curious or accepting attitude (wholesome emotions) (Bishop et al., 2004; Shapiro, Carlson, Astin, & Freedman, 2006). This practice can enable the emergence of non-elaborative perception (bare attention) and insight into one’s experiences (Kabat-Zinn, 2003; Shapiro et al., 2006).

**Mindfulness practices:** are exercises used in order to cultivate mindfulness. They include ‘formal’ practices, such as the Raisin Exercise, Body Scan, Sitting Meditation and mindful movement and informal practices of bringing mindful awareness to everyday activities (Baer & Krietemeyer, 2006; Kabat-Zinn, 2005).

**Mindfulness- based Cognitive Therapy (MBCT):** Mindfulness-based cognitive therapy aims to help individuals to change their relationship to their thoughts, feelings and body sensations so that this level of improved understanding reduces the chances of having a depressive relapse (Segal et al., 2002).

**Mindfulness- based Stress Reduction (MBSR):** Mindfulness-based Stress Reduction was developed by Jon Kabat-Zinn in the 1980s. It was originally designed to support patients in managing chronic pain and stress related conditions (Baer, 2006; Kabat-Zinn, 2005). Later, mindfulness based approaches were adapted to support the needs of a wider range of people (Didonna, 2009).

**Special Educational Needs (SEN):** Children may be considered to have SEN if they have a learning difficulty or disability that prevents or acts as a barrier to accessing educational facilities that their peers can. They need access to personalised educational provision in order to support their progress in school (DfES, 2001).

**SPSS:** this is a statistical package for the social sciences. It is used mainly by students and specialist researchers (Howitt & Cramer, 2008)

Abbreviations

BPS British Psychological Society

CYP Child/Young person

DECAP Division of Educational and Child Psychologists

EP Educational Psychologist

LA Local Authority

MAAS Mindfulness Attention Awareness Scale

MBCT Mindfulness Based Cognitive Therapy

MBSR Mindfulness Based Stress Reduction

SCAS Spence Children’s Anxiety Scale

SEN Special Educational Needs

SENCo Special Educational Needs Co-ordinator

SEMH Social Emotional Mental Health

TA Thematic analysis

WEMWBS Warwick Edinburgh Mental Well-Being Scale

# Chapter 1

# Introduction

## 1.1 Origins of the research

In this study the focus is on exploring how well-being and ability to deal with stress and anxiety can be enhanced through the use of mindfulness techniques. The researcher was keen to explore the ways in which taking part in an 8 week mindfulness intervention could help teenagers for whom anxiety has been an issue over the past 12 months. This interest developed due to awareness of the wide range of difficulties teenagers now face in life on a daily basis. It is hoped that through the use of mindfulness participants will report reductions in the levels of stress and anxiety they experience at school on a day-to-day basis and a reduction in negative thoughts and emotions. This will, hopefully, help these students deal with common challenges experienced in school in order to help them to live happier, more fulfilling lives and to deal with stress and anxiety in an effective way.

## 1.2 Context of the research

Teenagers face a number of challenges in school; academic demands, family expectations and peer relationships can cause an increase in the levels of stress and anxiety they face daily. Mendelson, Greenberg, Dariotis, Gould, Rhoades & Leaf (2010) highlight the plight of many children and teenagers in economically stable countries such as the US and the UK. They stress that there is a stigma attached to mental health difficulties which can in many instances lead to reluctance to ask for help. Research carried out in the UK reveals that a significant number of teenage girls suffer from high levels of stress and anxiety and can therefore find it very difficult to cope without support (Salmon, 2003). Furthermore, if it goes untreated there is an increase in the likelihood of mental health problems later in life (Stallard, 2010). Research into stress and neuroscience suggests that learning to cope with stress actually expands prefrontal brain regions that are important for regulation of emotion and resilience (Jain et al, 2007; Eysenck & Calvo, 1992). There is a risk that the child/young person may therefore use maladaptive coping techniques and experience on-going difficulties coping with the daily demands of life.

The Local Authority (LA) in which this study was based are already aware of the vast array of challenges which teenagers, particularly teenage girls, face in school. Many schools in this LA currently have school counsellors who try to assist those who face academic and personal challenges. At present, school counsellors report an issue around long waiting lists and the high number of girls who suffer from school related stress and anxiety but are reluctant to seek help; in many instances they suffer alone and try to develop their own range of often maladaptive coping mechanisms (personal communication with school counsellors, 2013).

It is imperative that schools play an active role in helping teenagers to not only deal with the range of challenges and difficulties they encounter but to also aim to increase their levels of resiliency and well-being in order to protect them throughout adulthood. Social Emotional Aspects of Learning (SEAL) project launched in 2006 laid out a number of whole school initiatives which highlighted the value of self-awareness and emotional intelligence and played an important role in highlighting the importance of social and emotional skills in education (Stallard, 2010). SEN code of practice (2014) outlines the importance of the use of strategies which can promote positive mental health in order to increase well-being and reduce levels of stress and anxiety in children and young people.

## 1.3 Students at risk

Students with anxiety fall into the Social Emotional and Mental Health category of the new SEN code of practice (Department for Education and Skills, 2014) in England and Wales. This group are at risk of falling behind in their educational attainment, missing school, substance abuse and there is also an increased likelihood of developing mental health problems later in life (Mental Health Foundation, 2002). Additionally, it is also crucial to consider that affective issues are often less visible in school when compared to challenging behaviour and in many cases they can be harder for school staff to initially identify and to then implement appropriate levels of support (Farrell et al, 2006; Frederickson & Cline, 2002).

## 1.4 Relevance to Educational Psychologists

This area of research has a range of important implications for Educational Psychologists (EPs). 1 in 10 children and young people suffer from a diagnosable mental health disorder – this equates to around 3 children in every classroom and nearly 80,000 children and young people suffer from severe depression (Young Minds, 2015). Child and Adult Mental Health services (CAMHS) are currently under huge amounts of pressure due to recent cutbacks. Breenan (2014) highlights the range of problems they currently face describing how in addition to this almost half of LAs in England had their budget’s cut or frozen in the last year. In addition to this the new SEN code of practice (2014) outlines the importance of integrated working with a range of professionals. There is a clear need for EPs to work with a range of students who experience mental health difficulties, especially in order to deliver a range of therapeutic interventions.

In many parts of the UK CAMHS report that they are currently not able to cope with the level of referrals they receive on a daily basis. It is therefore vital that staff at school and EPs can help students cope with these difficulties in order to equip them with strategies they can draw on throughout their time in school and for the rest of their lives. Further to this, EPs aim to have a solid evidence base for their interventions. Fox (2003) highlights that there must be a clear link between professional practice and research in order to reduce variations in practice and to improve outcomes for children and young people. Furthermore, Biesta (2007) outlines that evidence based practice can provide a framework that is useful in order to understand the role of research in educational practice. It is clear that EPs have a lot to gain from research around universal interventions for stress and anxiety

## 1.5.1 Definition of mindfulness

Hick (2008) describes mindfulness as a cultivation of compassion, acceptance, awareness and focused attention. Baer (2003) succinctly describes it as a type of ‘flexible awareness’. Through mindfulness an individual’s thoughts and feelings are recognised and accepted as they are, without trying to make any changes to them. Kabat-Zinn highlights that awareness “emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experiences moment by moment” (2003, p.145).

Fodor and Hooker (2008) describe the way in which mindfulness places great importance on attending to the external environment such as sights, smells and sounds as well as internal bodily sensations. Further, “one can become aware of the current internal and external experiences, observes them carefully, accepts them, and allows them to be let go of in order to attend to another present moment experience” (Fodor & Hooker, 2008, p.77). Mindfulness has its origins in the Buddhist tradition and the Eastern practices of meditation. However, it differs to meditation in that the goal is not to achieve a higher state of consciousness but to have increased awareness of the present moment (Hick, 2008, Jennings & Jennings, 2013).

## 1.5.2 Definition of Mindfulness Based Stress Reduction (MBSR)

Biegel, Brown, Shapiro and Schubert (2009) outline that MBSR is an intervention “that has received considerable attention for the enhancement of cognitive, emotional and behavioural well-being in a variety of adult psychiatric populations” (2009, p.855). They also describe it as being “a psycho-educational training programme in mindfulness and its application to daily life”. In MBSR and related contemporary mindfulness-based interventions there is a focus on the development of mindfulness in day-to-day life, while at the same time encouraging an attitude of acceptance or non-judgment toward events and experiences individuals encounter in their lives. These experiences are used in order to facilitate the practice of mindful presence (Shapiro, Carlson, Astin, & Freedman, 2006).

Much of the impetus for research regarding MBSR as an intervention originated with Jon Kabat-Zinn (1990) and his colleagues at the University of Massachusetts Medical Center. The Stress Reduction Clinic at the medical center offered MBSR in a medical setting as an intervention that uses meditation and yoga as aspects of a treatment approach for patients with a wide range of physical ailments and psychiatric diagnoses. They were keen to outline that MBSR is frequently taught without reference to the spiritual or religious underpinnings of the meditation techniques (Kabat-Zinn, 1990).

## 1.5.3 Principles of mindfulness

The theory behind mindfulness is consistent with positive psychology (Seligman & Csikszentmihalyi, 2000) and the goals of promoting resilience. Mindfulness includes a range of goals such as enhancing well-being, awareness of one’s self and the environment they are in and it can be used in order to discipline the mind and an individual’s emotions (Levine, 2000). The principles and practice of mindfulness as an intervention that can promote positive psychology include processes such as ‘flow’ (Csikszentmihalyi, 1990), forgiveness (McCullough & Pargament, 2000) and resilience (Mas-Ten, 2001). With this in mind, Kabat-Zinn (1990) has stressed that the purpose of mindfulness is not to point out what is wrong in life, but instead to help find out what is right (Hamilton, Kitzman, Guyotte, 2006).

## 1.5.4 Benefits of mindfulness

Over the last decade interest in mindfulness has grown exponentially. There is a wide range of evidence which indicates the effectiveness of mindfulness training in reducing stress and anxiety, lowered intensity and frequency of negative affect, more adaptive responses to stress and decreased negative self-focused attention (Chambers, Gullone & Allen, 2009). Additionally, mindfulness meditation has proven to have beneficial effects on brain function regulation, EEG patterns and attention (Huppert & Johnson, 2008). A number of studies reveal benefits to physical health, including the management of chronic pain and immune functioning, enhancement of positive mood, well-being, self-esteem, optimism, self-compassion and empathy (Huppert & Whittington, 2003).

Kabat-Zinn (2003) describes how mindfulness allows present experiences to be explored non-reactively, it aims to alter the relationship individuals have towards their mental processes (Siegal, 2007). Research into neuro-correlations underlying mindfulness has found observable changes in brain structure and synaptic strengthening (Chambers et al, 2009). Sustained attention and working memory improvements are hugely important for teenagers especially those embarking on exams in school.

According to Huppert and Johnson (2010) mindfulness has five beneficial effects. It promotes increased sensory awareness, greater cognitive control, enhanced regulation of emotions, acceptance of thoughts and feelings and the capacity to regulate attention. With the right type of mindfulness meditation the mind can let go of negative, ruminating thoughts and the non-reactive awareness provides the opportunity for all thought processes to be examined in a less biased manner (Ciesla, Reilly & Dickson, 2012; Lee & Miller, 2011). Through mindfulness, importance is placed on learning to respond rather than react and the ability to consciously control attentional resources is likely to have beneficial effects on learning, problem solving, decision making and other cognitive processes (Huppert & Johnson, 2010)

## 1.6 Positive psychology

The theory behind mindfulness has strong links with the principles of Positive Psychology. This was recognised as a formal branch of psychology from 1998, founded by Martin Seligman and Mihaly Csikszentmihalyi (Grenville-Cleave, 2012). Seligman’s model outlines that an individual needs positive emotions, engagement and interest, meaning and purpose, self-esteem, optimism and resilience for well-being. Many authors argue that it is highly important that students can recognise their strengths in order to nurture positive feelings about themselves and to form positive relationships with others (Seligman, Steen, Park & Peterson, 2002).

By encouraging students to do so they can begin to pinpoint their own personal strengths, which in time can produce genuine feelings of happiness (Seligman & Csikszentmihaly, 2000). It is crucial for students to consider their range of strengths and accomplishments both inside and outside of school. It is widely held that through doing so they can be encouraged to view new experiences in a more positive rewarding perspective (Lomas, Herreron & Ivtzan, 2014).

## 1.7 Listening to the Voice of Children and Adolescents

The researcher places a great deal of value on the importance of listening to the voice of the students involved in this study. Recent legislation and literature plays a crucial role in advocating the importance of listening to Children and Young People (CYP) and carrying out work that can fully represent their views and opinions (Farrell et al, 2006)

The United Nations Convention on the Right of the Child in 1989 highlights that children have a right to express their own opinions and this should always be taken into account on matters that affects them (Rose, 2005). Gersch (2001) considers that fully involving children is impossible without using appropriate ‘tool’ and resources in order to capture their opinions and beliefs.

## 1.8 Research Aims

The researcher who led this study and the local authority in which this research took place were keen to explore the ways in which students deal with school related anxiety and how they would respond to a therapeutic intervention carried out on a daily basis at their school and private mindfulness practice.

*This research study therefore aims to explore:*

-If a mindfulness intervention (MBSR) can reduce levels of anxiety and improve well-being in students

-The ways in which students can use mindfulness on a day-to-day basis and in a group setting

-If staff notice any changes with students from the use of mindfulness on a regular basis

## 1.9 Chapter Summary

This chapter has provided a context for the current research through the introduction of key issues facing teenagers at school on a daily basis and the importance of mindfulness techniques in building resilience, increasing well-being and reducing anxiety levels. The following chapters will include a detailed literature review, a full description of the methodology used in this study, a presentation of the quantitative and qualitative findings and a final chapter which outlines the findings in relation to the wider literature with a number of recommendations for future research studies.

# Chapter 2

# Literature review

## 2.1 Overview of the chapter

This chapter introduces key literature around mindfulness, mindfulness based stress reduction interventions and how these interventions have been effectively used in schools and colleges with a wide range of students. A systematic literature search and subsequent screening of articles generated a list of nine articles for critical analysis. This chapter concludes with an overview of key studies from this literature search, highlighting their strengths and weaknesses and a number of conclusions which can be drawn from such a wide body of research. The final section of this chapter locates gaps which exist in current research and pinpoints areas for investigation in this research study.

## 2.2.1 Research on mindfulness

Until 20 years ago research in relation to mindfulness took place mainly in health care settings. Some of these examples include pain management with adolescents (Thompson & Gauntlett-Gilbert, 2008) and mindfulness based cognitive therapy for relapses of depression (Allen, 2006). Over the past 20 years the range of studies carried out have demonstrated that mindfulness provides a wide range of benefits in clinical settings. More recently, over the past few years a large evidence base for school-based mindfulness programmes has emerged. Such programmes aim to promote well-being, resilience and prevent mental health problems both in childhood/adolescence and in later years of life. The number of studies has grown exponentially over the past few years (Kuyken et al, 2013, Ciesla, Reilly & Dickson, 2012).

## 2.2.2 Existing research on mindfulness based stress reduction (MBSR)

Mindfulness based approaches have been successfully used with a wide range of children and young people (Jennings et al, 2008), examples include students with attention difficulties, anxiety, stress, difficulties sleeping, self-esteem issues and eating disorders (Ciesla, Reilly & Dickson, 2012; Hamilton, Kitzman & Guyotte, 2006). Much of the research which has been conducted has been primarily quantitative, with a wide range of studies relying on self-report measures before and after the intervention has taken place. Research into the use of MBSR has shown that group mindfulness training can reduce the symptoms of anxiety and panic (Kim et al, 2009). A number of studies have found that an intensive mindfulness based stress reduction programme can have long-term beneficial effects on students with anxiety disorders (Kemple, 2012; Lee and Miller, 2011).

## 2.3 Stress and anxiety in the school setting

Teenagers face a number of challenges in school; academic demands, family expectations and peer relationships can cause an increase in the levels of stress and anxiety they face daily. Mendelson et al, (2010) highlight the plight of many children and teenagers in economically stable countries such as the US and the UK. They also stress that there is a stigma attached to mental health which can in many instances lead to reluctance to ask for help. A wide range of studies indicate that a significant number of teenage girls suffer from high levels of stress and anxiety on a daily basis, consequently there are struggling to cope in a busy school setting (Greco & Hayes, 2008).

Experiencing such a wide range of stressful events can result in anger, lack of concentration, maladaptive coping mechanisms (Cline, 2013). Many studies indicate that moderate to high levels of anxiety can have a negative impact on children’s performance in school and it can also lead to low levels of self-esteem and self-efficacy (Shapiro, Schwartz & Bonner, 1998). While some anxiety can be a helpful response to stress (Semple, Lee, Rosa & Miller, 2010) it is important to consider the implications of stress and the knock on effect that high anxiety levels can have on everyday life. Semple et al (2010) argue that the levels of stress which can often accompany anxiety can interfere with academic achievement by impairing attention and it can therefore disturb students’ levels of cognitive processing. It is therefore vital that those who experience difficulties controlling their levels of anxiety can learn to use effective techniques which can be used to lower their levels of anxiety, increase well-being and boost self-esteem levels.

## 2.4 Mindfulness in school settings with children and young people (CYP)

Schools can play a vitally important role in helping students who experience school related anxiety. Teachers and support staff have a major influence on children’s social and emotional development (Huppert & Whitington, 2003). Staff can also benefit from an awareness of the range of difficulties students may experience and the techniques which can be used effectively both in school and at home to boost well-being.

Previous research studies highlight that mindfulness has played a vitally important role in helping both staff and students who experience stress in their day-to-day lives (Lee & Miller, 2007; Brown et al 2013). Napoli et al (2005) highlight that children and staff can benefit from mindfulness by dealing with stress more effectively and from increasing their ability to focus on the present moment and therefore they spend less time ruminating or worrying about future events. A range of studies carried out over the past decade highlights how effective mindfulness can be in relation to reducing stress in school and therefore improving memory and concentration during academic work (Hozel et al, 2011; Greeson,2009;Posner,2000)

## 2.5 Systematic literature review

As mentioned earlier, a systematic literature search and subsequent screening of articles generated a list of nine articles to be used for critical analysis. Key areas highlighted by the literature reviewed include the wide range of benefits of mindfulness for students, the importance of well-planned interventions, sufficient time for individual practice and the ease at which mindfulness can be incorporated into daily life at school/college.

*Method of Reviewing papers*

A systematic literature review was conducted between June 2014 and December 2014. Electronic journal searches were conducted through the following databases and they were accessed via ATHENS and the University of East London library service: EBSCO, PsychInfo, Academic Search Complete, ERIC and GOOGLE scholar.

A thorough and detailed review of the literature was needed in order to gain a greater understanding into the use of mindfulness with children and young people, to identify any possible gaps in the research which has been conducted and to pinpoint possible areas to be examined in this study and also in future research studies.

The initial search utilised the term: ‘mindfulness teenage girls’ but this elicited a minimal response. Following this, key terms such as ‘mindfulness’, ‘mindfulness based stress reduction’, ‘anxiety’ and ‘adolescents’ formed the basis of the next database searches (see appendix A)

See appendix A for the inclusion criteria used in the literature search. Studies were included if they were peer reviewed as it was considered that an evidence base in such a sensitive and 'subjective' area of research would benefit from the rigour of peer review. Research that was not written in English were excluded as the researcher did not have the necessary resources or time for translation. All articles reviewed were published after 2004 (this date was chosen to reflect the vast number of studies carried out after this date).

This initial search generated a list of 68 potential studies, 11 of these were duplicates and 4 were errata. 53 articles then remained and a subsequent screening of articles was performed (this involved screening of titles followed by examining abstracts). This then led to the removal of studies relating directly to mindfulness based cognitive therapy and those that focused solely on relaxation techniques used with a range of students. The researcher made the decision to exclude studies that included only teachers or parents and did not include CYP. Interventions which were delivered to children on their own out of a group setting were also excluded.

This reduced the total number of potential studies down to 27 and these studies were then subjected to a final stage of screening. After this stage 18 articles were excluded.

The final 9 studies were selected, taking the following considerations into account:

-The inclusion criteria for affective outcomes were measured

-The researcher collected pre and post intervention data

-The intervention was delivered to a group

-The main target of the intervention was mindfulness practice

## 2.6 Overview of the studies reviewed

The following table summarises the articles which were chosen for in-depth review

**Table 1.**

Summary of key studies and findings

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Authors and title* | *Participants* | *Methodology* | *Findings* | *Strengths* | *Limitations* |
| 1.Ciesla, Reilly, Dickson, Emanuel & Updegraff (2012)  Dispositional Mindfulness Moderates the Effects of Stress Among Adolescents | 78 teenagers | Mixed methods | Lower levels of non-reactivity and non-judgment | Large sample size | Short duration – 7 day intervention not long enough to draw valid conclusions |
| 2. Lau and Hue (2011)  Mindfulness Based Programme for Hong Kong Adolescents in Schhols: Well-being, Stress and Depressive symptoms | participants 14-16year olds | Mixed methods | Decrease in levels of depression in intervention group  Increase in well-being by control group and intervention group | Randomized control trial successful use of Intervention and control group | n/a |
| 3. Edwards, Adams, Waldo, Hadfield and Biegel (2014)  Effects of a Mindfulness Group on Latino Students | 20 middle school students | Mixed methods | Mindfulness and self-compassion scores significantly increased, and their perceived stress and depression significantly decreased | Wide number of measures used  Long intervention and follow up phase to allow students to practice mindfulness | Over reliance on self-report measures  No triangulation with school, staff or parents |
| 4. Weijer-Bergsma, Formsma, Bruin and Bogels (2011)  The Effectiveness of Mindfulness Training on Behavioural Problems with Attentional Functioning Adolescents | 10 students aged 11-15, 19 parents and 7 tutors | Mixed methods | Attention and behavioural problems reduced, executive functioning improved, parents reported lower levels of stress | Good range of measures, views from students, tutors and parents included in this study. | Over-reliance on self-report measures |
| 5.  Huppert and Johnson (2010)  Mindfulness in School Programme | 173 boys aged between 14 and 15 | Mixed methods | Improvements in stress managementenhanced emotional coping, calmness, willingness to engage more in school activities | The intervention was well planned out  Large number of participants | Adult mindfulness measure used |
| 6. Jennings and Jennings (2013)  Peer-directed, Brief Mindfulness Training with Adolescents | 8 participants aged 17-18 | Mixed methods | Reduction in levels of anxiety | Intervention was well-planned out with the use of a pilot study and feedback taken on board | Short study, sessions were not long enough, peer facilitator used.  Lack of power due to the small sample size. |
| 7. Biegel, Brown, Shapiro and Schubert (2009)  Mindfulness-based stress reduction for the treatment of adolescent psychiatric outpatients: a randomized clinical trial | 102 participants  14-18 years of age | Mixed methods | Reduced symptoms of anxiety, depression, increased self-esteem and sleep quality. | Large number of participantsrandomized clinical trial and sufficient time allowed for follow up phase. | n/a |
| 8. Broderick and Metz (2009)  Learning to Breathe | 187 17-19 year olds | Mixed methods | Increased level of well-being, improvements in concentration and sleep | Rigorous study, large number of participants, control group and intervention group used. | Follow up phase not long enough to allow private practice, control group participants were2years younger than intervention group |
| 9. Napoli, Krech & Holley (2005)  Mindfulness Training for Elementary school students | 194 students  6-9 years of age | Mixed methods | Significant differences on all attentional measures after the intervention took place and in the follow up phase | Length of programme – 24 weeks and the researchers used control groups effectively  Sample was large enough to detect medium effects and the researchers used appropriate analyses. | n/a |

*Outline of the studies included in the critical review*

1. Ciesla, Reilly, Dickson, Emanuel and Updegraff (2012) carried out a piece of research with 78 adolescents in order to examine whether a mindfulness intervention could reduce the negative effects which can be caused by stressful situations. The study was carried out over a seven day period with participants filling in questionnaires on a daily basis. The questionnaires were used to examine their level of stress, dysphoric affect and rumination. Ciesla et al (2012) found that two facets of mindfulness – non-reactivity and non-judgment were associated with lower levels of dysphoric mood. Further to this, they also highlighted that the participants who scored as being ‘less mindful’ were noted as being highly vulnerable to the negative effects of stress. This study plays an important role in highlighting a number of significant findings in relation to the range of benefits from mindfulness. It is important to note that the short duration of the study, the over reliance on self-report measures and the absence of interviews are significant weaknesses in this research and the results therefore need to be treated with a high level of caution. Seven days is clearly not long enough to carry out an intervention of this nature and the results of this study cannot be deemed as representative of a typical mindfulness intervention which would run over a significantly longer period. It is also important to consider whether the measures used in this study were specific enough to detect some of the impact of the mindfulness intervention on the feelings and the mood of the participants. The researchers also failed to mention whether they took confounding variables into account when considering the effects mindfulness with this group of students.

2. Lau and Hue (2011) carried out a six week mindfulness based intervention with 24 low-achieving 14-16 year olds in two secondary schools in Hong Kong. The study used an intervention group and a control group. The researchers in this study measured well-being, stress and depressive symptoms at baseline and then after the intervention took place. The study’s findings reveal that there was a significant decrease in symptoms of depression in the intervention group with a significant increase in well-being reported by both the intervention and the control group. Lau and Hue’s study has a number of clear strengths. Firstly, using a control group alongside the intervention group allowed for a reliable way to successfully compare a number of findings from this study. Secondly, this was a mixed methods study and the qualitative element to this research has played an important role in gaining insight into individual student’s experience of participating in group mindfulness and their individual practice at home.

In this study it was beneficial to use test-retest reliability for the outcome measures, - a feature notably lacking in many other studies of this nature. It was also highly beneficial to split the well-being measure into six sub-scales which allowed for a detailed examination. However, it is also important to point out that due to the multiplicity of hypotheses under investigation in this study, a calculation of an error rate would have strengthened the findings and the researcher failed to take this into account.

The researchers mention a number of concerns about the translations of the perceived level of stress measure into Cantonese, as the internal consistency of the scale was much lower than expected. There are some limitations with this piece of research; for example it would have been beneficial to allow additional time for individual mindfulness practice at home. Doing so is not always possible but the study would have benefited from administering questionnaires at the end of this follow up phase in order to gain more insight into the long lasting benefits of regular mindfulness practice. There was a noticeable lack of between participant analysis for depression and the study could also have benefited from information on the cognitive abilities of the children as it would have been useful to highlight any difficulties the participants may have experienced accessing the wide range of questionnaires involved in the study. The researchers also failed to report the high attrition rates for both treatment and control groups; this therefore compromised the methodological quality of the study. It is also important to consider that the control group used in this study was systematically different to the treatment group as they were from a different school year, the researchers do not highlight the implications this may have when interpreting the range of findings.

3. Edwards, Adams, Waldo, Hadfield and Biegel (2014) evaluated the impact of mindfulness meditation through the Mindfulness Based Stress Reduction for Teens curriculum with 20 students. A number of measures were used at the beginning, mid-way through and also at the end of the intervention. This study found that after the intervention had been carried out there were significant increases in the mindfulness and self-compassion scores on the self-report measures completed by all of the participants. Further to this, the participants also reported a decrease in their levels of perceived stress and there was a decrease in their scores on a depression measure after the mindfulness intervention was over.

This study successfully used a number of well-established measures. It is however important to consider that the wide range of outcomes measured in a study of this nature heightens the risk of reporting significant effects across the whole range of participants without giving equal weighting to the null results obtained for those same outcomes. Nonetheless, it is clear that the study used sound measures and there was an appropriate amount of between-within participant analysis. A significant, medium sized treatment effect was detected in this study and it would be interesting to see in the future if other studies could replicate the findings among the teenage girls and the pupils who experienced high levels of depression and anxiety. It is also important to consider that including optimism as an affective or cognitive phenomena in this study is indeed open to debate and in this case the researchers failed to highlight the difficulties in measuring such a construct. If they had done so, they could have strengthened their findings and the importance of their research. It would also have been beneficial to wait longer to carry out the follow up phase of this study. This would be especially useful in order to give more time for participants to fully engage in their own private mindfulness practice on a regular basis. Also the large number of self-report measures used may have leaded to a higher risk of the participants giving socially desirable responses.

4. Weijer-Bergsma, Formsma, Bruin and Bogels (2011) carried out a study using mindfulness training for 11-15 year olds with ADHD. They also ran a parallel Mindful Parenting training course for the student’s parents. Their robust study incorporated the views and opinions of students, their tutors in college and their parents. This study benefits from the use of self-report mindfulness measures at the beginning of the intervention, mid-way through the study and finally at the end of a 16 week follow up phase. The study gathered large amounts of qualitative data on students’ attention and behaviour from the participants, their tutors and parents. Weijer-Bergsma et al (2011) found that the participants’ attention and behavioural problems decreased and they found that this decrease continued a number of weeks after the intervention had taken place. The authors also found that executive functioning improved significantly after regular private mindfulness practice was established by the participants. This finding highlights the importance of regular mindfulness practice, both in a group setting and in private. This research benefited from clearly defined outcomes, triangulation with students, tutors and parents, high internal consistency of the scales used and it was also good practice for the researchers to report the previous experience of those who carried out the intervention and the pupils who took part. There are however some limitations with this study. It can be said that there was at times an over-reliance on self-report measures for a range of constructs. This study did not triangulate measurement type, for example the researcher could have used additional parent interviews or questionnaires to rate the child’s outcomes alongside their self-reported measures. The study failed to consider and reflect on the social and emotional development of the participants.

5. Huppert and Johnson (2010) examined the Mindfulness in school’s project with one hundred and seventy three 14-15 year old male students. This study was conducted in two English independent boys’ schools. There were eleven groups in total, six groups received the intervention and five groups were used as control groups in the study. Huppert and Johnson found that mindfulness training produced significant effects on the participant’s levels of mindfulness, ego-resilience and well-being, particularly among students who regularly did ten minutes of home practice per day. The researchers also found smaller changes among those who did not practice mindfulness on a regular basis at home but did participate in the intervention at school. There are a number of strengths with this study. The study benefited from a large number of participants and the researchers used control groups and intervention groups effectively. This study played an important role in highlighting the correlation between private mindfulness practice outside of school and levels of mindfulness in the participants in the study. However, it is important to note that more consideration could have been given to the use of the measure of mindfulness (Cognitive and Affective Mindfulness scale) as there are a wide range of ‘child/teenager’ friendly measures available which may have been easier for the participants to complete. Throughout the study Huppert and Johnson (2010) fail to define well-being as a purely affective phenomenon, instead they define it as ‘the combination of feeling good and functioning well’.

6. Jennings and Jennings (2013) examined the impact of brief mindfulness meditation training with adolescents. Their programme delivered four sessions which each lasted for fifty minutes and this was over a three week period. The 8 participants in the study were aged between 17 -18 years of age. The Beck Anxiety Inventory and the Interaction Anxiousness Scale

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were used to establish baseline measures of anxiety and these measures were repeated at the end of the fourth session of mindfulness training. The study revealed that there was a reduction in anxiety scores on the Beck Anxiety Inventory after the intervention took place and a reduction in social anxiety as measured by the Interaction Anxiousness Scale. It is important to note that there are a number of limitations to this study. The study was led by a peer facilitator who already knew the participants. It is plausible that the participants may have just been motivated by friendship to take part as opposed to personal motivation and interest. However, it could also be argued that this level of familiarity may have led to participants feeling more relaxed and under less pressure during the mindfulness sessions. Another limiting factor is the short duration of the study, in view of the existing literature, three weeks does not appear to be a sufficient amount of time to carry out a mindfulness intervention regardless of the number of sessions per week. This leads to the question: -Is the evidence strong enough to suggest mindfulness based interventions for CYP can be effective in this instance? The study could have benefited from a larger sample size with control groups and randomisation. Another weakness in this study is the fact that the students were not allowed sufficient time to practice mindfulness privately and then to complete the post-test measures after this private practice took place outside of school.

**7.** Biegel, Brown, Shapiro and Schubert (2009) used a randomized clinical trial to assess the effect of Mindfulness Based Stress Reduction for 102 adolescents aged between 14 -18 years who were in an outpatient facility. The control participants were ‘treatment as usual’ and the ‘treatment’ group were involved in the intervention for 2 hour weekly sessions over a period of 8 weeks. The researchers used pre-test and post-test measures and there was a 3 month follow up phase. This was a rigorous, well planned study with a number of clear strengths. Biegel et al (2009) found that the participants involved in the MBSR intervention reported significant reductions in anxiety, depressive and somatization symptoms. They reported a number of benefits from using mindfulness such as improvements in quality of sleep and an increase in their levels of self-esteem. There were also significant declines in self-reported levels of stress, obsessive symptoms and interpersonal problems. There are clearly a number of strengths with this study, mainly due to the length of the intervention, the large number of participants and the fact that it was carried out as a randomized clinical trial. Some possible limitations include the fact that the sample is heterogeneous; therefore the results from the study can only be regarded as specific to this population under investigation. Therefore the findings are not generalisable to the wider population as a whole. Future research with a more balanced gender composition sample would be highly beneficial. There was also a relatively brief follow up period of three months; a longer follow up phase may have been useful in order to investigate the endurance of mindfulness training and the long term possible benefits with participants experiencing a range of difficulties in their personal lives. It is also important to consider the fact that the participants in the MBSR group received more attention and spent longer amounts of time in their groups in comparison to the treatment as usual group. There is a possibility that this may have skewed the findings, therefore some of the results from this study must be approached with some level of caution. This study also failed to mention the importance of group equivalence in prior exposure and the researchers made an assumption based on a lack of information. More time should have been spent considering the impact this may have on the outcomes of the pupils involved in the study. Nonetheless, this study plays an important role in highlighting the differential benefits of mindfulness when it is used with certain groups of pupils in a clinical setting.

**8.** Broderick and Metz (2009) evaluated the ‘Learning to BREATHE’ curriculum. This is an MBSR – derived mindfulness programme. Their study was conducted with 137 17-19 year old students in an Independent girls school in America. Broderick and Metz used a non-randomized quasi-experimental pilot trial. After the intervention took place the researchers found that the participants involved in this programme reported decreased levels of negative affect, an increase in their levels of calmness, relaxation, self-acceptance, emotional regulation, self-awareness and clarity. There were a number of strengths with this study mainly due to the large sample size and the rigorous study design. There was good use of questionnaires and they can be highly beneficial in facilitating pre and post data collection across a large sample of participants. It is important to note that the researchers added additional items to the ‘Positive and Negative Affect scale’ in order to ‘fill a perceived gap in the scale’s measured constructs’. Surprisingly, the scale had a reasonable level of internal consistency considering the amount of psychological phenomena it aimed to measure which therefore leads to questions about the reliability of the measure of internal consistency in this instance. It is also important to consider that the activities of the participants in the control group are unknown and it would be highly useful if the researcher gave additional information about the composition of this group. The participants in this group were therefore assumed to be inactive. The researchers failed to take into account treatment hours and the range of training for the range of staff who were involved in carrying out the mindfulness training with the intervention groups.

**9.** Napoli, Krech & Holley (2005) examined the results of an intervention which integrated mindfulness and relaxation techniques with 194 children aged between 6 and 9, who have experienced high levels of anxiety in school. There were 12 sessions in this intervention, each session lasted for approximately 45 minutes over a period of 24 weeks. The trainers and research assistants spent a considerable amount of time familiarising themselves with the students and building positive relationships prior to the start of the intervention. Students were then randomly placed in the experimental group or the control group. The researchers found that the participants displayed significant decreases in both test anxiety and behaviours associated with ADHD. They also found an increase in the children’s ability to focus in class and pay attention during whole class instruction as observed by school staff. Improvements were also noted in teacher-rated student attention, the participants’ social skills and selected aspects of their (visual) attention. The reported effect sizes in this study range from small to medium. This is a particularly strong piece of research mainly due the fact it was a randomized control trial. The large number of participants and the range of objective measures used can also be described as clear strengths within this study.

## 2. 7 Summary of the findings from the studies reviewed

The majority of the participants in the studies outlined above were children and young people ranging in age from 5 to 19 years of age. All of the studies used mixed methods as their methodology. It should be noted though that most of the studies placed greater importance on the quantitative findings than the qualitative information they gathered. All studies incorporated data generated from a number of self-report measures which then allowed for comparison with data generated from individual interviews.

Key points to emerge from the review:

-Four studies focused on students who have experienced high levels of stress and anxiety in their lives on a day-to-day basis (Ciesla et al, 2012; Lau & Hue, 2011; Biegal et al, 2009; Napoli et al, 2005).

-Other methodological approaches incorporated into the reviewed studies included randomized control trials (Lau & Hue, 2011; Huppert & Johnson, 2010; Napoli et al, 2005) and a randomized clinical trial carried out by Biegal et al (2009).

-Whilst some studies did not triangulate their findings with a wide range of significant adults in the lives of the participants, as a whole the literature reviewed can be said to incorporate views from a range of participants.

-It should also be noted that most studies were conducted in schools and colleges with the exception of Biegel et al’s (2009) study which took place in an out-patient facility.

-The majority of studies did not explicitly state their theoretical position. However given that all studies sought to ellicit views of the participants it can be assumed that a critical realist position had been adopted by all of the researchers.

-Results for negative affect reduction were present across all the studies which were critically reviewed and there is a high level of optimistic exploration in all studies reviewed.

-Overall, it is clear that there is a lack of a theoretical framework about the benefits of mindfulness for children and young peoples affect and a lack of clarity around which pupil groups may benefit over others.

## 2.8 Conclusions Drawn from the Literature Reviewed

*The following list summarises a number of conclusions drawn from the literature reviewed*

-Many studies highlight the importance of combining group mindfulness with private mindfulness practice on a regular basis;

-A randomised control trial with a long follow up phase is the most rigorous way of examining mindfulness and the benefits of individual practice;

-A large number of schools and institutions involved in this review highlight that mindfulness should be incorporated into daily lessons on a regular basis where possible;

-Mindfulness for children and young people is straightforward and not expensive to carry out on a regular basis. Many of the teachers and students in the studies reviewed highlight that it fits into a wide range of contexts and is enjoyed by students and teachers;

-The studies reviewed reveal that well conducted mindfulness interventions can improve the mental and emotional well-being of young people;

-Mindfulness has a wide range of physical benefits – it can improve sleep, reduce stress, anxiety, reactivity and challenging behaviour;

-Many of the participants in the studies reviewed revealed that they felt they were more calmer, able to manage their emotions more effectively, experienced higher levels of self-awareness and empathy from practicing mindfulness in a group setting and also on a regular basis in private;

-On a cognitive level, parents, teachers and the students in the studies reviewed report that they were able to pay more attention in class and they were able to stay more focused during independent work;

-From interviews and self-report measures students report that they experienced an increased ability to think ‘outside of the box’, many students reported being able to use their existing knowledge more effectively, a high number pointed out improvements in working memory, planning skills and their ability to reason and problem solve;

- Mindfulness may be more useful for some than it is for others; nonetheless, most CYP in the studies reviewed report that they found mindfulness to be a highly enjoyable experience and the universal aspect of this type of intervention could well ensure that all who continue to use it could benefit from it.

*Benefits of mindfulness*

Mindful non-reactivity and non-judgment was found to buffer the effects of life stress on daily changes in dysphoric affect (Ciesla et al, 2012). Adolescents who respond to their internal experiences in a non-judgmental way and those who can let negative experiences pass without reacting to them are less likely to experience higher levels of negative affect following the occurrence of a negative life event (Biegel at al, 2009). Mindfulness led to significant reductions in depressive symptoms (Lau & Hue, 2011). Many students in the studies which reported improvements in personal growth and well-being (i.e enhancement of personal growth). Students reported that they had found new approaches to reducing stress, understanding their mind and body, caring for others, appreciating nature and human relationships (Huppert & Johnson, 2010). Students highlight reductions in self-reported anxiety, depression and somatization symptoms, increased levels of self-esteem and quality of sleep. Many reported declines in self-reported stress, obsessive symptoms and interpersonal problems. In one study, the prevalence of mood disorders in the MBSR group in the follow up phase was less than half of that seen in the pre-test phase. In this study the researchers concluded that mindfulness lead to clinically significant outcomes that can be sustained over time with regular practice (Biegel et al, 2009). Students also reported reductions in cognitive, physiological and social anxiety. In one study the greatest improvement was found in cognitive anxiety and group anxiety (Jennings & Jennings, 2013). Many students viewed being part of the MBSR intervention as being a very positive experience (Ciesta et al, 2012, Lau & Hue, 2011; Edwards et al, 2014). Another study found that short intervention sessions can be as effective as longer sessions (Broderick & Metz, 2009).

Overall, there is clearly a growing body of evidence on the effectiveness of mindfulness training for children and adolescents. However, it is evident that many of the studies over the past few years rely heavily on the use of a number of self-report measures and these are given dominance over qualitative measures. Further to this, only a small number of research studies conducted over the past few years include teachers and/or parents’ views as a way to triangulate their findings. It was therefore felt that in order to address this gap in the literature the researcher should conduct a study using a mixed method methodology, giving dominance to the qualitative data gathered from students and school staff. This study includes a group intervention using MBSR and private mindfulness practice. The researcher felt that it would be highly advantageous to seek the views of students and school staff through a number of reputable measures, through the use of a focus group carried out at the end of the intervention and through semi-structured interviews which took place at the end of a follow up phase, a number of weeks after the intervention took place.

The research design of this research study was influenced by the following issues identified in the review:

i. more qualitative research is needed in school settings

ii. there is a clear need for triangulation between a range of measures

and through interviews with staff as well as students

iii. a longer follow-up phase is needed in order to give students

sufficient time to practice mindfulness in private outside of school.

At the time of designing the research there was no research which focused on MBSR with teenagers who had experienced school based anxiety. Consequently the researcher felt that due to this clear gap in the research it would therefore be highly beneficial to carry out a MBSR intervention with teenage girls in their school setting. There was also a notable lack of studies which used mainly qualitative research with adolescents (ie studies with a major qualitative and minor quantitative research design).

This research study intended to explore teenager’s experiences of mindfulness from their perspective and to examine how an intervention of this nature can be used to treat issues arising from school related anxiety.

## 2. 9 This research study proposes to explore the following questions:

1. Can a school-based mindfulness intervention lead to significant changes on measures of mindfulness, wellbeing and anxiety?
2. What do young people report are the outcomes of a school-based mindfulness intervention in terms of dealing with school-related anxiety and stress?
3. What are young people’s views on using mindfulness techniques on a day-to-day basis when they are experiencing anxiety and stress in school?
4. How do staff in school view the impact of the mindfulness intervention for a group of Year 10 students for whom anxiety has been an issue in the previous 12 months?

# Chapter 3

**Methodology**

## 3.1 Overview of this chapter

This chapter sets out the methodological design used in this study and it discusses the general epistemological position and the specific paradigm that underpins this research. Issues of the role of the researcher and reflexivity are discussed in detail. The chapter outlines descriptions of instruments and methods used in the collection of data, these include the range of quantitative measures and the use of a focus group at the end of the intervention and semi-structured interviews. The chapter also includes the research questions under investigation throughout this study and there is a careful consideration of the potential ethical issues which may arise from a study of this nature.

## 3. 2 Epistemological and theoretical framework

It is important to consider that psychology researchers tend to approach their studies with a particular paradigm or world-view in mind, and this influences how they select both the questions they explore and the methods they use to study them (Cresswell, 2003). Furthermore, research questions can drive the design of a study (Robson, 2002) and in the present study such questions can be explored rigorously through the use of both quantitative and qualitative measures. It is important that researchers assume a position or paradigm before undertaking a research proposal. A paradigm is underpinned by its ontological and epistemological assumptions and different paradigms are comprised of different ontological and epistemological views (Allen, 2006). These different assumptions are reflected in the methodology that will inform the present research study (Scotland, 2012).

In this study the researcher is taking a critical realist perspective. Critical realism bridges the gap between believing in only one fixed reality (positivism) and believing no real world exists beyond ways chosen to describe it (constructivism) (Scott, 2005). This perspective believes that there is a reality, but this can only be known imperfectly and with a degree of probability within the researcher’s limitations (Mertens, 2005). The researcher's view is that it is not necessary to follow either purely post-positivist or purely social constructionist routes in order to ‘discover’ knowledge. This study shall incorporate both elements which will suit the aims and purpose of the research. From this perspective, researchers are not bound by ‘scientific’ objectivity as participants’ subjectivity can indeed count as knowledge too. As Robson argues, the positivist paradigm does not fully capture ‘the real meaning of social behaviour’ (2002, p.23). It is very important that participants are regarded as unique individuals and this is in accordance with the constructivist paradigm which places a great deal of emphasis on how the participants can ‘construct’ reality (Robson, 2002).

Positivists deal with quantitative data whereas constructivists and social constructivists focus on qualitative data. Critical realism aims to find a balance between experimental methods used by positivists and the more subjective methods which are commonly used by constructivists. Critical realists tend to conduct research in a range of natural settings rather than artificial setting. This can indeed offer an adequate way of approaching open, real life situations (Robson, 2002). Critical realists differ from pragmatists, as rather than choosing any method to suit the purpose, critical realists believe that qualitative research offers opportunities to explore what is happening within the real world. A mixed methods design was felt to be beneficial in the present study in order to incorporate a range of measures alongside a thorough qualitative exploration of that reality’s mechanisms within a social context.

This research will take a critical realist position because in research in educational psychology there is often felt to be a need for an element of empirical ‘proof’, which mainly occurs through evaluating interventions quantitatively. At the same time, the researcher is aware of the importance of the socially constructed environment and the ‘rich picture’ which can be gained through the use of qualitative methods, i.e. focus groups and semi-structured interviews. Educational psychologists seek to explore what has happened, why it happened, how the participants felt, what worked well and what could be changed in future interventions. The critical realist paradigm therefore suits the research aims of this study as there is a need to evaluate the ‘reality’ of a school based mindfulness intervention in this particular context of teenage girls experiencing school related stress and anxiety. The research is also looking to identify factors or mechanisms that can work to reduce negative behaviours resulting from stress and anxiety.

It is important to consider that our understanding of this world is inevitably a construction from our own perspectives and views (Putnam, 1990). There is no possibility of attaining a single, ‘correct’ understanding of the world. Critical realists try to know about reality by using different methods (triangulation) which might lead to a certain level of agreement about reality. Both qualitative and quantitative methods can be effectively employed to discover reality. Furthermore, Morgan (2007) states that researchers can combine qualitative and quantitative methods without violating philosophical principles. He argues that there are things that quantitative research cannot accomplish alone but would be possible through the use of mixed methods.

## 3.3.1 Design of the study

As mentioned in the previous chapter, this study aims to explore the possibility that the implementation of a mindfulness intervention (MBSR) with teenage girls could decrease the negative behaviours displayed by them in relation to school related anxiety. An exploratory mixed methods design was considered the best option for this type of research. This involved a sequential data collection. Quantitative data was collected before the intervention took place and at the end of the intervention; qualitative data was collected at the end of the follow up phase of the study (see appendices B-E). A range of measures were used: The Mindfulness Attention Awareness Scale (MAAS) (2003), Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (2008) and The Spence Children’s Anxiety Scale (SCAS) (2003). The mindfulness intervention devised in this research study incorporates MBSR techniques and it also includes a number of exercises that are based on Biegel’s (2009) Stress Reduction Workbook for Teens. The structure of the MBSR will now be discussed in further detail (also see appendix F for a week by week overview of the activities and resources used in each session).

## 3.3.2 MBSR intervention

The mindfulness based stress reduction intervention used in this study combined a range of activities from the MBSR programme developed by Dr Jon Kabat-Zinn at the University of Massachusetts Medical Centre and a number of exercises were taken from Biegel’s (2009) Stress Reduction Workbook for Teens. The intervention itself was carried out over 8 sessions (over a period of 8 weeks) each lasting between 50-60 minutes. Each session had the same basic structure – starting off with a range of breathing techniques followed by exercises taken from Biegel’s stress reduction workbook for teens (see appendix G) and a structured mindfulness activity (see appendix H for some examples of the scripts used and appendix F for the structure of each session). At the end of each session participants were given the opportunity to provide feedback on their involvement in the intervention and also to outline how they had used mindfulness techniques in their own private practice since the last session (see reflective diary excerpt appendix Q).

## 3.3.3 Research participants

A non-probability sampling strategy was used in this study and the sample was chosen out of convenience. Participants were selected from one secondary school within a Local Authority in South-East London in which the researcher was on a two year professional placement. The researcher was familiar with this school as she had already worked there for 12 months as the school’s educational psychologist. The decision was made to only include Year 10 students for whom school related anxiety and stress had been an issue over the last 12 months as it was felt that students would have the necessary skills to take part in an intervention of this type and to complete the range of self-report measures. These Year 10 students did not have GCSEs coming up that term so they were able to take time out of their lessons once a week to take part in the group intervention.

The school SENCo and a number of form teachers were made aware of the study initially (see timeline appendix I) and they selected potential students and then passed on the relevant details to potential participants. Students were then asked if they would be keen to be involved in the study and for those who were not selected for the main study the researcher offered a shorter mindfulness intervention at their school at the end of the summer term. The study did not include students with a range of additional needs as it was felt that they would struggle to access parts of the intervention without additional help. This decision was taken mainly because the researcher was the only adult who was involved throughout the study, this was also influenced by time constraints and limited amount of resources.

School staff selected 16 students who they believed were likely to benefit from the intervention. Out of this initial group of 16 students only 5 actually had school related anxiety (see appendix J for the list of students and the reasons why the school SENCo and form teachers felt they may benefit from involvement in the study). A number of the original participants in this sample were encouraged by their form teachers to become involved in the intervention as their school attendance was low and the school had contacted their families in relation to this. Staff felt that involvement in a therapeutic intervention of this nature might encourage them to raise their attendance and staff hoped they could reflect on the impact their absence had on their performance in school. It was, however, clear after the first session that unfortunately these students did not want to be involved in the intervention. They were not intrinsically motivated to take part and they mentioned on a number of occasions that they were encouraged to join in order to ‘stay out of trouble’. Their presence in the group caused some difficulties for other members who were identified by staff as students who have experienced school-related anxiety over the past 12 months. In private, these students mentioned to the researcher that they would prefer if they could be involved in the intervention without those who were not genuinely interested. They were concerned as they struggled to be open about their difficulties and they felt they could not be fully ‘mindful’ as those who were less interested were talking and laughing during some of the activities (see reflexive note appendix Q).

The researcher immediately spoke to the school SENCo and the sample was reduced to 5 in order to cater for these students who had experienced school based anxiety. The other 11 students who did not continue with the intervention i.e those who were not genuinely motivated to take part and those who did not recently experience school related anxiety were asked if they would like to get involved in a shorter intervention at the school at the end of the summer term, this group were reluctant to do so and therefore this second intervention did not take place out of limited interest from students.

## 3.3.4 Pilot phase

The MBSR intervention and the quantitative measures went through a piloting phase. The intervention itself was piloted one month before it was due to start. This time gap was beneficial in order for the researcher to make necessary changes and adjustments based on feedback from the students involved in this part of the research (see appendix K). The pilot phase for the intervention and the various quantitative measures was carried out with 10 female participants who were not involved in the main research study. These students were selected by the school SENCo and the pilot session took place in the secondary school. This started with a 40 minute MBSR session which consisted of a brief overview of mindfulness, a number of breathing exercises, body scan and a short seated meditation.

The researcher took a range of notes throughout this session in order to gain insight into how open and responsive the participants were to the exercises. This was a useful opportunity to think about the setting itself and the available space and resources which were on offer (see reflective note appendix Q). After the guided mindfulness meditation participants were offered the opportunity to give immediate feedback on the experience and to discuss any changes they felt might be beneficial for future sessions. Participants then got the opportunity to take a look at the three quantitative measures and they used this opportunity to highlight any phrases/questions they found difficult to understand (see appendix Q).

The researcher felt that this was a useful and highly beneficial part of the research process. Through this pilot phase the researcher was aware of a number of elements of the intervention which some participants found particularly challenging. The students made a number of suggestions about where they were positioned in the classroom, the length of the meditation exercises and the nature of the mindfulness exercises they were encouraged to continue working on at home. This feedback was used in order to make a number of changes to the eight week MBSR intervention (see appendix K and appendix Q for notes taken during this part of the study).

Following the pilot phase, the researcher spent a considerable amount of time making changes to the MBSR intervention with the feedback from a number of students. For instance, feedback from this phase indicated that the participants felt that there was too much being ‘crammed’ into one session. The researcher then decided to remove a number of short exercises as it was felt that having sufficient time to complete a full mindfulness activity was more important than addressing a range of sections from Bigel’s workbook (see appendix H).

## 3.3.5 Qualitative measures in this study

One focus group at the end of the MBSR intervention (see appendix E) and semi-structured interviews with all participants and member of the school staff were used in this study in order to explore the effects of mindfulness in relation to students who experience school-related anxiety.

*The interview process*

Initially the researcher was hoping to interview the participants immediately after the end of the intervention and then in the follow up phase (see appendix L). Unfortunately this was not possible due to time constraints and a decision was made to use a brief focus group at the end of the intervention and to then interview the students a few weeks later at the end of the follow up phase in order to gain insight into their use of mindfulness outside of the group intervention. As mentioned previously, the questions which were planned to be included in the final interviews went through a piloting phase with students who were not involved in the study. This was extremely important in order for the researcher to gauge the length of time needed for each interview. It was also useful in order to gain insight into the amount of information the questions would generate and whether this data generated from each interview could be used to complete thematic analysis. The feedback at the end of this short pilot session proved highly beneficial for the interviews which took place in the follow up phase especially as there were time constraints for interviewing each participant. At the end of the follow up phase a number of school staff were interviewed (see reflective note appendix Q and appendix M).

The interviews with the students were short, semi-structured each lasting approximately 20 minutes maximum. The interview itself had predetermined questions (see appendix L) with fixed wording and a pre-set order, based on modifications made from the initial pilot study of the interviews. During the interview process the order of the questions was at times modified as some pupils left questions out and came back to them. In some instances further explanation was required in order to clarify exactly what the question was referring to. All the questions were phrased in a clear, non-threatening way.

The following outlines the format of the interview:

1.Introduction

2.Warm-up

3.Main body of the interview

4.Closure

Pupils were interviewed individually in a separate classroom. A tape recorder was used to record their responses and permission to tape record the interview was granted at the beginning of each interview. All pupils were assured that their responses would remain confidential and that only the researcher would listen to the taped format of the interview, the students were also made aware that a peer researcher would view the transcripts of the interviews in the analysis phase. Providing this level of assurance was vital in order to initially set pupils at ease as it contributed to the informal nature of the interviews this also complies with BPS regulations for research.

The interviews generated rich and highly illuminating material. All the interviews were transcribed (see appendix N) and individually coded (see table 2 for details of the coding process) this initially involved assigning each particular theme with a number in order to easily identify patterns across all of the interview transcripts. Inductive interview questions were used as the researcher felt it was important to allow themes to emerge from the semi-structured interviews.

## 3.3.6 Reliability of the Qualitative data:

As mentioned earlier it was extremely important to carry out pilot interviews with other students who were not participants in the research study. The interview questions were then reviewed and adapted based mainly on the feedback from this pilot phase (see appendix K). Trustworthiness of qualitative data is extremely important. Robson (2002) highlights the importance of asking appropriate questions, being a good listener, being adaptive and flexible, having a good grasp of certain issues and being aware of the issues of bias whilst carrying out research. Validity in research can be increased by audio taping, taking good quality notes and charting the steps through which interpretation has been made, this is also extremely useful in order to justify how interpretation has come about (Robson, 2002) (see appendix Q).

## 3.3.7 Trustworthiness of the qualitative data

The qualitative data in this study was recorded by audio-tape and thematic analysis was then used for interpretation. To ensure inter-rater validity, the researcher interpreted the data and then asked a peer researcher to separately code and interpret the data. After this was complete they met to go through their interpretations and codes and identify similarities and differences. This proved highly useful in order to ensure that the researcher was being systematic in their analysis and in the way in which they were generating codes in a clear manner in order to represent the data set and the various responses from the students involved in this study. As mentioned earlier, the researcher was aware of the need to be reflexive about their role in the data collection (see excerpts from research diary appendix Q for reflections on the coding process).

## 3.3.8 Quantitative measures used in this study

In order to explore the levels of well-being, anxiety and mindfulness in the participants before and after the MBSR intervention took place three measures were used in this study (see appendices B, C, and D). The Warwick Edinburgh Mental Well-Being Scale (2005) was used to measure mental well-being in the students. Spence Children’s Anxiety Scale (2003) was utilised in order to measure levels of anxiety and the Mindfulness Attention Awareness Scale (2003) measured the levels of mindfulness for each of the participants before and after the MBSR programme took place. Each measure and their corresponding levels of validity will be further discussed later in this chapter.

## 3.3.9 Reliability of the quantitative data

Robson describes reliability as ‘the stability or consistency with which we measure something’ (2002, p.101). Unless a measure is reliable it cannot be valid, however, reliability does not automatically ensure validity (Pallant, 2008). In the present study a number of measures were administered in order to assess well-being, levels of anxiety and mindfulness before and after the MBSR intervention took place. Robson (2002) points out that relying on only one way of measuring or gathering data is likely to have some shortcomings, therefore, the researcher felt it would be highly beneficial to incorporate a variety of measures into the quantitative phase as opposed to narrowing the focus by relying on just one measure.

*Validity of the quantitative measures*

Mindfulness Attention Awareness Scale (MAAS) was created by Brown and Ryan (2003) in order to measure mindfulness. It is widely regarded as a well-established tool and has previously been used in a number of studies. (Chambers, Gullone & Allen, 2009; Foder & Hooker, 2008). Brown and Ryan found that high MAAS scores are associated with ‘higher pleasant affect, positive affectivity, vitality, life satisfaction, self-esteem, optimism, and self-actualisation’ (Brown & Ryan, 2003, p.832). It is a 15 item self-report measure of present moment attention and awareness. In the present study participants were asked how frequently they encounter the experience described in each item, their response is on a 6 point Likert type scale (see appendix B). Brown and Ryan highlight that the scale has good internal consistency and temporal stability. The validity of the scale has been further demonstrated from administration with Zen practitioners who score significantly higher on the MAAS in comparison to a control group (Roemer et al, 2002).

The Mindful Attention Awareness Scale (Brown & Ryan, 2003) differs in its origins from other mindfulness measures as it was derived from “historical and contemporary Buddhist scholarship on the subjective nature and behavioral expression of mindfulness and also from clinical theory and research on the practice and enhancement of mindfulness” (Kabat-Zinn, 1990, p.88). The MAAS was developed with guidance from teachers and students who engage in mindfulness on a regular basis (Carmody, 2009). Previous studies have found that MAAS scores have also shown significant increases over the course of MBSR training (Shapiro, Brown & Biegel, 2007). The MAAS (see appendix B) takes an indirect assessment approach, in that items refer to the absence of mindful attention in various circumstances (Brown et al, 2011). It is considered to be a valuable instrument with high internal consistency, test-retest reliability, both concurrent and incremental validity. A number of studies reveal that MAAS scores have been correlated with cortical and limbic markers of emotional reactivity (Rueda et al, 2004; Greeson, 2009).

The Warwick-Edinburgh Mental Well-being scale (WEMWBS) is a well-established tool for the assessment of well-being and has been used frequently since its development in 2005 (see appendix C). It consists of 14 items answered on a 5 point Likert scale. The scale focuses on all positive aspects of mental health. Huppert et al (2010) report good reliability scores (Cronbach’s alpha of 0.745 – 0.830) and it has been shown to have good validity, internal consistency and strong test-retest reliability from administration with a large sample of students. Cronbach’s Alpha was used as an indicator of internal consistency for all the scales. This measure of internal consistency examines the degree to which the items that make up each scale ‘hang together’ (Pallant, 2008). In the present study, all the Cronbach alpha coefficient values of each scale were above .8 which is deemed as highly reliable, this is in line with Howitt and Cramer’s (2008) recommendation that a scale must have at least a minimum Cronbach alpha value of .7.

Spence Children’s Anxiety Scale (SCAS) (Spence, 2003) is a self-report measure of anxiety which consists of 44 items, 38 of the items assess specific anxiety symptoms and the remaining 6 items act as positive items used in order to reduce a negative response bias (see appendix D). Spence et al (2003) report high internal consistency and satisfactory 12 week test retest reliability from a large sample of students. Furthermore, they also found that the SCAS correlated strongly with another well-known frequently used anxiety measure. Hayes (2000) highlights that there are a range of advantages from using a Likert scale. This type of scale can be utilised in order to express agreement or disagreement with a particular statement. It can cope with different strengths of opinion and it is particularly useful if a participant has no opinion at all about a particular topic. Robson found that participants ‘often enjoy completing a scale of this kind’ (2002, p.293). This is especially important when conducting research with teenagers who understandably can easily become bored whilst filling in a number of scales which at the time may also appear to be pointless to them.

## 3.4 Triangulation

In the present study data triangulation, the use of multiple sources to enhance the research (Robson, 2002), was effectively used through the combination of qualitative and quantitative approaches with students and school staff. This was highly useful in order to counter all threats to validity and to gain insight into a range of views from a range of people involved in the study (Miles &Huberman, 1994). It is however important to note that there is some risks involved in collecting data from a range of participants as it can indeed open up discrepancies between a variety of sources (Robson, 2002). Triangulation took place through the use of a number of self-report measures, semi-structured interviews and one focus group with the students. At the end of the follow up phase interviews were carried out with school staff in order to gain insight into any changes they had noticed in the participants in school since they had been using mindfulness.

## 3.5.1 Analysis of data

During the research proposal stage the researcher considered a range of ways to analyse the data. It was clear that a rigorous analysis of the data was necessary in order to fully capture the experiences of the students in the study and to explore the ways in which they were able to use mindfulness to deal with school-related anxiety. Interpretive Phenomenological Analysis (IPA) was initially considered mainly because it can be effectively used to offer great insight into a participants’ lived experience and it is useful in exploring how they themselves can try to make sense of some form of phenomenon (Hayes, 2012; Butler, 2011). The researcher had previously successfully used thematic analysis to analyse data for their Mphil dissertation, they were therefore more familiar with this method and felt that this level of familiarity was vital in order to ensure that a thorough analysis of the data took place. The peer researcher involved in the analysis phase was also more comfortable using TA over IPA, therefore it was felt that the best decision would be to use TA to analyse the qualitative data from the interviews with the students.

The researcher also felt that due to the fact that they were carrying out the intervention alone and as they were in charge of all other aspects of the study they would not have enough time to learn about a new research method from ‘scratch’. The researcher also considered that another difficulty with using IPA would be the 'workload' for the participants who are already being asked to to practice mindfulness at home on a regular basis. This is in addition to their existing coursework commitments. The researcher was also concerned that there was a risk that this participant group may not be able to sustain sufficient interest in order to be able to complete diary/blog entries across the time span in this phase of the study. It was felt that TA would be a more appropriate tool for analysis as it would be highly beneficial in order to gain a general view of the impact of the intervention and the themes that emerged as important for the group as a whole.

## 3.5.2 Thematic analysis

As mentioned previously, the qualitative data in the present study was interpreted by thematic analysis (TA). The researcher followed the six steps for TA (Braun & Clarke, 2006) and this was used with the transcribed data from the students in order to discover the common and unique themes expressed amongst these participants.

The following steps were used by the researcher:

* + - 1. Familiarity with the data.
      2. Generate codes
      3. Search for themes
      4. Review themes
      5. Define and name themes
      6. Final analysis and write up

TA was found to be highly beneficial in order to provide a framework within which to analyse the data and identify the themes within it. A theme can “capture something important about the data in relation to the research question” and it also “represents some level of patterned response or meaning within the data set” (Braun & Clarke, 2006, p.82). This type of analysis is popular and used in a range of studies mainly because it is widely viewed as an accessible and flexible approach to the analysis of qualitative data (Miles & Hyberman, 1994).

Braun and Clarke (2006) highlight that TA “should be seen as a foundational method for qualitative analysis’’. It can be used in qualitative research in order to identify, analyse and report themes within data. It can also be an effective tool used to organise data into ‘rich detail’. Additionally, it often goes much further than this and it can be used in order to interpret various aspects of the research (Boyatzis, 1998). Thematic analysis seeks to describe patterns across qualitative data. It benefits from the fact that it is not wed in any pre-existing theoretical framework – so it can therefore be used within a range of different theoretical frameworks (Brown, 2008). It can be viewed as a realist method, this therefore fits in very well with this research study as it can be used to report experiences, clarify and explore meanings and the reality of participants’ experiences within the intervention. There are clearly a wide range of benefits from using TA and it is widely regarded by researchers for its level of flexibility. Through its theoretical freedom it provides a flexible and useful research tool, which can ‘potentially provide a rich and detailed yet complex account of data’ (Braun & Clarke, 2006, p.83), furthermore it allows the researcher to determine a range of themes and prevalence in a systematic manner.

## 3.6.1 Role of the researcher

The researcher was heavily involved in all aspects of this study. From initial consultations with staff and students, to carrying out the pilot study, making relevant changes to the intervention, implementing the intervention over a period of 8 weeks, distributing the pre and post quantitative measures and conducting the interviews with students and staff in the follow up phase. Due to the level of involvement it was crucial that the researcher kept a research diary throughout each part of the study and this was updated on a regular basis (see appendix Q for excerpts from this diary). The researcher had previously used mindfulness on a regular basis to deal with stress and anxiety and they found it highly beneficial to record all prior assumptions they held at the start of the study. The next section shall outline the importance attached to being reflexive, which is particularly relevant to a study of this nature.

## 3.6.2 Reflexivity

Mosselson (2010, p.108) posits that reflexivity in the research process “can not only enhance the ethical integrity of the research but also enhance both the research process and the analysis and interpretation of the data’’. It is crucial that we must always remember to take into account our own beliefs, views and values:

*‘the researcher filters the data through a personal lens that is situated in a socio-political and historical moment. One cannot escape the personal interpretations brought to qualitative data analysis’* (Creswell, 2009, p. 408).

Finlay (2002) highlights the importance of being reflexive while carrying out research and King (2004) describes reflexivity as ‘the recognition of the involvement of the researcher as an active participant in the research process which shapes the nature of the process and the knowledge produced through it’ (2004, p.98).

In the present study the researcher spent a considerable amount of time writing down their own assumptions and beliefs at the start of the process in their research journal (see appendix Q). This was not only highly beneficial for their own development, it was extremely important to do so in order to be as transparent as possible and to identify potential areas for role conflict. Researchers highlight that through doing so it is possible to reflect on the ways in which feelings can affect neutrality and be aware of any blocks/difficulties that could occur in the process of carrying out research (Scott, 2009; Creswell, 2012). In order to be as reflexive as possible the researcher felt it was crucial to start to make notes in a reflective journal from the beginning of the research proposal phase right up to the end of writing the final thesis. For instance, the researcher regularly reflected on the way in which their presence during the MBSR intervention and in the quantitative and qualitative data collection phases may have affected responses offered by the participants e.g. they may have felt it was necessary to give more ‘socially desirable’ response (Quint, 2009). This process was a highly important component of this research study, especially in attempting to counteract researcher bias. Roemer and Orsillo (2002) define researcher bias as the assumptions and preconceptions that the researcher may bring to the study and they highlight a range of implications such bias may have on methodological validity (see reflexive note appendix Q).

## 3.7 Feedback

Due to time constraints and the secondary school SENCo not being available at the end of each weekly session due to their teaching commitments in school, the researcher felt it would be easier to deliver feedback to the SENCo after the first, fourth and final session of the MBSR intervention. At the follow up phase when the interviews were complete the researcher gave feedback to other members of the staff. This was highly important as it offered a good opportunity to allow the staff to see the benefits of implementing this type of therapeutic intervention in school. It also became a good opportunity to inform the school staff about some of the difficulties these students have been experiencing in relation to anxiety levels. Unsurprisingly, staff were not fully aware of the wide range of difficulties these students face on a day to day basis as they do not have enough time to work with these students in a small group setting or on a one-to-one basis (see reflective note appendix Q). This feedback was highly useful for all involved in this study and the staff at school now recognise the importance of talking with pupils who experience stress and anxiety on a regular basis, where possible. They are now also more aware of the implications these stressors can have on concentration, attention and academic performance in school.

## 3.8.1 Data analysis

When all the interviews with staff and students were complete the researcher first analysed the quantitative data using a SPSS package at the University of East London. After this they spent a considerable amount of time analysing the qualitative data from the focus group and the interviews which were carried out with students and staff.

## 3.8.2 Quantitative data

Quantitative data analysis started off with descriptive statistics then moved on to inferential statistics. The quantitative data was initially used for baseline comparison and the differences between pre-test and post-test scores were compared in a table (see tables 3, 4 & 5). Wilcoxon signed-rank test was used as the inferential statistic. This statistic was used in order to assess the differences before and after the mindfulness intervention took place. In order to enter the quantitative data into SPSS it was necessary to generate codes for each item on the measures and these were then added together and entered manually into an SPSS programme at the University of East London. After entering all the pupils’ scores into SPSS, descriptive statistics were used to assess the normality of the distribution of scores before analysis was conducted (see figures 2-8). Correlation assessed the relationship between all variables, this was followed by Wilcoxon Signed Rank test which the researcher felt was the best statistic to use in relation to the sample size in order to compare the findings from the pre and post test measures completed by the students.

## 3.8.3 Qualitative data

Attride-Stirling (2001) highlight that qualitative psychologists need to be clear about what they are doing and why they are doing it while conducting a research study. The researcher was aware at all times of the importance of keeping detailed notes outlining the way in which they analysed their data (see reflective diary appendix Q). It is widely held that it is important to be transparent at all time when analysing data and also being clear about the range of assumptions that informed the analysis process (Creswell, 2003)

If this is absent it is therefore difficult to evaluate a research study and to compare it with other research studies that cover a similar topic (Attride-Stirling, 2001). Braun and Clarke argue strongly that “clarity around process and practice of method is vital’’ (2006, p.7). They stress that the researcher must take an active role in this process and not just simply report the themes which have ‘emerged’ from the data. The researcher was therefore acutely aware of the need for a thorough analysis and on-going dialogue. They did so by reflecting back on what they did and justifying their actions and their thinking process throughout the analysis (see reflexive note appendix Q).

As mentioned earlier in this chapter, the interviews with students and staff were recorded with a tape recorder. The researcher spent seven full days listening to the recordings and transcribing the data. This was a time consuming process but the researcher felt it was beneficial in providing an opportunity to increase levels of familiarity with the findings for each participant (see reflective note appendix Q).

The researcher followed Braun and Clarke’s guidelines to generate codes within the data in order to search for themes. In order to do so they went through each transcript a number of times and then began the process of coding. As the researcher read each transcript they made notes in the margins as they went along. As the coding process continued some codes then required further differentiation, and others were also combined to make them more ‘conceptually inclusive’ (Miles & Huberman, 1994). Lincoln and Guba (1985, p.350) discuss a variety of coding procedures which can occur as a coding structure develops. The researcher found it useful to use the following:

‘Filling in’: reconstruction of a coherent scheme as new insights materialize; ‘Extension’: re-interrogation of material previously coded;  
‘Bridging’: identification of new relationships within categories; and

‘Surfacing’: identification of new categories.

Coding continued until the researcher felt satisfied that all data had been properly classified, they also felt that a sufficient number of regularities had been identified and categories had been ‘saturated’ (Miles & Huberman, 1994).

As a large number of codes were generated the researcher felt it would be highly beneficial to cut out the data manually and group it together on large sheets of paper in order to create themes and sub-themes. This proved to be a lengthy process (see reflexive note appendix Q), however, it was felt that spending additional time during this part of the analysis would be beneficial in the long run and high levels of familiarity with the data would help with the writing of the findings and discussion section of the thesis. During this process it was extremely important for the researcher to immerse themselves in the data where possible. However, the researcher was also acutely aware of the need to take a step back for a few days and return to it with a ‘fresh mind’ and some clarity (Braun & Clarke, 2006).

As mentioned earlier the researcher then asked a peer researcher to spend time separately going through a selection of the transcripts in order to look out for possible themes and sub-themes (see reflective note). The researcher made the decision not to mention any of the existing themes which had emerged from the data as it was felt that it would be more beneficial if the peer researcher could analyse the data without any pre-existing scheme and codes in mind (Breakwell & Rose, 2000).

This proved to be highly useful particularly because the peer researcher was able to identify a theme that the researcher had not considered. This was also a valuable opportunity to share ideas about naming and reviewing the themes which had already been identified in the initial phase of analysis (see reflective note appendix Q). Overall, there generally was equal agreement on the codes which were identified during this process, interestingly the peer researcher offered a number of useful ways to rename some of the sub-themes in a succinct manner which had not been previously considered by the researcher. As this was a lengthy process the peer researcher also felt it was beneficial to leave the qualitative data for a few weeks and then go back to it with a fresh outlook. This was found to be useful in order to fully consider if the code they assigned to the data and the themes that had already been generated were appropriate and fully reflect the experiences of the participants involved in the study.

It was vitally important to be systematic and thorough at all times throughout the analysis. This was especially important considering the large amount of data generated from the focus group and the students’ interviews (see reflexive note appendix Q). The researcher found that it was easier to spend time reading through everything a few times and then return to add codes to the data (see thematic map, figure 1) in order to avoid becoming overwhelmed by the enormity of the data. It was also highly beneficial to instruct the peer researcher to follow the same system and to go through a similar process in order to code the data. This proved to be highly beneficial mainly because it ensured a higher level of validity and transparency (see reflexive note appendix Q).

## 3.8.4 Ethical considerations

UEL ethical approval was applied for in December 2013 and it was obtained by February 2014. No changes or deviations from the initial research proposal were made throughout the duration of the research study. Informed consent from parents and pupils was obtained in advance (see appendix O) and participants were aware of the timeframe in which they were free to decide if they wanted to withdraw from the study without their data being used for analysis. Breakwell (2000) highlights the importance of informed consent and the BPS ethical principles stipulate that researchers should inform participants in psychological research of all aspects that may influence their willingness to take part. Participants need to know that they can withdraw at any time and also that their contributions will remain anonymous unless there are any issues which may arise in relation to their welfare. A consent letter was sent home with each participant providing detailed information about the study (see appendix O). All aspects of this study remained confidential, for example the data collected was given a code and the participants’ transcripts remained anonymous at all times. It was agreed at the start of the study with school staff and participants that any information relating to safeguarding would be passed on to the relevant member of staff. A procedure for doing so was outlined in the initial research proposal and in the ethics application (see appendix P).

As mentioned earlier, anonymity was ensured at all times since the researcher assigned codes and pseudo names to the data collected during all stages in the study. The data was stored in a locked filling cabinet at the researcher’s home. All the data which was gathered from the self-report measures and interviews was destroyed when the intervention was over and after all the data had been analysed. Ethical guidelines issued by the British Psychological Society (BPS) were adhered to throughout the study and the welfare of the participants remained paramount throughout. At all times the researcher maintained respect and dignity for all students and school staff involved in this study, this is in line with HCPC guidelines issued in 2012. The researcher ensured that involvement in the intervention and the measures used to gather qualitative and quantitative data did not put any unnecessary pressure on the participants. The measures used in this study have previously been used in a wide range of studies, and to the best of the researcher’s knowledge they did not cause unnecessary levels of distress. At all times the participants were aware that if they became distressed or upset they could leave the study if they wished to do so. The researcher planned to contact the form tutor immediately, if this was felt to be necessary, and then take advice from them in relation to school procedure in this instance.

## 3.9 Summary of the chapter

This chapter outlines the methodological design of the study, the epistemological position of the researcher, the process of collecting quantitative and qualitative data and the importance of regular reflection and being reflexive at all stages in the study where possible. In the next chapter the qualitative and quantitative findings from this research study will be presented in relation to the research questions under investigation.

***This research study proposes to explore the following questions:***

1. Can a school-based mindfulness intervention lead to significant changes on measures of mindfulness, wellbeing and anxiety?
2. What do young people report are the outcomes of a school-based mindfulness intervention in terms of dealing with school-related anxiety and stress?
3. What are young people’s views on using mindfulness techniques on a day-to-day basis when they are experiencing anxiety and stress in school?
4. How do staff in school view the impact of the mindfulness intervention for a group of Year 10 students for whom anxiety has been an issue in the previous 12 months?

# Chapter 4

**Findings**

## 4.1 Overview of the chapter

This chapter highlights the findings from the present study. Initially the quantitative results will be presented, beginning with descriptive statistics then leading on to an individual examination of each of the scales used and the pre and post intervention findings from the Wilcoxon-signed rank test. The final section presents the observations from the interviews with the students and some of the school staff, which were conducted at the end of the follow up phase. This section highlights the various themes which emerged throughout the interviews. In line with the research design, priority is given in this chapter to the qualitative data generated from the students’ interviews, which provided a range of highly illuminating results.

## 4.2.1 Descriptive statistics

3 self-report measures were used in this research study. These were used to measure the students’ well-being, levels of anxiety and mindfulness, pre and post intervention (see appendices B, C & D).

*Well-being, anxiety and mindfulness scores*

Scores on the Warwick Edinburgh Mental Well-being scale, Spence Children’s Anxiety scale and Mindfulness Attention Awareness scale were added together to give a total score for each scale. Pre and post intervention scores from the whole sample for all scales, are shown in tables 3, 4 & 5.

***Table 3.***

Participants’ pre and post intervention Warwick Edinburgh Mental

Well-Being Scores (WEMWBS)

|  |  |  |
| --- | --- | --- |
| Participant | Pre intervention | Post intervention |
| 1 | 23 | 30 |
| 2 | 26 | 40 |
| 3 | 34 | 38 |
| 4 | 31 | 40 |
| 5 | 24 | 34 |

*Potential range of scores on this scale: 14 – 7*

***Table 4.***

Participants’ pre and post intervention Spence Children’s Anxiety

scale scores (SCAS)

|  |  |  |
| --- | --- | --- |
| Participant | Pre intervention | Post intervention |
| 1 | 71 | 69 |
| 2 | 59 | 56 |
| 3 | 47 | 50 |
| 4 | 64 | 59 |
| 5 | 68 | 65 |

*Potential range of scores on this scale: 0 - 114*

***Table 5.***

Participants’ pre and post intervention Mindfulness Attention

Awareness Scale scores (MAAS)

|  |  |  |
| --- | --- | --- |
| Participant | Pre intervention | Post intervention |
| 1 | 31 | 60 |
| 2 | 38 | 56 |
| 3 | 26 | 60 |
| 4 | 27 | 50 |
| 5 | 26 | 48 |

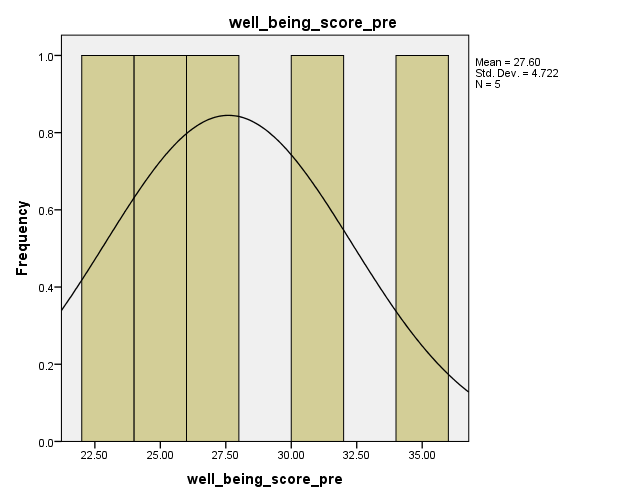
*Potential range of scores on this scale: 15 – 90*

## 4.2.2 Pre-intervention scores

The following section outlines the scores from the questionnaires administered before the MBSR intervention took place with the students.

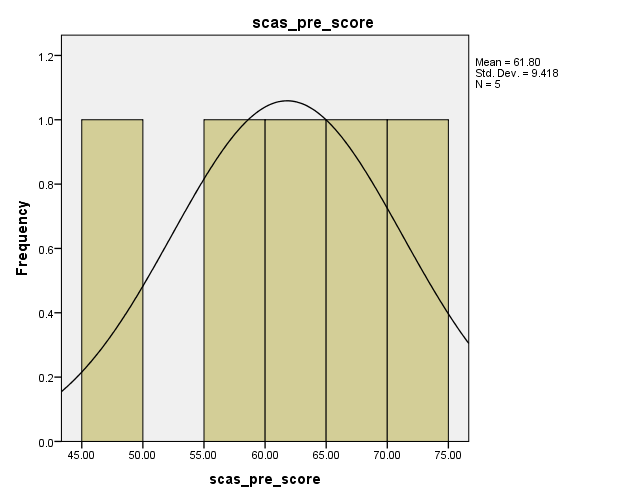
The Warwick Edinburgh Well-being scores ranged from 23 to 34. The mean score was 27.60. The potential range of scores on this scale ranged from 14 to 70 (higher scores indicate higher levels of well-being), scores were negatively skewed (see figure 2)

Figure 2: Histogram displaying scores from the Warwick Edinburgh Mental Well-Being scale (WEMWB)



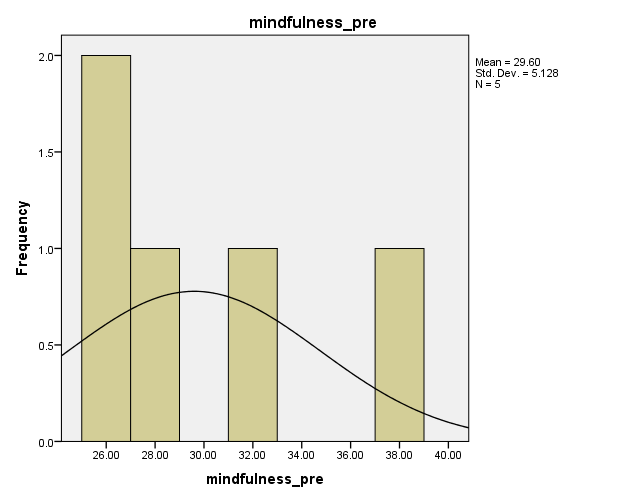
The Spence Children’s Anxiety Scale scores ranged from 47 to 71, with a mean score of 61.80. The potential range of scores on this scale was from 0 to 114, (higher scores indicating higher levels of anxiety) (see figure 3)

Figure 3.: Histogram displaying scores from the Spence Children’s Anxiety scale (SCAS)



The Mindfulness Attention Awareness Scale scores ranged from 26 to 38, with a mean score of 29.60. The potential range of scores in this scale was from 15 to 90 (higher scores indicating higher levels of mindfulness). In this instance the pre-intervention mindfulness scores of the participants were negatively skewed (see figure 4).

Figure 4.: Histogram displaying scores from the Mindfulness Attention Awareness scale (MAAS)

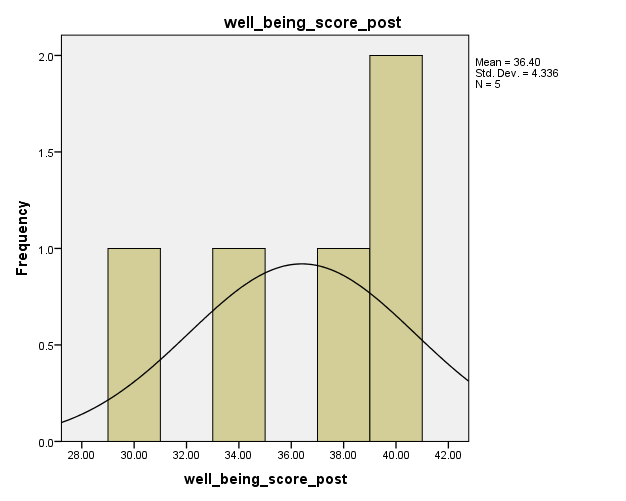


## 4.2.3 Post intervention Scores

**Post intervention scores on the scales administered after the intervention took place:**

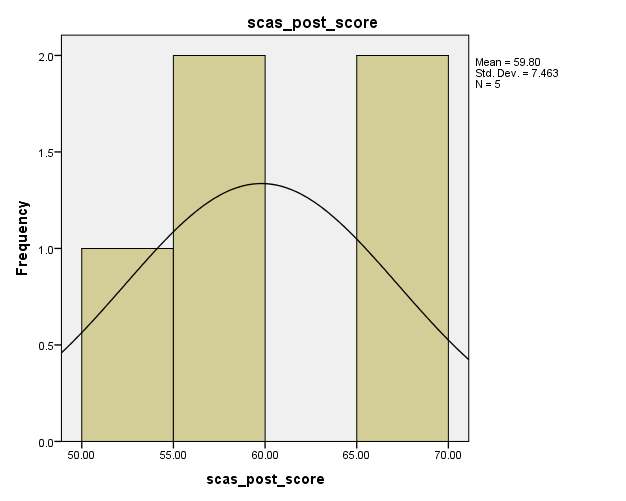
The Warwick Edinburgh Well-being scores ranged from 30 to 40. The mean score was 36.40. The potential range of scores on this scale ranged from 14 to 70 scores were positively skewed (see figure 5)

Figure 5: histogram displaying scores on the Warwick Edinburgh Mental Well-Being scale (WEMWB)



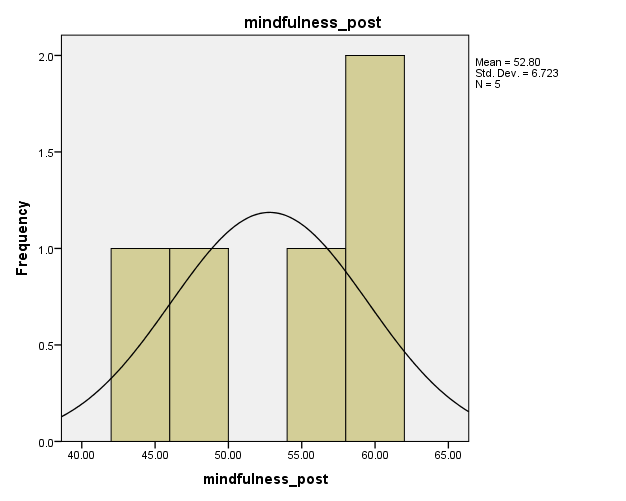
The Spence Children’s Anxiety Scale scores ranged from 50 to 69. The mean score was 59.80. The potential range of scores on this scale ranged from 0 to 114 (see figure 6)

Figure 6: Histogram displaying scores from the Spence Children’s Anxiety scale (SCAS)



The Mindfulness Attention Awareness Scale scores ranged from 44 to 60. The mean score was 52.80. The potential range of scores on this scale ranged from 15 to 90. Scores were skewed in a positive direction (see figure 7).

Figure 7: histogram revealing scores from the Mindfulness Attention Awareness scale (MAAS)



These results therefore reveal that before the intervention took place the students’ scores on the Mindfulness Attention Awareness scale and the Warwick Edinburgh Mental Well-Being scale were negatively skewed.

After the mindfulness based stress reduction intervention took place there was a greater difference in the Mindfulness Attention Awareness scale scores and the Warwick Edinburgh Mental Well-Being score. Scores from the Spence Children’s Anxiety scale reveal that there was a small decrease in students’ levels of anxiety after the MBSR intervention took place.

## 4.3 Inferential statistics

*Wilcoxon Signed rank test*

*Quantitative findings*

**Research question 1:**

**Can a school-based mindfulness intervention lead to significant changes on measures of mindfulness, wellbeing and anxiety?**

*Mindfulness Attention Awareness scale*

Wilcoxon signed-rank test was utilized using SPSS in the University of East London in order to investigate the differences in mindfulness, well-being and anxiety before and after the mindfulness intervention took place.

The Wilcoxon signed-rank test revealed that an eight week, once weekly mindfulness intervention did elicit a statistically significant change in the participants’ self-reported levels of mindfulness ( z= 2.023b, p = .043, p<0.05) (see table 5).

There was a significant difference in scores on the mindfulness awareness attention scale pre and post intervention.

The magnitude of the differences in the means was (eta squared) η2=.08.

(see table 8)

In this instance the results reveal that mindfulness as measured by the Mindfulness Attention Awareness scale differed significantly after the intervention had taken place in school with the students.

**Table 8**

Test statistics for the MAAS pre and post intervention scores using the Wilcoxon Signed Ranks test

|  |  |
| --- | --- |
| **Test Statisticsa** | |
|  | mindfulness\_post - mindfulness\_pre |
| Z | -2.023b |
| Asymp. Sig. (2-tailed) | .043 |
| a. Wilcoxon Signed Ranks Test | |
| b. Based on negative ranks. | |

*Spence Children’s Anxiety scale*

The quantitative data gathered from the Spence Children’s Anxiety Scales reveal that the percentile median score before the intervention took place was 61.80 and after the intervention it was 59.80. The difference between these scores was not significant, z=1.236, p=0.216, p>.05 (see table 6)

This was interpreted by the researcher as there being no measurable difference overall between the participant’s scores (levels of anxiety) before and after the intervention, as measured using the Spence Children’s Anxiety Scale.

**Table 9**

Test statistics for the SCAS pre and post intervention scores analysed using Wilcoxon Signed Ranks Test

|  |  |
| --- | --- |
| **Test Statisticsa** | |
|  | scas\_post\_score - scas\_pre\_score |
| Z | -1.236b |
| Asymp. Sig. (2-tailed) | .216 |
| a. Wilcoxon Signed Ranks Test | |
| b. Based on positive ranks. | |

*The Warwick-Edinburgh Mental Well-being scale*

These results show the percentile median score before the intervention as 27.60 and afterwards as 36.40. The difference between these scores was significant, z=-2.023, p = 0.043, p<.05 (see table 10). This has been interpreted as there being an overall measurable difference between the student’s scores (levels of well-being) before and after the intervention took place, as measured using the Warwick Edinburgh Mental Well-Being scale (see table 7).

**Table 10.**

Test Statistics for WEWBS pre and post intervention scores analysed using the Wilcoxon Signed Rank test

|  |  |
| --- | --- |
| **Test Statisticsa** | |
|  | well\_being\_score\_post - well\_being\_score\_pre |
| Z | -2.023b |
| Asymp. Sig. (2-tailed) | .043 |
| a. Wilcoxon Signed Ranks Test | |
| b. Based on negative ranks. | |

## 4.4 Summary of the Main Findings from Quantitative analysis

* Before the mindfulness intervention took place the students’ scores on the mindfulness attention awareness scale and the Warwick Edinburgh Mental well-being scale were negatively skewed.
* After the intervention there was no significant difference in the students’ post intervention scores as measured on the Spence Children’s Anxiety Scale.
* There was a significant difference in the students’ well-being scores as measured on the Warwick Edinburgh Mental Well-Being scale before and after the intervention took place.
* There was found to be a significant difference in the students’ Mindfulness Attention Awareness scale scores as measured before and after the mindfulness intervention took place.

## 4.5.1 Qualitative findings

*Semi-structured Interviews*

Semi-structured Interviews were conducted with all students involved in the research study and 4 members of school staff after the mindfulness intervention took place. The semi-structured interviews were carried out with the students in order to gain a greater understanding of their views on being part of the intervention and the ways in which they used mindfulness outside of school on a regular basis. The interviews with school staff were used in order to ascertain whether they had noticed any differences in the students from the time in which they started to use mindfulness both in school and at home.

The overall main focus of the interviews was on the outcomes of using a school-based mindfulness intervention to deal with school-related anxiety and stress both inside and outside of school.

\*All names in this study have been changed to pseudo names selected by the researcher after the data was collected.

## 4.5.2 Themes

Through the process of thematic analysis the following 7 key themes emerged from the data:

1. **Ability to prioritise (school work, tasks at home, etc.)**
2. **Reduction in negative thinking patterns**
3. **Ability to deal with stressful events/events as they happen**
4. **Lower levels of stress and anxiety**
5. **Higher levels of self-esteem (particularly in relation to self -confidence/self-efficacy)**
6. **Approach to academic work (subtheme improvements in concentration and attention in class and at home)**
7. **Regulating emotions (subtheme being able to control anger, recognising emotions)**

Higher levels of self-esteem

Lower levels of stress

Ability to prioritise

Approach to academic work

Lower levels of anxiety

Ability to regulate emotions

Reduction in negative thinking patterns

**IMPACT OF SCHOOL BASED MINDFULNESS BASED**

**STRESS REDUCTION INTERVENTION**

## 4.6.1 Themes and subthemes

## 4.6.2 Theme 1:

**Ability to prioritise work**

School work

Ability to prioritise work

Tasks at home

From the qualitative data collected it emerged that a number of students found they could prioritise work in school and activities at home. During the interviews a number of students mentioned that they did not put things off in the same manner as they previously had done:

*Sarah: “instead of continually putting things off I now tend to get on with it rather than avoid doing it like I used to, especially difficult tasks”*

*Jane: “strangely for the first time in a while I now feel more creative,*

*I can use my time to get things done instead of letting negative thoughts come along and take over which sometimes put me off doing homework I was avoiding”*

*Researcher: “Is it just in school you have noticed this?’’*

*Jane: “no, no not just in school, outside of school also (pause), I was able to tackle a messed up situation with a friend who I had fallen out with. I had put this off before……”*

## 4.6.3 Theme 2:

**Reduction in negative thinking patterns**

Staying present

Reduction in negative thinking patterns

Replacing negative thoughts with positive ones

**(a) Staying present:**

Most of the young people who were interviewed talked about a change in their negative thinking patterns.

Claire described how her:

*“mind does not seem to jump ahead as much as it used to”*

She also commented that:

*“I now seem to know more about how emotions can be controlled. Last time I was anxious about stuff I took the time to think about what was it I was feeling, and to think back to what happened that could have led to these feelings”.*

*Researcher: ‘‘Did that help in anyway?’’*

*Claire: “well as I said I tend not to jump ahead as much now. I think less often about ‘what if’ or ‘why didn’t I do that differently’, kind of like, it is like more about accepting things for what they are now”*

*Jane: “When I start to think about bad things happening in school or at home, I try my best to stay present (pause)…. you know like using the breathing exercises we went through in each session”*

Another pupil talked about ‘taking a step back’

*Sarah: “I really don’t think that I have been spending as much time going over some of the stuff that happens at school. Well not as much time as I used to before. It’s almost as if I am taking myself out of all of it, like taking a step back from some of the things I struggle with”*

**(b) Replacing negative thoughts with positive ones**

Liz described how she tries more often now to replace a negative thought with a positive one:

*Liz: “If I have a negative thought, like the other day when I was worrying about the results for my art coursework, I tried to replace it with a positive one, like, I spent time thinking about the amount of work I put into it……”*

*Researcher: “was that useful in anyway?”*

*Liz: “ well in a way yeah. What I mean is that I was trying to think differently, and think of ways in which it could pass and not why it should fail”*

One pupil did not report any reductions in negative thinking. This pupil’s level of ruminative thinking appeared to be present throughout the intervention and she spoke about it in great detail during the follow up phase.

*Diane: “I would say a negative thought could come into my head and it would stay there – it would go round and round without escaping”*

When asked by the researcher if this was in relation to school or outside of school the young person highlighted that this could happen anywhere in

## 4.6.4 Theme 3:

**Ability to deal with stressful events as they happen**

**Subtheme:**

1. **coping with stressful events in school**
2. **coping with stress outside of school**

Coping with stressful events in school

Ability to deal with stressful events as they happen

Coping with stressful events outside of school

This theme and the combined subthemes illustrates comments made by a number of students in relation to the ways in which they cope with stressful events both in school and at home

*Jane: “It is not so much like before when things got too much…. Like when we had a test in class few days back… I try not to let it all get too much… erm, how do I describe it, … I take my time (pause) I go back and use the breathing exercises we went through in here…”*

*Researcher: “anything else that helps in a situation like this?”*

*Jane: “The counting to ten, you know when we try to clear our mind and count up to ten without any other thoughts coming in and taking over. That can help when things become too much especially in school”*

*Liz: “I break things down and try not to rush through it all. As I said, I used this with the coursework that was making me panic and worry. When I stopped* *rushing ahead and worrying over and over about it seemed like it was easier to do, easier to manage and get on with”*

*Researcher: “why do you think you were able to do this?”*

*Liz: “I think it goes back to being present. Like the work we did in our weekly sessions here. Spending time focusing on what I could do with the work and not letting outside stuff and fears take over, well, (pause) erm, maybe not as much as they used to”*

Sarah talked about her experiences in class:

*Sarah: “I try to be calm and present in class, and take my time with stuff. This was hard to do at the start and I remember thinking ‘what is the point?, even if I do try it is not going to make any difference’. I would say that I am glad I tried it more often as I have noticed it can help sometimes, (pause)….. I don’t seem to be caught up as much in the past and in the future”*

## 

## 4.6.5 Theme 4:

**Lower levels of stress and anxiety**

Mindfulness techniques to deal with anxiety

Lower levels of stress and anxiety

Coping with stress more effectively

**Subtheme:**

1. **Coping with stress more effectively**

This theme illustrates comments made by four of the students interviewed in relation to their levels of stress and anxiety since completing the intervention.

*Sarah:**“I would say I have ways to manage stress and deal with difficult emotions*”

*Researcher: “why do you think that has happened?”*

*Sarah: “It is hard to say really…… I think maybe it is just easier now to stop and use the breathing exercises or think about the here and now. Like I spend more time thinking about how I react to (the) things that are going on around me”*

*Researcher:**“You mentioned your reactions to things around you, what has changed?”*

*Sarah:**“…….for me it is about recognising that I can’t control some of the things that are happening around me, like the things that others may say about me. What control do I have over that? (pause) It is like as if I can accept that and focus on myself, (pause) if that makes sense”*

Liz talked at length about making better choices and feeling ‘clearer’ about what she was doing. She mentioned that this was largely due to

*“less time spent dwelling in the past”*

Liz also mentioned that she:

*“felt as if I had some kind of realisation that (dwelling on the past) can take us no where only deeper into negative feelings/despair. I now view my emotions in an entirely different way, I now feel like I am better at thinking, feeling and learning. Like I am ready in a way, whereas before I was not willing or open to any of that’’*

Jane talked about coping mechanisms:

*“This group has given me some valuable tools to deal with stress effectively. I now realise that before I thought I was coping with stressful situations both in school and outside of it but really looking back now I wasn’t coping. I was dealing with things in my own way but not properly and not addressing things the way I can now which is odd for me. Odd to even mention that now as I have been considering that a lot recently”.*

She also describes how she:

*“walked out of each session with a new set of coping skills and I think I viewed my anxiety differently the more I dealt with it and approached it rather than skim over it like I had spent so much time doing over the past few years. I feel I have grown, changed in many ways. In some ways I'm happier, kinder to others, can accept the reasons why some people act the way they do and I think that is because I can accept the way my own mind works and the way I have previously dealt with life when things were not going well”*

Another pupil talked about being kinder to herself and recognising the times when it is necessary to take a step back in order to reduce anxiety:

*Claire: “we talked about compassion towards ourselves in some of the group sessions we did. I do that on a regular basis now as it was time to stop putting myself down so much. I did this a lot (pause) I honestly think it could have caused me to be anxious and worry even more about school”*

Claire also mentioned a significant change which she points out has led to lower levels of stress:

*“I now tend to get less confused and muddled as I see the value of doing one thing at a time rather than multitask, before this that caused me ….errrmmm.. well that would make me get really stressed and then get very little done cos I would be just way too stressed”*

**Subtheme:**

1. **Mindfulness techniques to deal with anxiety**

Students described the techniques they use to deal with stress:

*Liz “I can switch off more now and I find it is easier to clear my mind”*

Sarah describes how she finds it useful to:

*“focus on the present and try to do that as much as I can especially when life is not going well”*

In addition to this, a number of times throughout the interview Sarah highlighted that she is feeling better emotionally:

*“almost like inside I understand myself better and where I am and what I need to do to control my emotions”*

Sarah also mentioned the value of acceptance:

*“I can accept myself and the way that others behave towards me, I have found that its much easier to do so now”*

Jane referred to specific mindfulness activities that have been beneficial:

*Jane: “walking mindfully has been useful when things are not going well at home and I have had another fight with my foster carers. I have removed myself from the situation. I use the activity we did in group on noticing nature and taking time to appreciate what is outdoors instead of spending the evening in my bedroom”*

Researcher: “How else has this made a difference?”

*Jane: “Well for a start I am not sitting in my room stewing about something they (foster carers) have said or thinking about comments from some of the girls in my class”*

Jane also mentioned comments from family members:

*“my foster carers noticed I am more perky”*

and she attributes this to :

*Jane : “Cos I seem to worry less and have better days in school”*

One pupil highlighted that she felt it was easier now to stop the negative feelings from taking over:

Liz: *“I would say before I tried out mindfulness I was like a big ball of stress. I got wound up when things were not going my way and when I felt I wasn’t in control”*

*Researcher: “So has it been like that recently?”*

*Liz: “I would say not as much now as I can focus on the here and now*

*As previously I could not deal with stress, like I said it was put it out of my mind”*

A number of times during the interview Liz mentioned the importance of acceptance:

*“In group we talked about acceptance, like that there are some things in life I cannot change, but in a way with mindfulness I can certainly manage to deal with them and almost endure them in a different way”*

## 4.6.6 Theme 5:

**Higher levels of self-esteem**

Belief in abilities

Higher levels of self-esteem

Taking time to consider strengths

**Higher levels of self-esteem**

**Subtheme:**

1. **Belief in abilities**

Another theme that emerged from the interviews with a number of students was the recognition that they felt better about themselves and they mentioned higher levels of self-esteem:

*Liz: “Well at times I do feel better about myself”*

*Researcher: “Could you give me some examples of times when you feel like this?”*

*Liz: “well I mentioned before about my coursework and not letting the negative thoughts about failing it take over. Instead I spend more time thinking about what I have done well and I try to feel proud of what I have done instead of getting caught up in thinking about all the things that could go wrong”*

**Subtheme:**

**(b)Taking time to consider strengths**

Jane talked about placing higher ‘value’ on herself:

*“After each session I felt much better about myself, like I could take more on, like I am refocused in a way”*

Jane also mentioned: *“In a way I can say that I value myself more (pause) what I do and what I have managed to achieve in school”*

And she outlined her feelings of pride towards what she has achieved through participating in the intervention:

*“I am proud that I made our group sessions every week. Proud that I was able to contribute and open up as I am not really one to talk about how I feel.*

*I realize now that maybe some of the things I have been stressing out about are not such a big deal. For example how others view me or what some of the girls I used to get on with say about me behind my back. I have sort of accepted that it happens and there is not much I can do about it. Acceptance is important, that is possible that most valuable thing I have learned in our sessions together”*

Claire highlights that feeling better about herself came from experiencing lower levels of stress:

*Claire: “my family have mentioned that I am not as tired and as stressed as I was before. I do take better care of myself and I find that I am feeling better about who I am and what I am capable of achieving”*

Claire also mentions a shift from how things were before the intervention took place:

*Claire:**“I was too busy before to even care about myself. Like, what I mean is ermmm… that I was always on the go rushing from one class to another in school, never had the time to think about me and how I felt”*

## *4.6.7 Theme 6:*

Approach to academic work

Concentration levels in class

Approach to academic work

Taking time to complete academic work

**Subtheme**

1. **Concentration levels in class:**

A number of students mentioned throughout the interviews that they had noticed improvements in their concentration levels in class.

Sarah noticed that:

*“it is almost like I have more space in my head now and I don’t think I spend as much time now going back over things that have happened, like I was over-thinking and over-analyising situations”*

Sarah also described how:

*“Its bizarre, I seem to know more now by slowing myself down”*

Claire reports that an improvement in concentration was not immediate:

*Claire: “It didn’t happen right away but I do think my concentration is better now and has been improving as I practice mindfulness more often in private at home”*

*Researcher: “Any times of the day or any lesson in particular?”*

*Claire: “If I could try to explain it in the easiest way possible, it’s like my thoughts aren’t pulling me to the side as much as they had before, especially in maths. I can listen to the class teacher without as much outside interference”*

Another pupil mentioned that she also noticed she could block outside ‘noise’ which led to improved levels of concentration in school:

*Jane: “It is like as if I can hear what the teacher says now, like, emm, I can make more of an effort to ignore the background noise and pay attention”*

*Researcher: “What difference has that made?”*

*Jane: “Through paying attention? Well, it means I can understand what I am being asked to do and I can think more about what I am putting down on paper rather than rushing through it just to get it done and get out of class in time”*

At the end of the interview Jane highlighted that the main benefits of mindfulness for her were:

*“I can concentrate more now*” and that *“mindfulness helped with stress around exam time”*

**Subtheme:**

1. **Taking time to complete academic work**

Liz reports that she spends more time on work both inside and outside of school:

*Liz: “I have found my mind does not wander off as much as it can and as much as it used to. (pause) I can try harder now to get the work done”*

*Researcher: “Is it just in school you notice this?”*

*Liz: “I can think clearer now when I am at home especially alone in my bedroom trying to do my homework”*

Further to this Liz also pointed out a difference in her approach to academic work:

*Liz: “I don’t think that I ever really spent much time considering what I was writing in class. Now I am trying harder, like (pause), trying to be more focused on what needs to be done. I think about what I am being asked to do, what needs to be done and what I can do to do it, if that makes sense to you*”

A number of pupils mentioned improvements in memory:

*Sarah: “I was the kind of person who would walk into a room to get something, I could go in and then have no clue what I was looking for”*

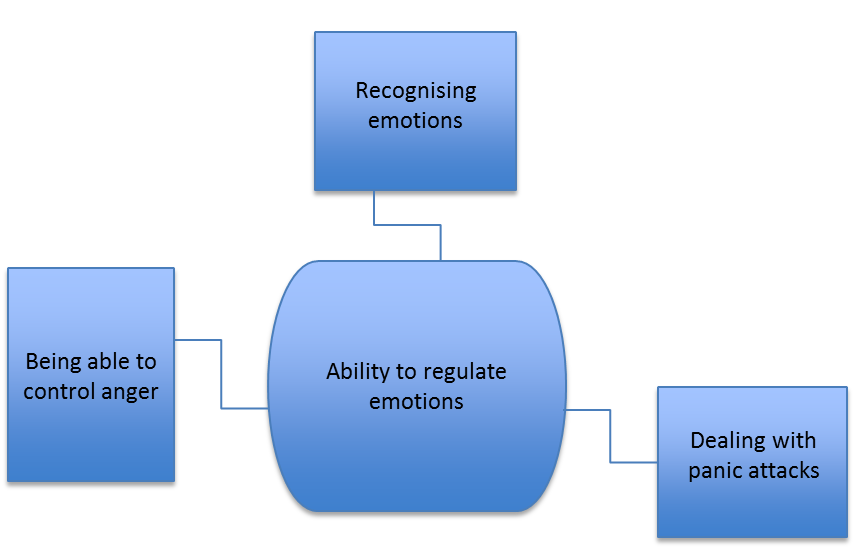
*Researcher: “has that changed in anyway?”*

*Sarah: “yeah, cos I try to be more mindful cos, like, (pause) I know that I wasn’t thinking really about what I was doing”*

*Claire: “now that I think about it, I find it easier in some ways to remember stuff we have learned in class”*

## 4.6.8 Theme 7:

**Ability to regulate emotions**

****

**Subtheme:**

**(a) Being able to control anger**

One pupil mentioned this had previously been an issue for her in school and at home:

*Jane: “I used to see red and straightaway I would react. Happened a lot at home with others saying things to me, that would set me right off”*

*Researcher: “what has changed?”*

*Jane: “well errr, I think. (pause)…. I stop and think. Like as if the red mist has changed”*

Another pupil mentioned how she can regulate her emotions:

*Claire: “I do have anger issues. I try to respond to it differently now. The other day at home I tried to calm myself down, like, (pause) well I could walk away when my step-brother said spiteful things to annoy me”*

Another pupil highlighted how she tries not to let things bother her as much now:

*“when I do get angry with others I don’t feel I let it get to me as much”*

*Researcher: “in what way?”*

*“like when I’m p\*\*\*\*d off with others, I’ll go away count to ten and then go back into the room or just go somewhere else if it is easier”*

Sarah described how she ‘thinks’ more now before she acts in certain situations:

*Sarah: “I think more about what I am going to say and what could happen if I do end up saying something nasty to someone else. Almost as if I can see when it is best to take a step back”*

Sarah was open with how she feels and described how she is:

*“now more equipped in a way to deal with anger and I have noticed I am less agitated”*

Sarah also mentioned that family members noticed a difference:

*“family have noticed that I am a lot calmer now, previously I let my anger and frustration build up, I just could not cope with it, everyone at home could see that”*

When asked how these changes had come about Sarah described how:

*“I needed the open space we had in our group meet ups to address my worries”*

Previously in the focus group Sarah mentioned that:

*“it was good to know that others are going through the same thing”*

Sarah also described how:

*“it was helpful to know that someone cares enough to invest that time with us,*

*I always looked forward to each session as I knew it would be beneficial”*

**Subtheme:**

**(b) Recognising emotions:**

One student commented on the ability to recognise emotions and being able to be open about her feelings:

*Liz: “Before this, I tried my best to hide my emotions, could be the shame for not getting homework in on time or fear about exam time and coursework. I don’t think I realised what I was doing or how I had been feeling if that makes sense”*

*Researcher: “and now, how have things changed for you?”*

*Liz: “well, I think that I am more likely to say that it is ok to be stressed. I can accept it in a strange way and I have noticed that I talk about it and try to think about what has caused me to feel this way”*

**Subtheme**

**(c) Dealing with panic attacks**

At the start of the intervention Sarah talked openly about experiencing panic attacks in school on a regular basis. These attacks happened in class quite often and Sarah described how she needed to leave class in order to go outside and deal with them.

In the focus group Sarah mentioned a reduction in the amount of panic attacks she has been experiencing:

*Sarah: “they (the panic attacks) are not happening as much. When it does happen I find it is easy now to recognise when one is about to start”*

*Researcher: “what has been helpful when this happens?”*

*Sarah: “watching my breathing and focusing on one thing can make a big difference. Like as if I can control my mind in a way, slow it down. In group we spent time together looking at one thing for a long time to control our attention, I did that in class with my pencil (pause), it helped and its something I will use again when I need to”*

Sarah also talked about opening up to others more than she used to in relation to the panic attacks she had previously experienced:

*Sarah: “I would just close off from others”*

*Researcher: “tell me a little more about that?”*

*Sarah: “I mean, avoid some people, I would not talk about what I went through and how it made me feel. I can face up to it more often now, I feel like I have a way to deal with it…..”*

The following section outlines a number of additional themes which emerged from the focus group and the individual interviews carried out with the students. The researcher felt it would be useful to include these interesting findings separately, in addition to those that were covered in the thematic map. This decision was made mainly because they did not constitute a theme in themselves and also because these findings further illustrate the benefits of mindfulness and the ways in which students incorporated mindfulness techniques within their daily routine and activities.

## 4.6.9 The experience of mindfulness

During the focus group at the end of the intervention all participants reported that mindfulness had a ‘relaxing’, ‘calming’ effect on them. Two students talked about feelings of ‘peacefulness’ which they experienced during private mindfulness practice.

-Noticing sounds that are around them more often, for example one pupil reported that they would:

“in class I close my eyes and use some of the mindfulness techniques, this I found useful when feeling stressed during the school day I would use it again when I am doing my exams”

-Another pupil described how they enjoyed closing their eyes and it helped to let the ‘worries drift off’, sometimes I could like feel some of my problems almost ‘melt’ before my eyes.

-A number of students described their new perspective on breathing and the difference it can make in order to help them feel calm and content. It is important to note that mindfulness helps to counteract anxiety by decreasing breathing and the heart rate and encouraging feelings of relaxation

Liz talked about “imagining a calm place in my head, like the time I spent with my family having a picnic in the sunshine without any worries or stress getting into the way”

Another pupil mentioned how they would ‘Visualise clouds and open air’

Mindful counting – visualizing the numbers coming towards me and making out their shape and size was useful when I felt feelings of fear and panic

“my head was just thinking about open space and fresh air and I just had a floaty feeling”

One pupil used some strong imagery to describe their thoughts to being like a ‘flickering flame’:

*“when I have a lot on my mind it is really hard to focus and concentrate, the flame is at its brightest and its strength grows as the thoughts continue”*

Another pupil outlined why they felt they were less distractible:

*“I find when I’m at home and I take time to practice mindfulness meditations, I start to visual sea, calm water, fresh air, peaceful surroundings, leaves on an autumn day …”*

This pupil also described that she feels more alert now – “after each group session I felt I had higher energy levels”, and another student mentioned how they have noticed they feel “much more awake” both at home and in school.

Another student described how it was a “good chance to unwind, it is rare for us to do that in school”

Liz talked about the calming experience of silence – “….Weird taking time to hear birds singing, clock ticking and somehow (pause) in a way that can be very calming”

-One student described the practice as ‘Peace inducing’. Another student talked about their ‘heightened awareness’ about what is happening around them during group MBSR practice both inside the room and outside of the room. They stressed that this was new for them as ‘usually I would never even notice that’

During the semi-structured interviews one student gave a number of brief responses. This student expressed how she has a tendency to feel sad and can struggle a lot with difficult feelings and rumination

When asked to elaborate she was not keen to do so as she was not comfortable in the interview setting. She found the techniques ‘weird’ and too ‘out there’. Although she did highlight the benefit of being part of a group who met on a weekly basis and spent time talking about what was going well in school and strategies that have helped with difficulties during the week in school. She described how in the initial seated meditation she felt dizzy and she did not like that her head was spinning for most of the meditation

It could be argued that these findings are due to the mindfulness intervention itself (see appendix N). She talked about her concern over how others pupils in school would have a mental image of what the group does during the intervention:

*Diane: “They think we sit there humming, sitting with legs crossed over each other”*

Diane described on a day-to-day basis that she is ‘Inundated with thoughts’ she also talked about how “if I push one thought down another comes up again”.

Diane talked about her experience in the group and how she often found there were bad memories ‘coming flooding in’. For example she talked about a fight she had with her family the evening before the interviews. She described how it was easier to stay busy sometimes “the bad memories can stay away then”.

***Mindfulness techniques***

Eating meditation – (few students report using this more often at home)

**Mindful eating**

Mindful eating – “instead of devouring food I take time with it and enjoy it more”

“the food would be down my throat in seconds, now it is all about enjoying every piece of it, particularly chocolate ice cream and nougat”

“through mindful eating I learned a lot about my own eating habits as well as hunger and satisfaction”

“in group we talked about the thoughts and sensations we experience as we eat, during some meal times I spend time going back through that activity and enjoying each and every mouthful. Afterwards I feel full and almost like I am (pause), like as if I can get greater satisfaction from it (eating)”

“I found it encouraged me to think more about my emotions and when I tend to eat more, I also think that when I am feeling anxious I immediately go for junk food like crisps and lots of chocolate”

“I savour each bit and now I chew it all thoroughly”

“increased quality of eating and enjoyment of small things in life, like savouring the time I sit down to eat”

**Noticeable difference in motivation levels**

*Physical differences*

students reported the following:

“……my body is not as tense, used to notice the difference in my shoulders when we all did the mindfulness work together”

Liz: “After each session I felt at peace and relaxed. Feeling this way made me realise that this is what could be missing from my life on a regular basis, especially when we are rushing around school trying to get lots done in a short space of time. Now for me it is more about the quality of what I do and not the quantity”

Jane: “Recognition of how I am feeling on a day to day basis, before I would never have spent time thinking about this, I would regard that as a waste of time. Now I see why it is useful”

Jane also talked about heightened awareness about physical sensations:

*“Now I consider how my body parts connect to each other and connect to how I am feeling. This is important as it can remind me that I need to slow myself down, take care of myself and realise that I am rushing through stuff without even considering what I am actually doing and why”*

……she also described how she has benefited from a

“Feeling of connectedness which is positive, relaxing and in a way has grounded me”

**Help-seeking behaviour**

Although the interviews did not specifically seek to examine help-seeking behaviour, it emerged from the data that pupils who practiced mindfulness on a regular basis displayed a desire to address issues they were experiencing rather than push them to one side as they had previously done and were keen to ask for help from others.

**Goals**

The students mentioned a range of personal goals they had in mind at the start of the intervention:

1.Lower anxiety levels

2.Boost confidence

3.Deal with negative thoughts

4.Deal with anger

5. Open space to address worries

6.Gain confidence when speaking out in class

As mentioned previously one student in this study reported that her stress levels have remained the same since starting the intervention. This student gave very little positive feedback in relation to the intervention. This could be due to the fact that she had quite a few ‘strange dreams’ at the start of the intervention that put her off mindfulness and she mentioned that she would not be keen to use it again (see appendix N)

This Student reported that she found the sessions were too long (one hour maximum)

She found it hard to be serious and to be mindful in these sessions as she was worried about the opinions of other students.

Like the other students she did however report that she enjoyed meeting up on a weekly basis and discussing things that had gone well in school and things that were causing her to worry (see appendix N)

She highlighted that she never spoke about mindfulness with other students and her family members, mainly because she was worried about being teased and she also mentioned a number of times that she is from a family who tend to keep things ‘bottled up’ and just ‘get on with it’.

She described how practicing mindfulness often made her feel uncomfortable and it gave her strange dreams.

Her least favourite activity was the body scan and mindful eating. She talked about her difficulties with food and the guilt she would feel after the session for eating a malteaser (see reflective diary page appendix Q)

This student also described the difficulties she had when anxieties about school/home life/friendships came to her mind during a meditation and she tried to acknowledge them and let them go. She felt that this was a ‘unnatural thing to do’, ‘why should I let them go when they trouble me almost all the time every day?’ (see appendix N).

## 4.7 Summary of the main findings from qualitative analysis

Through thematic analysis a number of themes emerged from the interviews carried out with the students in the follow up phase after the mindfulness intervention took place

* students described the ways in which they noticed they were able to prioritise work both in school and tasks at home
* A number of students highlighted a reduction in negative thinking patterns
* During the interviews quite a few participants talked about their ability to deal with stressful events as they happen
* A number of students reported reductions in the levels of stress and anxiety they experienced on a day-to-day basis
* Many students highlight they experienced higher levels of self-esteem (particularly in relation to their levels of self –confidence and their levels of self-efficacy)
* Most students report noticeable improvements in concentration and attention in class and at home
* A number of students report greater ability to control anger and regulate emotions in challenging situations
* Four out of the five pupils interviewed mentioned that they overall found the intervention ‘really useful’ and ‘enjoyable’
* Four out of five report that they would recommend it to others

All pupils highlight that they enjoyed coming to each session and talked about the benefits of meeting together on a weekly basis over the course of 8 weeks

## 4.8 Interviews with Staff

**Research question 4:**

**How do staff in school view the impact of the mindfulness intervention for a group of Year 10 students for whom anxiety has been an issue in the previous 12 months?**

Semi-structured interviews were carried out with 4 members of the school staff at the end of the follow up phase after the final interviews with the students were complete (see appendix M for the interview questions). The transcripts from these interviews can be found in appendix R

In summary, the interviews with school staff reveal that they noticed the following:

1. An increase in levels of productivity

2. Improvements in concentration

3. The students were ‘more involved’ and able ‘to attend to material’ in class

4. Students appeared to be calmer and less anxious

A number of staff reported that they did not notice any changes in the students’ attention and concentration at the start of the intervention, it was however, noted by staff towards the end of the intervention and became much more noticeable weeks later at the end of the follow up phase as students’ were practicing mindfulness at home on a regular basis.

One member of the support staff mentioned that they noticed one student seemed happier and able to focus more in class a few weeks after the intervention took place. Interestingly, this student practiced mindfulness at home on a regular basis (more often than the other students’ reported they practised it) both during the intervention and after it was complete (see reflexive note appendix Q). One teacher also mentioned she found that students appeared to be more compassionate towards other classmates (see appendix R).

## 4.9 Summary of the chapter

This chapter has presented both the quantitative findings from the range of measures used in this study and it also outlines an analytic narrative which has been used in order to report the data whilst retaining the ‘voices’ of each student through a number of illustrative quotes. Quantitative analysis indicated that after the MBSR intervention took place there was a significant difference in the students’ mindfulness and well-being scores. There was a small, non-significant decrease in the students’ levels of anxiety.

The 7 master themes identified through thematic analysis of participant interviews are:

Ability to prioritise tasks, reduction in negative thinking patterns, the ability to deal with stressful events as they happen, lower levels of stress and anxiety, higher levels of self-esteem (particularly in relation to self -confidence/self-efficacy), approach to academic work and the ability to regulate emotions.

In addition to this a number of subthemes extend the depth of the analysis and are useful in order to reflect the depth of the narrative around the students’ experiences of using mindfulness.

The brief interviews with staff provided an extremely useful way to triangulate the findings, they reveal that they noticed increased levels of productivity, improvements in concentration and attention in class and the staff also highlight that after the intervention took place the students appeared to be calmer and less anxious.

The next, final chapter of this thesis will relate the quantitative and qualitative analysis to the research questions and the existing research literature on mindfulness. The wider implications of the findings from this research study will also be explored and a number of recommendations, ideas and suggestions for EP practice and future research will also be made.

# Chapter 5

**Discussion**

## 5.1 Overview of the chapter

This chapter aims to present the findings from this study in relation to the research questions and the themes which emerged from analysis of the data. It will also highlight the significant aspects of the research findings in relation to current literature. It will take a critical look at the research design and methodology of this study and consideration will be given to the role of the researcher throughout the research process. This chapter evaluates the analysis of the data and there will also be consideration of the strengths and limitations of this research study. The wider implications of the findings shall be considered, particularly in relation to educational psychology practice, the use of interventions in primary and secondary schools and the range of benefits for pupils and finally potential areas for further research in the future will also be highlighted.

## 5.2.1 Research questions revisited

The following questions were used in this study in order to explore how mindfulness can be used with teenage girls who have experienced school based anxiety

1. Can a school-based mindfulness programme lead to significant changes on measures of mindfulness, wellbeing and anxiety?

2. What do young people report are the outcomes of a school-based mindfulness intervention in terms of dealing with school-related anxiety and stress?

3.What are young people’s views on using mindfulness techniques on a day-to-day basis when they are experiencing anxiety and stress in school?

4.How do staff in school view the impact of the mindfulness intervention for a group of Year 10 students for whom anxiety has been an issue in the previous 12 months?

## 5.2.2 Research Question 1

**Can a school-based mindfulness programme lead to significant changes on measures of mindfulness, wellbeing and anxiety?**

The self-report measures for anxiety, well-being and mindfulness were analyised using Wilcoxon Signed rank test. This analysis revealed that the mindfulness programme led to significant changes on the well-being and mindfulness measures after the intervention took place. There was no significant difference on the measure of anxiety after the intervention took place.

These significant changes in well-being and mindfulness scores is in keeping with the findings from a range of studies which have previously been outlined in the literature review (Broderick & Metz, 2009; Lau & Hue, 2011; Edwards et al., 2014). The small amount of change on the anxiety self-report measure post intervention is in contrast with the findings which were originally expected from this intervention. This is in conflict with the findings of Jennings & Jennings’ 2013 research study which found that the greatest overall difference from a mindfulness intervention was the level of anxiety the students reported after the intervention took place. It is important to consider the impact of the small sample size used in the present study on this measure. It would be useful to see if there was a change on the students’ anxiety scores after the follow up phase after they had been using mindfulness in private outside of school.

The findings from this study in relation to students’ levels of anxiety as measured by the SCAS also differ from Biegel et al’s (2009) study in which a randomized control trial was utilised using MBSR for the treatment of adolescent psychiatric outpatients. Biegel et al (2009) found that the students who participated in the MBSR intervention report reduced symptoms of anxiety, depression, somatic stress and improved sleep quality.

In summary, these results reveal that a school based mindfulness based stress reduction intervention can lead to significant changes on measures of mindfulness and well-being as measured before and immediately after the intervention took place.

## 5.2.3 Research questions 2 and 3:

These questions aimed to explore

-What young people report are the outcomes of a school-based mindfulness intervention in terms of dealing with school-related anxiety and stress, and

-What are the young people’s views on using mindfulness techniques on a day-to-day basis when they are experiencing anxiety and stress in school?

From a focus group at the end of the intervention and semi-structured interviews the following themes emerged from the data:

**1. Ability to prioritise (school work, tasks at home, etc.)**

From the analysis of the data collected it emerged that a number of students revealed that they found it easier to prioritise work in school/activities at home and they highlighted that they did not put things off as much they previously had done. Previous studies have also found that regular mindfulness practice can lead to improvements in planning ahead, organising tasks and dealing with tasks rather than putting them off (Mendelson et al., 2010; Raes et al., 2013). The benefits of mindfulness in relation to planning and organisation has been highlighted in the literature review (Lau & Hue, 2011; Joyce et al., 2010) and the current findings indeed add weight to the findings that have previously been reported in a range of studies.

**2. Reduction in negative thinking patterns**

During the interviews four of the five students described the ways in which they noticed a clear change in their negative thinking patterns. This is in keeping with the findings from Ciesla, Reilly, Dickson, Emanuel & Updegraff’s 2012 mixed methods research study with 78 teenagers which highlights the potential for mindfulness to reduce ruminative thinking.

It is also important to consider that previous studies highlight that there are additional brain networks for evaluating and monitoring emotional reactions (Todd & Lewis, 2008). The ability to regulate emotions can happen intrinsically by the ability to consciously re-evaluate a situation (Semple & Lee, 2010) and therefore make individuals can make an effort to override the automatic responses (Todd & Lewis, 2008). Mindfulness can be effectively used to break the cycle of ruminative thinking (Deyo, Wilson, Ong, & Koopman, 2009; Williams, Teasdale, Segal & Kabat-Zinn, 2007). Many believe that this can happen through the process of acceptance and kindness and that the ruminative thinking patterns could be reduced by reducing the anxiety that difficult thoughts can elicit (Grabovac et al., 2011). This pattern could also be reduced by the cultivation of compassion and acceptance which can therefore help to reduce levels of stress (Biegel, 2001).

**3. Ability to deal with stressful events/events as they happen**

This theme illustrates comments made by a number of students in relation to how they cope with stressful events both in school and at home.

Findings from the current research suggests that through the use of mindfulness the students were able to face and deal with stressful and challenging situations when they occurred in their lives (see reflexive note appendix Q). Schonert-Reichl and Lawler (2010) highlight similar findings from their study which used an 8 week MBSR intervention with a longer follow up phase. In the study students report that they developed a range of strategies which they used in order to deal with stress in school.

**4. Lower levels of stress and anxiety**

Due to the experience of mindfulness having a calming effect on participants, the researcher predicted that regular mindfulness practice could help to reduce anxiety levels. It is however important to consider that the self-report measure distributed at the end of the MBSR intervention did not find a significant difference between anxiety levels pre and post intervention. This is unsurprising due to the small sample size, however, it is important to consider that during the interviews after the follow up phase a number of students mentioned that they experienced a reduction in their levels of anxiety. These findings from the qualitative phase of the study are consistent with research carried out by Semple & Lee (2008) and a number of other studies which reveal that the students who engaged in regular mindfulness practice outside of the group experienced lower levels of stress and greater levels of attention in class (Biegel et al, 2001; Huppert & Johnson, 2010; Weijer-Bergsma et al, 2011).

Regular practice of mindfulness can lead to “greater levels of clarity, objectivity, equanimity and therefore facilitates self-regulation, values clarification, cognitive and emotional flexibility and exposure”- Carmody, Baer, Lykins and Olendzki (2009, p.889). Further to this, Biegel et al (2009) highlight that research suggests that there is a need to implement programmes in order to “enhance health promotion, emotional well-being, and use of adaptive coping skills to reduce the use of non-productive coping skills” (2009, p.855).

Bearing these studies in mind it must be considered that it may take some time for reductions in levels of anxiety to be reflected in the measures. In the present study there was a slight decrease in the anxiety scores (see table 4) however it was not significant.

**5.Higher levels of self-esteem (particularly in relation to self -**

**confidence and self-efficacy)**

In the present study there were a range of qualitative indications that the student’s understanding of mindfulness changed throughout the intervention and after the follow up phase, particularly in the development of their levels of self-confidence. This was an interesting and relatively unexpected finding in the present study. As previously indicated in the literature, mindfulness can create heightened awareness of thoughts and this can move beyond mindfulness of the body and includes the mind itself (Analayo, 2010; McCown et al., 2010). Semple and Lee (2010) report similar findings and highlight mindfulness practice both in a group setting and on a regular basis was needed in order to develop students’ levels of self-efficacy.

**6.Approach to academic work (subtheme improvements in**

**concentration and attention in class and at home)**

Previous research highlights the use of mindfulness to get to a state of mind that can be described as conducive to psychological and cognitive flexibility (Chaskalson, 2005). Thematic analysis revealed that a number of students reported greater levels of concentration in the classroom and the ability to pay attention more often. This finding is concurrent with the literature reviewed in chapter two, particularly Weijer-Bergsma et al.’s (2012) study which found improvements in student’s ability to concentrate in class and improvements in overall executive functioning.

**7.Regulating emotions (subtheme being able to control anger,**

**recognising emotions).**

All participants in the current research were able to identify times in school or in personal domains of their lives, and the majority in both, when they were able to recognise and regulate their emotions. This is promising given that authors suggest emotional regulation is a precursor for many other positive life outcomes (Smith, 2003).

During the interviews a number of students mentioned how they effectively used mindfulness techniques when they were faced with a challenging situation. For example Jane described how after the intervention she was more inclined to stop and think about the consequences of her actions and Claire further reinforced this by stating that she recognises she has issues with anger and is now more likely to calm herself down or walk away when dealing with difficult situations both at home and in school.

Only one young person experienced difficulties initially in identifying a time when they recently were able to regulate their emotions, however, this is not surprising given that she spoke at length about how she did not find mindfulness beneficial and would not take part in the intervention if she was offered the opportunity to do so again (see appendix N).

These particular findings and the overall theme are in keeping with the literature reviewed in Chapter two, which found that the majority of young people involved in the studies reviewed were more able to identify a range of emotions and regulate their emotions during difficult times in their lives (Huppert et al., 2010; Mendelson et al., 2010; Semple & Lee, 2010).

## 5.2.3 Research question 4:

**How do staff in school view the impact of the mindfulness intervention with the students?**

Four members of the school staff were interviewed at the end of the follow up phase. They reported that they noticed the following changes in the students: increases in levels of productivity in class, increased attentional levels, students appeared to be calmer and less anxious and one member of staff mentioned that they noticed that the some of the students who took part in the intervention were noticeably ‘more involved’ and able ‘to attend to material’ in class.

A number of staff reported that they did not notice any changes in the students’ attention and concentration at the start of the intervention, it was however, mainly noted by staff towards the end of the intervention and mainly after the time in which students were using mindfulness in private on a regular basis outside of school.

These findings replicate those from wider literature, particularly the studies which triangulate findings with staff in school and students’ families. Previous studies highlight that others did not notice a difference in the students concentration levels at the start of the intervention, many report that these changes were gradual after some amount of private practice (Kim et al, 2009; Napoli et al, 2005). A number of studies report that significant people in the participants’ lives noticed improvements in concentration, performance in academic tests and overall executive functioning (Weijer-Bergsma et al., 2012; Sharp & Lipsky, 2002). The responses from the staff (see appendix Q) are in line with the data which emerged from analysis of the quantitative measures used in the study and the semi-structured interviews with the students.

## 5.2.4 Other interesting findings which emerged from the data

Notably all young people involved in the research reported that they benefited from being part of a group and having regular opportunities to talk about how they deal with anxiety and stressful situations in school. Many described how they found the breathing exercises useful, especially as an anchor for attention. All students highlighted a level of clarity about specific emotions that they felt. It is interesting that a number of students mentioned that they felt that stress was inevitably going to be a major part of their lives. They were happy to find out that there are a number of ways to manage stress. One student described how “before the intervention, stress and anxiety felt too over whelming, like it was taking over my life”. It was surprising to find out that this participant did not believe they had the skills to effectively deal with it (pre intervention).

## 5.3 Summary of the findings from this study

Overall the quantitative and qualitative evidence indicates the potential of MBSR to support students who have experienced school related anxiety. The study revealed that participants who took part in the intervention reported reductions in negative thinking patterns, ability to deal with stressful situations, lower levels of stress and anxiety, higher levels of self-esteem (self-confidence and self-efficacy) and there were a number of improvements in attention and concentration in class as reported by students and staff in school.

## 5.4.1 Critique of the methodology and design of this study

The following sections will now take a closer look at the strengths and weaknesses of the methodology and design used in the present study.

*The research design and the methodology*

The research study benefited from the amount of time and effort which went into designing the MBSR intervention (see appendix K). The researcher felt that it was highly beneficial to carry out a pilot phase in order to get feedback from students about the activities involved in each session and to carefully plan ahead for future sessions. The intervention itself was carried out over a period of 8 weeks, one session per week, and the follow up phase allowed the students to carry out mindfulness at home in private.

In this study the mixed method design was an important component in order to reflect the complexity of this type of research and indeed the lives of teenage girls who are experiencing stress at school. The quantitative element of the study allowed for an empirical investigation of mindfulness, well-being and anxiety before and after the mindfulness intervention took place. However as mentioned previously, due to the small sample size the results are therefore mainly descriptive and unfortunately cannot be applied to the wider population.

Data Collection

Greene and Hill (2010) stress that participants can be highly prone to bias such as social desirability when they are asked to give their views to others; especially in this instance when they are asked to give their views to the person who led the intervention they had just been involved in for over 8 weeks. In order to lower the likelihood of these biases, the researcher felt it was vital to put the participants at ease at all times. Many argue that this can be useful in order to reduce possible inhibitions and the desire they may have to please others (Mertons, 2008; Miles & Huberman, 1994). The semi- structured interviews did allow the participants to have a certain level of control over what they discussed, with the additional benefit of some amount of structure to guide their thinking (Robson, 2002).

In some respects it was beneficial that all interviews were conducted by the same person as this ensured a high level of consistency between the ways in which the interviews were carried out and the questions that were used (Cresswell, 2005). It is also imperative to consider that issues of validity are inherent research of this nature (Meltzer, 2000; Greeson, 2009). Further to this, Willig (2008) describes how the use of real-life settings is vitally important in order to add ‘ecological validity’ to the research study.

Data analysis

Braun and Clarke (2006) stress that many researchers make the mistake of generating themes during thematic analysis that reflect the research questions and do not capture the real essence of the actual data which has been collected. In order to reduce the risk of this happening, the researcher ensured a range of reliability checks were put in place while analysing the data. These included regularly going back to the original data in order to verify the codes which had been generated. It was also extremely beneficial to work with a peer researcher (see reflexive note appendix Q). Inter coder agreement checks during the fourth and fifth stages of thematic analysis i.e during the review, definition and the process of placing a name on the themes was vitally important. At stage four this included the review of codes by a peer researcher. In stage five the issues of reliability were addressed through examining the codebook with another trainee EP in the office in which the researcher was on placement. Cresswell (2005) stresses that internal validity as evaluated through the accuracy of findings from work with a peer researcher is a clear strength associated with qualitative research, it is important that it is consistently in place throughout a research study.

*Reliability and trustworthiness*

Reliability focuses on ensuring that experiences can be interpreted in a fair and accurate manner (Mertons, 2005). The researcher took a range of actions to ensure the findings from this study had a high level of reliability and trustworthiness. Initially, there was the issue that the researcher was the main EP for this particular school. Students may have therefore worried about the responses they gave in the self-report measures and during the interviews. However, the researcher spent a considerable amount of time discussing the importance of being open and honest about the overall experience (see reflective diary appendix Q). Credibility was also enhanced through triangulation. This study made use of a range of highly useful self-report measures, a focus group at the end of the MBSR intervention and interviews with students and school staff at the end of the follow up phase.

*Reflexivity within the process of conducting research*

Willig (2008) argues that a level of personal reflexivity involves deliberate reflection on our own personal values and beliefs. It also considers how certain aspects of our own life experiences have shaped both the researcher and the process of carrying out research. Issues of reliability were addressed through reflexivity regarding the researcher’s personal feelings towards the use of mindfulness and the consideration of a range of ethical issues at play in the study (see reflective note appendix Q). Throughout this study the researcher found it was useful to discuss issues/pre-existing beliefs with classmates, colleagues at the educational psychology service and during regular supervision on both on placement and university. This was highly beneficial in order to discuss the researcher’s feelings, expectations and anxieties in relation to the research study. It also proved to be extremely useful in order to deal with times when the researcher felt under significant amounts of pressure. Throughout this study the researcher acknowledged their own limitations through completing this research journal at regular intervals through the process and from discussions with tutors in university to the final thesis write up stage (see reflexive note appendix Q)

## 5.4.2 Strengths of the study

There are a clear number of strengths with this research study

-The researcher invested a considerable amount of time in designing each session of the intervention and ensuring that the feedback from the pilot phase was taken into account.

-The fact that the remaining students who took part were genuinely interested in mindfulness and highly motivated to be involved in the study is a vitally important factor to bear in mind;

-At all times throughout the study the researcher referred back to the research questions which were under investigation. A systematic approach was applied to the analysis of the data and the use of a peer researcher in order to check coding and to verify the themes and subthemes was crucial;

-It was useful found to become immersed in the findings but to take a step back at regular intervals (see reflective diary appendix Q). Therefore this thorough qualitative analysis allowed the voice of each student to come across;

*Style of interviews*

The researcher felt it was important to use an open approach in the semi-structured interviews with the students. A number of prompts were used and these were useful when students needed to refocus or required extra encouragement. There were no leading questions in each interview and the research allowed additional time for each student to give their feedback.

The interviews with the school staff generated some highly useful data. They were very beneficial in order to triangulate the findings and to see the ways in which there were any noticeable differences in the students in school from practicing mindfulness.

The Research Journal

The research journal was a highly effective tool for a variety of reasons (see excerpts in appendix Q). On one occasion it was particularly useful to write down feelings and frustrations after a difficult session in which some of the students were presenting with anxiety and finding it difficult to take time to relax and be mindful. It was also very useful during the analysis and write up phase when there were any queries regarding findings the researcher could take a look back at the research journal. A separate journal was used while the researcher was writing the thesis. This proved extremely beneficial as a way to record ideas and next steps for occasions when the researcher was only writing for one/two days a week. They found that it was easy then to start writing again as it was clear from the journal the next steps and which section to go back to.

*Qualities and strengths of the researcher*

As a researcher I felt that I possessed a wide range of skills that are vital in order to carry out good quality research (Miles & Huberman, 1994). I had developed an interest in mindfulness over the last three years. Where possible, I practiced it daily and attended a monthly mindfulness group in which a range of MBSR techniques were tried out with others. This group also offered the opportunity to talk about their research and to hear about studies carried out by others. In my capacity as a Trainee Educational Psychologist in the third year of my doctoral training I felt that I also have a number of crucial HCPC competencies which are especially important while working with vulnerable teenagers who have experienced difficulties in the school environment. I also benefited from regular supervision on placement and a high level of guidance and support at The University of East London from my personal and academic tutor and from a number of staff and peers at this institution.

*Time to develop relationships*

By the final interviews the students were much more familiar with the researcher and therefore calmer and more willing to open up about their experiences. This increased the level of credibility of their own personal accounts. The opportunities to talk about mindfulness practice and the interview stage provided a safe, supportive space for the students to open up and feel at ease (see reflective diary page appendix D).

*Listening to the voice of the participants*

Chapter 1 highlights the importance of taking time to listen to the ideas and opinions of children and adolescents. It is vital to do so in order to capture all of their views and to allow them to play an integral role in the type of support that may be of benefit to them (Gersch, 2000). In this research study students had ample opportunities to give their opinions and offer ideas. This was done through a pilot phase, range of self-report measures distributed at two time points in the study, through a focus group and at the end of the follow up phase in the individual semi-structured interviews. In addition to this, students were encouraged to give feedback and suggestions at the end of each session of the MBSR intervention.

## 5.4.3 Limitations of the study

Like with any piece of real life research it is inevitable that there will be some setbacks along the way and the researcher acknowledges that there were some things that could have been done differently (Polak, 2009).

-In the quantitative phase there was an over reliance on self-report measures. Carmody, Baer, Lykins & Olendzki (2008) highlight the potential issues which can arise from the reliance on self-report methods, they stress that these measures can be subject to response biases, and it is possible that they do not accurately capture the true feelings and experiences of the participants.

-It may have been useful to include the students’ parents in order to add another dimension of triangulation to the findings, unfortunately there was not enough time to do so in the present study.

-As mentioned previously, the researcher was involved in all aspects of the delivery of the intervention and the data collection. There was a risk that participants may therefore have felt under pressure to give answers that would please the researcher rather than outline their actual feelings about the intervention and their mindfulness practice. However, after some time considering the pros and cons of this the researcher felt that in order for the research to continue they would need to carry out the intervention and the follow up interviews alone without the support of school staff. At the time of carrying out the research unfortunately there were no teaching assistants available who could commit to delivering an 8 week intervention. In addition to this the researcher was also acutely aware that the school may have been reluctant to go ahead with the research study if they had to take some of their support staff out of class in order to participate in the delivery of the intervention.

-The sample in this study was homogenous. The researcher made the decision to focus on teenage girls who have experienced school related anxiety in the last 12 months due to the fact that this group can often go unnoticed in the school setting. The findings from this study cannot realistically be generalised to the wider school population.

-The researcher initially hoped to use online diaries with the students to gain insight into their personal use of mindfulness on a regular basis. Unfortunately the students were reluctant to do so and a number expressed concern that their responses would not be confidential and may be seen by other friends and family members. These diaries could have been extremely beneficial in order to allow participants to give a more detailed account of how often they were practicing mindfulness, what techniques they were using at home and if they were noticing any changes.

-The researcher failed to highlight that high levels of mindfulness can lead to come maladaptive outcomes, for example high levels of unconditional mindful acceptance of the present moment. There is therefore a risk that participants who ‘over-use’ mindfulness may neglect future planning and preparation.

Sample size

The researcher hoped to have a larger number of participants. However, a number of those who were initially identified by school staff were chosen for the wrong reasons and were not keen to try out some of the meditations (see reflective diary appendix Q). School staff originally felt that the mindfulness intervention would help students who had missed a large amount of time at school, they 'missed the point' regarding the purpose of the intervention as they believed that maybe these students were missing school because they had been experiencing school related anxiety, this was not actually the case.

At the start of the first session it became clear that there were a number of issues with these students who had been selected by the school to take part in the research. Unfortunately the vast majority of these students were not experiencing school related anxiety and did not have an interest in carrying out mindfulness in school and at home. The number of students therefore reduced to 5, the researcher was hoping for at least 10-15 students. However, in the reduced sample it is important to consider that these students had previously experienced school related anxiety and were genuinely keen to find out more about mindfulness and they were open to practicing it in private as well as in the group at school.

*Lack of control group*

Unfortunately there was no control group in this study. This was mainly due to time constraints and limited resources. It clearly would have been useful to compare findings and it has been noted in previous studies that it is highly beneficial to conduct this research with a control group and an intervention group (Biegel et al, 2009; Siegel & Johnson, 2012). Therefore, without the use of a control group in the present study, it is not entirely possible to pinpoint how these changes that the students have identified during their interviews can be attributed. For future research, larger mixed method studies which incorporate a control group need to be utilised. Future studies of this nature would clearly benefit from a design of this nature.

*Personal bias*

The researcher clearly has been an advocate of mindfulness for a long time and there is a danger that these strong feelings may have inadvertently surfaced during the group sessions in school and there is a risk that this could have influenced the participants' responses in interviews. Another factor to consider is that the researcher was heavily involved in all aspects of the study and this may have influenced the responses the staff and students gave during the qualitative phase of the research (see reflective diary appendix Q).

## 5.5.1 Recommendations for future research

In future studies it would be prudent to use allow a wider gap between the end of the intervention and private mindfulness practice in order to further examine the benefits of mindfulness and to allow students to develop their own style of practice. It would also be highly beneficial to ask the students to complete the range of measures after the follow up phase as previously noted in this chapter, changes due to the use of mindfulness are gradual and in many instances changes are reported after a period of regular private mindfulness practice. Future studies could use additional measures to collect data about physiological responses to mindfulness, this would be beneficial in order to further explore the outcomes of practicing mindfulness.

The researcher could have really benefited from being observed by a peer during their delivery of the mindfulness intervention. This would be beneficial in order to gain additional insight into their delivery style and into the ways in which the researcher had structured each of the sessions. This type of research could benefit from higher levels of autonomy for the students involved, for example higher amounts of feedback from students or opportunities for them to decide the layout and structure of each session when possible or even lead some of the mindfulness practice in later sessions could be beneficial to incorporate into future research into mindfulness with students.

Thematic analysis was used in this study mainly because the researcher felt it complimented the quantitative findings quite well. In retrospect, it may have been more beneficial to use Interpretative Phenomenological Analysis to gain greater insight into the lived experiences of those who took part in the intervention and the student’s experiences on a daily basis while using mindfulness practice outside of school (see reflexive note appendix Q).

Students were encouraged to carry out some additional mindfulness exercises at home which encourages participants to pay more attention to what they are doing – eg brushing their teeth. There was some positive responses to this, however, this was limited and students were not keen to participate in similar activities on a regular basis. In future studies an incentive could be useful students could use this as an opportunity to take turns and try various exercises out at home (one student per week) and then report back to the rest of the group. As mentioned previously, the researcher was heavily involved in all aspects of the study. In hindsight, it may have been beneficial to ask some of the school staff to deliver some of the mindfulness sessions in order to reduce fatigue and to ensure that all students remained motivated and interested. Support from staff could be utilised in future studies.

*Consideration of a wider range of factors when delivering the sessions*

The researcher unfortunately did not consider the wider implications of some of the exercises used in the intervention, for example using chocolate for mindful eating and the reactions from students during the body scan exercise. A number of participants found the body scan very difficult to do as they had concerns about their body image and found it challenging to focus on their legs, stomach, shoulders even for a few moments (see reflexive note appendix Q). If this intervention was carried out again the researcher would use only raisons for the mindful eating exercise and maybe leave out the body scan or just use a body scan that focused on feet, knees, back, neck arms.

*Follow up phase*

In an ideal world a longer follow up phase would have been highly beneficial, however it is important to consider that this was not possible in the present study as the researcher was hoping to carry out the follow up phase before the school holidays. Staff at school also felt that it may be problematic to return to the school in a new academic year and hope to pick things up. There was a risk that the students may have lost interest and found it too challenging to practice mindfulness in private for a long period of time.

## 5.5.2 Additional Considerations

The researcher decided to carry out the follow up period in July when exams were over and the students were on the wind down for the summer break, in future it may be beneficial to select a stressful period of time to carry out the follow up work with the participants in order to see how mindfulness can be effectively used by students under pressure.

Careful consideration should be given to the types of food used in the mindful eating exercises. For example in the mindful eating the researcher was surprised by the number of students who were reluctant to try it as they were not keen to eat chocolate. The feedback was really positive and a number of students mentioned how it was a wake up call in a way as they felt they never previously spent enough time savouring food, especially some really good decadent food. This made them also stop and think about the other experiences in life that they tend to ‘race’ through. As one student raised a really important point – “how much time have I been spending going through the daily motions and noticing very little? It is really quite frightening and these opportunities in our group has really made me slow down a lot and think about these missed opportunities’’.

Many highlighted their frustration at times when they tried to practice mindfulness at home and just could not switch off or find somewhere that they would not be disturbed. One student mentioned that she just could not leave her mobile phone out of her sight, instead she would keep it close by her side and it would go off. This student mentioned that it was hard to be mindful as she ‘always had a number of messages to reply to’. The researcher unfortunately had not anticipated this level of difficulty. It therefore, would have been useful to research potential difficulties like this beforehand and make students aware of them. This was a clear oversight on the researchers part and should be taken into consideration when designing a similar research study in the future.

## 5.5.3 Direction for further research

If possible, it would be highly beneficial to carry out a similar study on a much larger scale with males and females across a range of ages with a control group.

This study has played an important role in highlighting the need to triangulate findings, conduct pilot studies and collect quantitative and qualitative data pre and post intervention. It is hoped that other studies will take this into account.

It would be interesting to gather views from parents and other family members also at the end of the intervention and after the follow up phases in order to gain insight into the way in which students have used mindfulness in their lives.

It would be highly beneficial to carry out research which allowed school staff and parents to take part in a mindfulness intervention alongside students.

As mindfulness grows in popularity it would be interesting to introduce it into teacher training, to reduce stress and also to encourage prospective teachers to use mindfulness with their students in school on a regular basis.

## 5.6 Implications for educational psychology practice

As noted in chapter one, Educational Psychologists need to be aware of the evidence base around therapeutic interventions (Fox, 2003). A report by the British Psychological Society Division of Educational and Child Psychology (DECAP, 2006) describes how EPs have a knowledge base which is relevant to students who have experienced school related anxiety. EPs have an in-depth understanding of the stages of development, emotional well-being and the ways in which students can regulate their emotions. This DECAP article also outlines the importance of regularly monitoring well-being and the need for the voice of the child or young person to be heard at all times.

Mindfulness is useful for EPs to practice on a regular basis in order to maintain levels of calmness and clarity. (Siegal & Johnson, 2012; Green & Hill, 2010). A number of EPs in the UK now use mindfulness during one-to-one work with students in order to encourage them to become relaxed, and this can be exceptionally useful before they carry out a psychometric assessment, not only for the students’ well-being but also for cognitive functioning and attention levels.

It may also be highly beneficial to offer an intervention to schools for both students and staff. Staff could receive training on mindfulness techniques delivered by an EP, these techniques could be used in the classroom throughout the day on a regular basis.

It is important that when EPs suggest mindfulness as an intervention they should carefully consider the reasons why a student may benefit resource implications especially due to the nature of mindfulness interventions being time intensive. Regular practice with teachers in classrooms throughout the school day can be as effective and in some cases even more effective than mindfulness delivered by expensive external specialists.

## 5.7 Implications for students and staff

This study highlights that MBSR is a cheap, easy to run, interesting, beneficial and effective intervention. Schools would benefit from training some staff to implement a mindfulness based stress reduction intervention and to carry it out during the school day where possible. As this study revealed, there are a number of benefits from practicing mindfulness and these benefits can continue long after the actual intervention has taken place. Staff and students at school would benefit from practicing mindfulness as part of a group or in private as it can help to reduce levels of stress and anxiety.

As this study and many other research studies reveal, mindfulness can bring with it a number of benefits for all who practice it especially students who have experienced high levels of stress and anxiety. It is extremely useful as students can use it with ease on a regular basis and in stressful situations as and when they need it. The wide range of benefits reported by the participants in this study and also in various others studies reveal that it can help to lower levels of stress, improve concentration levels, helping students to deal with life in the present moment instead of rushing ahead and worrying about future events. This will be especially useful during exam time when students are trying to study and also when they are in the middle of sitting their exams. Due to the increased use of social media and availability of electronic devices, students can lose concentration easily, their mind is elsewhere due to a wide range of distractions, mindfulness helps to bring them back to the present moment so they can concentrate on the here and now (Schonet-Reich & Lawler, 2010)

All students involved in this research benefited in a variety of ways from mindfulness based stress reduction. The intervention and the techniques which the students are encouraged to use can be used at any time and can be extremely effective when practiced on a regular basis. Students who are struggling due to inattention, anxiety or high levels of stress could benefit from one hour mindfulness sessions alongside other students and staff.

This study has played an important role in highlighting the range of difficulties teenagers face on a daily basis and the impact such difficulties can have on their ability to focus and concentrate in class. A number of recent studies highlight that schools have now decided to incorporate mindfulness into the start of the day or even into the start of each lesson where possible (Edwards et al, 2014; Ciesla et al, 2012).

Schools also need to create an awareness of school related anxiety and the importance of resilience, happiness and success for optimal functioning. It is also crucial to promote the beneficial effects that positive thinking can have on intelligence, attention, creativity and well-being. Schools must also be made aware that there are times when stress can be useful but not on a regular basis.

Elvidge (2014) argues that protecting mental health must begin in Britain’s schools. He highlights the need for children and young people to be made aware of neuroscience, of how the brain works, how it is wired, why brain chemistry makes us all react differently in different situations and relate to other people differently. Further to this he outlines that through doing so “we can teach people how to keep mentally well” (Elvidge, 2014 p.87). Schools therefore need to explore a range of tools and techniques to bolster resilience, mindfulness and problem- solving. It is vital that children and young people are aware of the warning signs of stress and anxiety and how to spot when things are not going well for their peers and family.

## 5.8 The distinctive contribution of the current research

The present study provides a wealth of information regarding the benefits of mindfulness, specifically in relation to dealing with school related anxiety. It is hoped that the findings from this research study will play an important role in contributing to the growing body of research relating to the well-being of young students and the need for school staff and outside agencies to be aware of the pressures students are under on a day-to-day basis. The researcher hopes that this study will support the development of a research agenda which values the importance of therapeutic interventions used both inside of school by staff and pupils and outside of school where necessary.

It is hoped that the findings of this study will serve to illustrate the multitude of benefits of mindfulness and how it can make a significant difference in the lives of students who may be experiencing high levels of stress or anxiety in their school environment. This study plays an important role in highlighting the benefits of EPs delivering therapeutic interventions and addressing how students can use these when they are experiencing difficulties in school.

## 5.9.1 Key recommendations from the current research include:

-Where possible CYP should be given the opportunities to practice mindfulness in a safe, supported way during the school day;

-CYP who experience school related anxiety need support in order to address the issues they face in school on a regular basis;

-It is vital that staff are aware of the range of implications which can arise from school related anxiety and how to detect when a student is experiencing such difficulties;

-School staff would benefit from being able to carry out mindfulness with students;

-Staff would benefit from also practising mindfulness on a regular basis in order to reduce their own levels of stress and anxiety;

- MBSR clearly has a wide range of benefits in not only reducing levels of school related anxiety but increasing levels of concentration in class, clarity of thought, higher levels of self-esteem and self-efficacy.

## 5.9.2 Concluding remarks

The mixed methods design of this study explored how an 8 week mindfulness based stress reduction intervention can reduce the level of school related anxiety in teenage students.

The analysis illustrates the broad range of positive experiences of the participants, including lower levels of stress, higher levels of self-esteem and self-efficacy, ability to plan ahead and improved levels of concentration and attention in school.

Most of the participants articulated positive attitudes towards mindfulness in both group and private practice. These positive experiences were instrumental in the development of the student’s feelings of self-efficacy and self-awareness, this was identified during the various discussions which took place at the end of each mindfulness session and mainly in the final interviews carried out in the follow up phase after the intervention was complete.

## 5.9.3 Summary of this research study

The final chapter of this research study has linked the current findings to the research questions and also with the wider literature surrounding the use of mindfulness with young people. This investigation has played an important role in highlighting the need for support with students who are experiencing difficulties at school and also in raising awareness of the role of the EP in delivering effective therapeutic interventions in order to improve overall well-being and cognitive functioning. This chapter reiterates previous findings from research including the importance of regular mindfulness practice, emotional and academic support, the need for a safe space for students to talk about the difficulties they encounter in school and the need for strategies to improve mental well-being. This research plays a vital role in identifying the importance of resilience and self-esteem in relation to young people, it has identified a variety of ways to support the development of CYP into confident, well-adjusted individuals who clearly have a lot to offer to the school environment and the outside world.

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# Appendices

**Appendix A: Key Search Terms and Inclusion and Exclusion Criteria**

**Search Term**

-Mindfulness

-Mindfulness Based Stress Reduction

-Teenagers use of mindfulness

-Mindfulness with adolescents

Studies were *excluded* if they met *one* of the following exclusion criteria:

***Scope***

* 􏰀 Not focused on pupils who experienced stress and anxiety
* 􏰀 Not concerned with education
* 􏰀 Not concerned with young person views
* ***Study type***

􏰀 Descriptions

* 􏰀 Reviews
* 􏰀 Purely quantitative
* ***Time and place***
* 􏰀 Not written in English
* 􏰀 Not published after 2000
* 􏰀 Not peer reviewed

**Appendix B: Mindfulness Attention Awareness Scale**

Day-to-Day Experiences

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1**  Almost Always | 2  Very Frequently | 3  Somewhat Frequently | 4  Somewhat Infrequently | 5  Very Infrequently | | | 6  Almost Never | | | |
| I could be experiencing some emotion and not be conscious of it until sometime later. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I break or spill things because of carelessness, not paying attention, or thinking of something else. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I find it difficult to stay focused on what’s happening in the present. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I tend to walk quickly to get where I’m going without paying attention to what I experience along the way. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I tend not to notice feelings of physical tension or discomfort until they really grab my attention. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I forget a person’s name almost as soon as I’ve been told it for the first time. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| It seems I am “running on automatic,” without much awareness of what I’m doing. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I rush through activities without being really attentive to them. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I get so focused on the goal I want to achieve that I lose touch with what I’m doing right now to get there. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I do jobs or tasks automatically, without being aware of what  I'm doing. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I find myself listening to someone with one ear, doing something else at the same time | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I drive places on ‘automatic pilot’ and then wonder why I went there. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I find myself doing things without paying attention. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| I snack without being aware that I’m eating. | | | | | 1 | 2 | 3 | 4 | 5 | 6 |

**MAAS Scoring**

To score the scale, simply compute a mean of the 15 items. Higher scores reflect higher levels of dispositional mindfulness.

**Appendix C**

**The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)**

Below are some statements about feelings and thoughts.

**▢** Please tick the box that best describes your experience of each over the last two weeks

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

**Appendix D**

**Spence Children’s Anxiety Scale**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_**

**Please put a circle around the word that shows how often each of these things happen to you there are no right or wrong answers**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 | I worry about things | Never | Sometimes | Often | Always |
| 2 | I am scare of the dark | Never | Sometimes | Often | Always |
| 3 | When I have a problem I get a funny feeling in my stomach | Never | Sometimes | Often | Always |
| 4 | I feel afraid | Never | Sometimes | Often | Always |
| 5 | I would feel afraid of being on my own at home | Never | Sometimes | Often | Always |
| 6 | I feel scared when I have to take a test | Never | Sometimes | Often | Always |
| 7 | I feel afraid if I have to use public toilets or bathrooms | Never | Sometimes | Often | Always |
| 8 | I worry about being away from my parents | Never | Sometimes | Often | Always |
| 9 | I feel afraid that I will make a fool of myself in front of people | Never | Sometimes | Often | Always |
| 10 | I worry that I will do badly at my school work | Never | Sometimes | Often | Always |
| 11 | I am popular amongst other kids my own age | Never | Sometimes | Often | Always |
| 12 | I worry that something often will happen to someone in my family | Never | Sometimes | Often | Always |
| 13 | I suddenly feel as if I can’t breathe when there is no reason for this | Never | Sometimes | Often | Always |
| 14 | I have to keep checking that I have done things right (like the switch is off) | Never | Sometimes | Often | Always |
| 15 | I feel scared if I have to sleep on my own | Never | Sometimes | Often | Always |
| 16 | I have trouble going to school in the mornings because I feel nervous or afraid | Never | Sometimes | Often | Always |
| 17 | I am good at sports | Never | Sometimes | Often | Always |
| 18 | I am scared of dogs | Never | Sometimes | Often | Always |
| 19 | I can’t seem to get bad or silly thoughts out of my head | Never | Sometimes | Often | Always |
| 20 | When I have a problem my heart beats really fast | Never | Sometimes | Often | Always |
| 21 | I suddenly start to tremble or shake when there is no reason for this | Never | Sometimes | Often | Always |
| 22 | I worry that something bad will happen to me | Never | Sometimes | Often | Always |
| 23 | I am scared of going to the doctors or dentists | Never | Sometimes | Often | Always |
| 24 | When I have a problem, I feel shaky | Never | Sometimes | Often | Always |
| 25 | I am scared of being in high places or lifts (elevators) | Never | Sometimes | Often | Always |
| 26 | I am a good person | Never | Sometimes | Often | Always |
| 27 | I have to think special thoughts to stop bad things from happening (like numbers or words) | Never | Sometimes | Often | Always |
| 28 | I feel scared if I have to travel in the car or on a bus or a train | Never | Sometimes | Often | Always |
| 29 | I worry what other people think of me | Never | Sometimes | Often | Always |
| 30 | I am afraid of being in crowded places (like shopping centres, buses) | Never | Sometimes | Often | Always |
| 31 | I feel happy | Never | Sometimes | Often | Always |
| 32 | All of a sudden I feel really scared for no reason at all | Never | Sometimes | Often | Always |
| 33 | I am scared of insects and spiders | Never | Sometimes | Often | Always |
| 34 | I suddenly become dizzy or faint when there is no reason for this | Never | Sometimes | Often | Always |
| 35 | I feel afraid if I have to talk in front of my class | Never | Sometimes | Often | Always |
| 36 | My heart suddenly starts to beat  quickly for no reason | Never | Sometimes | Often | Always |
| 37 | I worry that I will suddenly get a scared feel when there is nothing to be afraid of | Never | Sometimes | Often | Always |
| 38 | I like myself | Never | Sometimes | Often | Always |
| 39 | I am afraid of being in small closed spaces, like tunnels or small rooms | Never | Sometimes | Often | Always |
| 40 | I have to do some things over and over again (like washing my hands, cleaning or putting things in order | Never | Sometimes | Often | Always |
| 41 | I get bothered by bad or silly thoughts or pictures in my mind | Never | Sometimes | Often | Always |
| 42 | I have to do some things in just the right way to stop bad things happening | Never | Sometimes | Often | Always |
| 43 | I am proud of my school work | Never | Sometimes | Often | Always |
| 44 | I would feel scared if I had to stay away from home overnight | Never | Sometimes | Often | Always |
| 45 | Is there something else that you are really afraid of? | Never | Sometimes | Often | Always |
|  | Please write down what it is |  | | | |

**Appendix E**

***Focus Group Questions with the students involved in the intervention***

- How do you feel the intervention went?

-What was your favourite mindfulness exercise?

-What mindfulness techniques will you use during your private  
 practice?

-What changes could be made to this intervention?

-Would you take part in a group intervention like this again?

**Appendix F**

**Outline of the mindfulness intervention.**

The 8 week intervention was based on Kabat-Zinn’s Mindfulness Reduction Programme (MBSR), Biegel (2009)’s stress reduction for teens workbook and various other breathing techniques used within mindfulness interventions.

|  |  |
| --- | --- |
| Session one | introductions  overview of mindfulness  finding out more about the participants – icebreaker activity  exercises around defining stress and anxiety (from the Stress Reduction workbook)  mindfulness activity  breathing exercise |
| Session two | review of the previous session  recap on the homework activity  mindfulness practice  breathing exercise |
| Session three | review of the previous session  exercises based on living in the present moment  mindfulness practice |
| Session four | review of the previous session  exercises based on the 5 senses (Stress Reduction Workbook mindful eating exercise  mindfulness practice |
| Session five | review of the previous session  exercises based on formal and informal mindfulness practice  listening to music mindfully  mindfulness practice |
| Session six | review of the previous session  opportunities for students to share their experiences so far  exercise on doing school work mindful  body scan meditation  mindfulness practice led by students |
| Session seven | review of the previous session  exercises based on walking meditation  exercises based on paying attention to your breath  mindfulness practice led by students |
| Session eight | review of all of the previous sessions  exercise based on train of thoughts  exercise based on accepting all of your emotions  exercise on letting go of negative self-judgments  activities on focusing on the positive |

**Appendix G**

*Breathing techniques used throughout all sessions*

|  |  |
| --- | --- |
| **1** | * **Deep Breathing Techniques**   Breathe in all the way  Hold for 5 seconds  Breathe out half way  Hold for 5 seconds  Breathe out all the way  Hold for 5 seconds |
| **2** | * **Abdominal Breathing Technique** * With one hand on the chest and the other on the belly take a deep * Breath in through the nose ensuring the diaphragm (not the chest) * Inflates with enough air to create a stretch in the lungs * The goal: 6 to 10 deep, slow breaths per minute for 10 minutes each Session |
| **3** | **Quick Breathing Technique**  Begin this with a long slow inhale, followed by a quick powerful exhale generated from the lower belly.  Once comfortable with the contraction, up the pace to one inhale/exhale (all through the nose) every one to two seconds, for a total of ten breaths |
| **4** | **Tense and Release Technique**  Start off by closing your eyes, next focus on tensing and relaxing each  Muscle group for two to three seconds each.  Start with the feet and toes, then move up to the knees, thighs, rear,  Chest, arms, hands, neck, jaw and eyes  All while maintaining deep slow breaths  \*If there is any difficulty with this exercise it may be useful to breathe in through the nose, hold this for five seconds while the muscles tense, then breathe out through the mouth on release. |

**Appendix H**

***Mindful eating***

**Focus of this exercise:** savouring food and using our sense of taste and smell

**Script:** In this session the mindfulness activity we are going to do will involve focusing on eating. Eating is an example of something we often do while we are on automatic pilot. Sometimes we eat without focusing on the nutritious value or the taste of the food, its smell and its texture.

In this activity you can choose to savour one of the tasty options I have to offer. There are cherries, tomatoes, a piece of chocolate, raisons or a grape.

Now, bringing your attention to the piece of food you have chosen to eat, looking at it very carefully as if you had never before seen something like this.

Feel its texture between your fingers and notice it colours

(Pause)

Be aware of any thoughts you may be having about this piece of food, what is it you notice? Consider what is going through your mind while you are looking at it.

Now, lift it closer to your nose and smell it for a little while (Pause)

With awareness, bring it to your lips, being aware of the sensations of how it feels in your hand and also the sensations in your mouth as your mind and body anticipate eating it (pause)

Taking the food into your mouth now you will slowly experience the actual taste and texture of the food. Hold it in your mouth. Notice the sensations in your mouth, attend to this experience (pause).

When you feel ready to swallow, watch the impulse to swallow as it comes up so that even that is experienced consciously. After the food has gone down to the stomach, notice the lingering in your mouth and any feelings or thoughts you have about the experience.

**Home practice:**

When you can, try to savour at least one meal per day. Focus on the presentation of the food. What it looks like, the smell of the food and the taste and texture of each and every mouthful that you take. Please report back how you found this experience in our next session.

***Mindfulness sitting meditation***

***Focus of the exercise***: sitting meditation/breathing and focus on the present

Aim of exercise: this will focus on the body and sensations. Meditation is a way that we can focus on the body and sensations. It is a way in which we can focus our minds. The most common type of meditation focuses on a single object and this is often the movement of the breath in and out of the body, our breath is a useful focus for meditation because although we may take it for granted it is vital for our survival we can’t live without it.

Also, it is with us wherever we go. It also links very closely with our emotional and feeling. Our breath also draws our attention to the present, the here and now. We breathe in the present not the future or in the past.

Life experiences only happen now at this very moment. Tomorrow and yesterday are actually no more than thoughts accessed through thoughts of memory or imagination.

True experience is in the present. Sometimes we overlook real time experience, as we are too busy worrying about the future of fretting about the past. It is a good idea to focus on the present and explore what we appreciate about now. By focusing on our breathing and our body helps us focus on present experience. We will practice a meditation which will focus on our breathing and our body.

Sitting meditation: this meditation is seated.

For this meditation you need to sit on a chair. Sit up straight with purpose. You may close your eyes or focus your gaze on the floor in front of you (pause)

Firstly, focusing on your breathing, exploring how your breath enters your body where you are aware of it entering your body, how does that feel?

Really focus in on the actual experience. If your mind wanders acknowledge where it has taken you without judgment, just noticing these thoughts then bringing it gently back to your breathing.

Now, taking your full attention to your feet, to the soles of your feet (pause) and exploring the sensations of your feet as they are in contact with the ground or the shoes you are wearing (pause)

Noticing any tightness or fizzing, coolness or heat. Noticing which part of your foot is in contact with the ground. Really concentrating on just your feet now in the present moment your mind is likely to wander away from this focused attention on your feet but try noticing and acknowledging what you have been thinking about, then bring your attention back to your feet.

It is quite normal for the mind to wander but keep trying to bring your attention back to what you are holding as your focus of attention (pause).

Now, bringing the attention to your legs, exploring the sensations as you move your attention up the back of the legs…. Now to the back of the knee…. This is somehow you may never have sent your attention so try exploring the sensations that are there (pause)

Now, bringing the attention to the front of your knees touching your clothing or are they exposed to the air? You can focus on one knee or both…really noticing how they feel and bringing your attention gently back to them if it wanders

Now, drawing your attention to your hips… explore any contact with clothing, the sensations you are experiencing in this part of the body… exploring the contact with the chair you are sitting on… what do you feel? Is there any pressure? Explore what is there.

Now, we will move slowly up your spine, can you feel your vertebrae? As you do this are you aware of any thoughts drifting into your mind such as I cannot feel my spine? Acknowledge this without judgment and then gently take your attention back to your body, moving up to your shoulder blades.. how do these feel? Are they tight? Relaxed? Warm? Explore how they feel to you.

Now, come around to the front of your torso to your stomach and chest. Noticing the sensations here. Any movement in the stomach? Any tightness in the chest? Exploring the sensations in the chest, exploring the sensations, now moving to your face, exploring the sensations in the chest.

Now, moving to your face, exploring the sensations in your face, nose, lips, cheeks, forehead, ears (long pause)

Noticing if your mind wanders bringing your mind back to the here and now and your bodily experiences (pause)

Now, please open your eyes.

How did that feel?

How did that go for you?

Was it hard to focus and listen to what I was saying?

Any other comments?

Home practice: please try the sitting meditation for yourself at least once at home if possible before the next session and then feedback to everyone.

**Appendix I**

Time Scale for Research

|  |  |
| --- | --- |
| **Month** | **Plan** |
| December 2013 | Submit research proposal to UEL |
| January – February 2014 | Literature Review  (reading & writing) |
| March - May 2014  Phase one | Carry out mindfulness intervention and pre and post intervention measures.  Analyse quantitative data |
| June 2014  Phase two | Interview a selection of students |
| Start of October 2014  Phase three | Interview students and form Teachers |
| October 2014 | Analyse qualitative data |
| November – December 2014 | Interpret findings from the study |
| January – April 2015 | Write up thesis |
| May 2015 | Hand in thesis to UEL  Give written feedback to the school and participants involved  Present findings at Educational Psychology Service |
| July 2015 | Viva at UEL |
| July 2015 | Present my findings to tutors and trainees at UEL conference |
| July - August 2015 | Make amendments to thesis |

**Appendix J: Profile of the students who participated in the intervention**

*Diane*

-Year 10

-No previous experience with mindfulness

-Has experienced school related anxiety

- School staff describe how she struggles to cope with this anxiety and they mention the impact it has on her around exam time

-not open to support from school staff

-reluctant to engage in parts of the mindfulness activities

\*(see appendix N)

Liz

-Year 10

-No personal previous experience with mindfulness

-Talked about how her mum has used it to treat her depression

-Highly anxious

-Staff and peer group concerned about high levels of anxiety

-Open about her range of difficulties

-Keen to try out a range of mindfulness techniques

Sarah

-Year 10

-No personal previous experience with mindfulness

-First student to be identified with staff as she has suffered from panic attacks since starting secondary school

-Anxiety has been an issue in school and socially outside of school

-Eager to engage in mindfulness techniques

-Practiced mindfulness at home from the beginning of the intervention

Jane

-Year 10

-No personal previous experience of mindfulness but had heard about it through family

-Highly anxious around exam time (often unable to complete exams)

-Keen to try out a range of mindfulness techniques

Claire

-Year 10

-No personal previous experience of mindfulness

-Keen to try mindfulness at home and in school

**Appendix K**

**Outcome of pilot phase for intervention**

The following changes were made to the MBSR intervention based on feedback from students during the pilot phase:

-Less activities now in each session as previously there was too much to get through

-The girls said that they wanted time at the end to discuss what they had done and how they could incorporate their techniques into private practice

-Breathing techniques to be used in each session

-Small group size as previous feedback indicated that a large group is not ideal for this intervention

-Mindfulness exercises led by facilitator

-Allow sufficient time at the end of each session to address students’ anxieties/worries/concerns

-Feedback on mindfulness group and private practice at the end of each session

**Appendix L**

**Semi-structured interview questions with the students**

Semi-structured interview questions were conducted with the students. Some of the questions were altered or omitted during the interview process.

* What goals did you have in mind at the start of the intervention?
* What was it like to be involved in the intervention in school?
* Do you practice mindfulness on a regular basis?
* How have you learned how to deal with stressful events in a different way?

* What changes have you noticed since starting the intervention?
* Would you recommend mindfulness to others? Please explain reasons why you would/would not.
* How has school been since starting the intervention?
* Have your teachers, friends and family noticed any changes in you since you started the intervention?
* How do you deal with school-related stress now?
* How did you previously deal with school related stress?

Prompts:

* Can you explain a little more about that?
* In what way did that help?
* Who else noticed?
* Why do you think that could be?

**Appendix M**

***Interview questions with school staff***

Did you notice any changes in the students at the end of the first phase of the intervention?

What changes did you notice?

Did you notice any changes in the students at the end of the final phase of the intervention?

What did you notice?

Why do you think you noticed these changes (if any)?

Did any other member of staff comment on these changes after the end of the final phase of the intervention?

Any other comments in relation to the students’ use of mindfulness or how it could be used by other students in school?

**Appendix N(a): Transcript from a semi-structured interview with Sarah**

* **What goals did you have in mind at the start of this intervention?**

Well, erm I was not certain really at the start if I did have goals in mind. Thinking about it now, I probably hoped to develop the ways in which I deal with anger – this has been an issue for me and my parents have mentioned this loads of times before.

I was hoping it would be like an open space to discuss stuff, er, you know (pause) like school problems, homework stuff, friendships problems.

Even though the group was small I hoped I would gain confidence when speaking out in front of others.

I think staff here felt I would benefit from it because I do have high levels of anxiety, I guess also when they mentioned it to me a few weeks back I thought it could be useful for my panic attacks.

* **What was it like to be involved in the intervention in school?**

Overall (pause)…. Well I would say it was enjoyable. It was good to get to know someone new and spend time with other members of the group. I looked forward to each session.

* **Do you practice mindfulness on a regular basis?**

Erm , well if I’m honest (pause) not as much as I would like to really. I did try at the start, like using the exercises you gave us to use at home. But it is not always easy when im at home, don’t have my own space, it is not peaceful and it can be hard to get a quiet spot.

Its not that I do not want to do it more often, it can be hard that’s what im trying to say (pause)

* **Have you learned to deal with stressful events? If so, in what way?**

Yes from the group work and from using mindfulness. The counting to ten helps a lot in class.

Researcher: can you give me some more information about the ways in which you can deal with stressful events now?

Errmmm, hard to say. Well I guess before I started this I really would say I was not into positive thinking.

If Im getting worked up or struggling to deal with something I stop and try to be mindful more often. Like this morning, on my way to school I was getting worked up about …… (pause) I’ll not go into it, but worked up about stuff, yeah, I tried to do the mindful nature thing we talked about. Like noticing what I am walking by, the smells like……

Normally, before this , I would say I stayed away from thinking about my reactions to events.

Researcher: and now, what is different?

Sarah: I have learned lots about my thoughts and feelings. I can now deal with the negative I can deal with life in a positive kind of way.

**-What changes have you noticed since starting the intervention?**

No like massive big changes, really. But, like.. I would say I can be more positive in a way now. Like before I used to step away from dealing with stuff, now I am not like that as much… like instead of continually putting things off now I tend to get on with it, rather than avoiding it like I used to, especially difficult tasks.

**Researcher: anything else?**

Sarah: I really don’t think I have been spending as much time going over the stuff that happens in school. Well not as much time as I used to before. It is almost like I am taking myself out of it, like taking a step back from some things I struggle with.

I try to be calm and present in class, and take my time with stuff. This was hard to do at the start and I remember thinking ‘what is the point?’ even if I do try it will not make any difference.

Also, I was the kind of person who would walk into a room to get something, I could go in and have no clue what I was looking for.

**Researcher: Has that changed in any way now?**

Sarah: Yeah, cos I try to be more mindful, cos, like (pause)…… I know that I wasn’t thinking about what I was doing.

* **Would you recommend mindfulness to others? Please explain you reasons.**

Yeah, ermm yes I would.

Like, from being in this group I have learned lots of new things, like new ways to deal with stuff and think about things in a better, easier kind of way. In here is the first time I have ever really thought about all that stuff, even like my breathing, I think about that now.

To the other girls in my class dealing with stress I would say to come to group, or even just try it out at home like with the apps we talked about.

* **How has school been since starting this intervention?**

Well, we still have loads to get through and I am still stressed sometimes. But, like (pause) now I think about why I am stressed. I found it useful to do the thinking thing in an exam?

Researcher: could you tell me more about that?

Sarah: you know, the watching the pencil, like focusing only on it. Don’t care if I looked silly cos it did actually help.

**Researcher: ah, ok. Can you think of anything else?**

Sarah: its bizarre, I seem to know more now by slowing myself down.

I would say I have more ways now to manage stress.

Researcher: why do you think this happened?

Sarah: it is hard to say really…. I think maybe it is just easier now to stop and use the breathing exercises or think about the here and now. Like I spend more time thinking about how I react to things that are going on around me.

**Researcher: you mentioned reactions to things around you, what has changed?**

Sarah: ….. for me it is about recognising that I can’t control some of the things that are happening around me, like the things that others may say about me. What control do I have over that? (pause)…….

* **Have your teachers, friends and family noticed any changes since you started the intervention?**

Mum says she has, yea. And (pause) the rest of the family have noticed that I am a lot calmer now, previously I let my anger and frustration build up, I just couldn’t cope with it. Everyone at home could see that.

**Researcher: How do you think that change came about?**

Sarah: I needed the open space we had in our group meet ups to address my worries.

* **How do you deal with school related stress now?**

Now I would say I am able to switch off. Its like I can deal with stress in a healthy way if that makes sense to you? Like, rather than bury my head like I used to I just deal with stuff.

**Researcher: why do you think that is?**

Sarah: …. Almost like inside I understand myself better and where I am and what I need to do to control my emotions.

In a way (pause)….. it is almost like I have more space in my head now and I don’t think I spend as much time now going back over things that have happened, like I was over thinking and over analysing situations.

**How did you previously deal with school related stress.**

Like I said before, not in a good way.

I think that maybe is why I had so many panic attacks. Now I can see how that can happen and in now more about what I should do.

**Researcher: anything else?**

Sarah: Before I probably found it too hard to face stuff and to get on with it and tackle it, if that makes sense to you?

**Appendix N.(b) Transcript**

**DIANE**

**Interview Questions**

1. **What goals did you have in mind at the start of the intervention?**

None really, just like was not sure what to expect. Had never heard of mindfulness before so had no idea what we would be up to really.

* **What was it like to be involved in the intervention in school?**

I just did not enjoy it like I thought I would. After the first few sessions I had some really strange dreams. That kind of, in a way, freaked me out and made me feel uncomfortable. This put me off if I’m being honest.

I hated body scan, what was the point of that, I just kept thinking about

My fat legs, it made me think about them even more….. not impressed

With that one……

I didn’t think that the sessions would be so long, I just got bored of it all…..

* **Do you practice mindfulness on a regular basis?**

No it is not for me. Not keen on doing it again to be honest with you. I don’t get letting things go, what is that all about? Why should I let things go when they trouble me all the time, almost every day?

* **How have you learned how to deal with stressful events in a different way?**

No, not really. I do find it good to meet up with you all in our group for the past while, that did help. Good to talk about the stuff that makes me worry…

* **What changes have you noticed since starting the intervention?**

I definitely do think more about how I deal with stuff in school and at home. I pay more attention some times to what I feel and why I guess.

* **Would you recommend mindfulness to others? Please explain reasons why you would/would not.**

No. Just don’t see why, like what’s the point of it all.

* **How has school been since starting the intervention?**

Same really, why?

* **Have your teachers, friends and family noticed any changes in you since you started the intervention?**

*No answer……*

* **How do you deal with school-related stress now?**

In a way I can see how school makes me feel and I think I do spend time thinking bout what stress is and why some of us experience it.

* **How did you previously deal with school related stress?**

Before, like… I would say a negative thought could come into my head and it would stay there – it would go round and round without escaping.

Like I said at the start, not much has changed really (Pause) It just hasn’t …..

I never spoke about mindfulness with other students and my family members,

They would tease me. Where I’m from you just get on with it or if its not

Going well then bottle it up.

Prompts:

* Can you explain a little more about that?
* In what way did that help?
* Who else noticed?
* Why do you think that could be?

**Appendix O: Consent Letters**

**UNIVERSITY OF EAST LONDON**

Patricia Gilleece

U1131172@uel.ac.uk

Dear \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,

The purpose of this letter is to provide you with the information that you need to consider in deciding whether to participate in my research study. The study is being conducted as part of my Doctorate in Child and Educational Psychology at the University of East London.

The Special Educational Needs co-ordinator at your school has identified you as a student who has experienced a significant amount of school based stress and anxiety over the last 12 months. My intervention will use some mindfulness based stress reduction techniques in a group with 14 other year 10 students and it is hoped that along with daily practice at home you will experience reductions in the levels of stress and anxiety that you experience at school on a day to day basis and a reduction in any negative thoughts and emotions.

Mindfulness is about slowing down, seeing things clearly and paying attention to the present moment. When you are mindful, you notice what is happening as it is taking place and you are more aware. For example in this intervention you may sit for a while in the group without doing anything at all and just try to notice your surroundings and yourself during this time.

This intervention itself comprises of three phases:

**-Phase one:** You will complete three scales which should take no longer than 30 minutes. You will then take part in the intervention in school for one hour per week over 8 weeks. At the end you will fill the three scales in again and you may be selected to take part in an interview which will last no longer than 1 hour.

**-Phase two:** you are encouraged to use some of the mindfulness techniques you will have used in the intervention on a daily basis for no longer than 10-15 minutes per day. It would also be really helpful if you could complete an online journal as regularly as possible in order to find out how you have been using the mindfulness techniques and to identify if they have helped you in any way.

**-Phase three:** this is a follow-up phase and you may be involved in one semi-structured interview which will last no longer than one hour. I may also interview your form teacher to find out more about how things have been going for you in school.

Please be aware that you can opt out of the study at any time. Should you choose to withdraw from the study you may do so without disadvantage to yourself and without any obligation to give a reason: Should you withdraw, the researcher reserves the right to use your anonymised data in the write-up of the study and any further analysis that may be conducted by the researcher.

Please feel free to ask me any questions. If you are happy to continue you will be asked to sign a consent form prior to your participation. Please retain this invitation letter for reference.

If you have any questions or concerns about how the study has been conducted, please contact the study’s supervisor [Mary Robinson, School of Psychology, University of East London, Water Lane, London E15 4LZ. Telephone: 020 8223 300 Email: m.robinson@uel.ac.uk]

Thank you in anticipation.

Yours sincerely,

Patricia Gilleece

3rd of March 2014

**UNIVERSITY OF EAST LONDON**

**Consent to participate in a research study**

**A exploratory study which examines how a school based mindfulness intervention can help teenage girls who have experienced school related anxiety within the last year?**

I have the read the information sheet relating to the above research study and have been given a copy to keep. The nature and purposes of the research has been explained to me, and I have had the opportunity to discuss the details and ask questions about this information. I understand what is being proposed and the procedures in which I will be involved have been explained to me.

I understand that my involvement in this study, and particular data from this research, will remain strictly confidential. Only the researcher(s) involved in the study will have access to identifying data. It has been explained to me what will happen once the research study has been completed.

I hereby freely and fully consent to participate in the study which has been fully explained to me. Having given this consent I understand that I have the right to withdraw from the study at any time without disadvantage to myself and without being obliged to give any reason. I also understand that should I withdraw, the researcher reserves the right to use my anonymous data in the write-up of the study and in any further analysis that may be conducted by the researcher.

Participant’s Name (BLOCK CAPITALS)

……………………………………………………………………………………….

Participant’s Signature

………………………………………………………………………………………..

Researcher’s Name (BLOCK CAPITALS)

………………………………………………………………………………………..

Researcher’s Signature

…………………………………………………………………………………………

Date: ……………………..…….

**UNIVERSITY OF EAST LONDON**

Patricia Gilleece

U1131172@uel.ac.uk

Dear parents,

The purpose of this letter is to provide you with the information that you need to consider in deciding whether to allow your daughter to participate in my research study. The study is being conducted as part of my Doctorate in Child and Educational Psychology at the University of East London.

The school’s Special Educational Needs Co-ordinator has identified your daughter as a student who has experienced a significant amount of school based stress and anxiety over the last 12 months. My intervention will use some mindfulness based stress reduction techniques in a group with 14 other year 10 students and it is hoped that along with daily practice at home they will experience reductions in the levels of stress and anxiety that they experience at school on a day to day basis and a reduction in any negative thoughts and emotions.

Mindfulness is about slowing down, seeing things clearly and paying attention to the present moment. When you are mindful, you notice what is happening as it is taking place and you are more aware. For example in this intervention your daughter may spend time sitting for a while in the group without doing anything at all just trying to notice their surroundings and their breathing during this time.

This intervention comprises of three phases:

**-Phase one:** Your daughter will complete three scales which should take no longer than 30 minutes. They will then take part in the intervention in school for one hour per week over 8 weeks. At the end they will fill the three scales in again and they may be selected to take part in an interview which will last no longer than 1 hour.

**-Phase two:** your daughter will be encouraged to use some of the mindfulness techniques they will have used in the intervention, on a daily basis for no longer than 10-15 minutes per day. It would also be really helpful if they could complete an online journal as regularly as possible in order to find out how they have been using the mindfulness techniques and if they have noticed any benefits from using them in any way.

**-Phase three:** this is a follow-up phase and your daughter may be involved in one semi-structured interview which will last no longer than one hour. I may also interview their form teacher to find out more about how things have been going for them in school.

Please be aware that your daughter can opt out of the study at any time. Should they choose to withdraw from the study they may do so without disadvantage to themselves and without any obligation to give a reason.

Please feel free to ask me any questions. If you are happy for your daughter to continue you will be asked to sign a consent form prior to their participation. Please retain this invitation letter for reference.

If you have any questions or concerns about how the study has been conducted, please contact the study’s supervisor [Mary Robinson, School of Psychology, University of East London, Water Lane, London E15 4LZ. Telephone: 020 8223 300, email: m.robinson@uel.ac.uk]

Thank you in anticipation.

Yours sincerely,

Patricia Gilleece

3rd of March 2014

**UNIVERSITY OF EAST LONDON**

**Consent to participate in a research study**

**A exploratory study which examines how a school based mindfulness intervention can help teenage girls who have experienced school related anxiety within the last year?**

I have the read the information sheet relating to the above research study and have been given a copy to keep. The nature and purposes of the research have been explained to me, and I have had the opportunity to discuss the details and ask questions about this information. I understand what is being proposed and the procedures in which my daughter will be involved have been explained to me.

I understand that my daughters’ involvement in this study, and particular data from this research, will remain strictly confidential. Only the researcher involved in the study will have access to identifying data. It has been explained to me what will happen once the research study has been completed.

I hereby freely and fully consent to my daughter participating in the study which has been fully explained to me. Having given this consent I understand that she has the right to withdraw from the study at any time without disadvantage to herself and without being obliged to give any reason. I also understand that should she withdraw, the researcher reserves the right to use their anonymous data in the write-up of the study and in any further analysis that may be conducted by the researcher.

Participant’s Name (BLOCK CAPITALS)

……………………………………………………………………………………….

Participant’s Signature

………………………………………………………………………………………..

Researcher’s Name (BLOCK CAPITALS)

………………………………………………………………………………………..

Researcher’s Signature

…………………………………………………………………………………………

Date: ……………………..…….

**Appendix P: Ethical Approval and Risk assessment**

# ETHICAL PRACTICE CHECKLIST (Professional Doctorates)

**SUPERVISOR**: Mary Robinson **ASSESSOR:** Christian van Nieuwerburgh

**STUDENT:** Patricia Gilleece **DATE (sent to assessor):** 07/02/2014

**Proposed research topic**: **How can a school based mindfulness intervention help teenage girls who have experienced school related anxiety within the last year?**

**Course**: Professional Doctorate in Educational and Child Psychology

1. Will free and informed consent of participants be obtained? YES

2. If there is any deception is it justified? N/A

3. Will information obtained remain confidential? YES

4. Will participants be made aware of their right to withdraw at any time? YES

5. Will participants be adequately debriefed? YES

6. If this study involves observation does it respect participants’ privacy? N/A

7. If the proposal involves participants whose free and informed

consent may be in question (e.g. for reasons of age, mental or

emotional incapacity), are they treated ethically? YES

8. Is procedure that might cause distress to participants ethical? N/A

9. If there are inducements to take part in the project is this ethical? N/A

10. If there are any other ethical issues involved, are they a problem? N/A

**APPROVED**

|  |  |  |
| --- | --- | --- |
| YES |  |  |

**MINOR CONDITIONS:**

**REASONS FOR NON APPROVAL:**

Assessor initials: CJvN Date: 7 February 2014

# RESEARCHER RISK ASSESSMENT CHECKLIST (BSc/MSc/MA)

**SUPERVISOR**: \_\_\_\_\_\_\_\_\_\_\_\_ **ASSESSOR:** Christian van Nieuwerburgh

**STUDENT:** Patricia Gilleece **DATE (sent to assessor):** 07/02/2014

**Proposed research topic**: **How can a school based mindfulness intervention help teenage girls who have experienced school related anxiety within the last year?**

**Course**: Professional Doctorate in Educational and Child Psychology

Would the proposed project expose the researcher to any of the following kinds of hazard?

1 Emotional NO

2. Physical NO

3. Other NO

(e.g. health & safety issues)

If you’ve answered YES to any of the above please estimate the chance of the researcher being harmed as: HIGH / MED / LOW

**APPROVED**

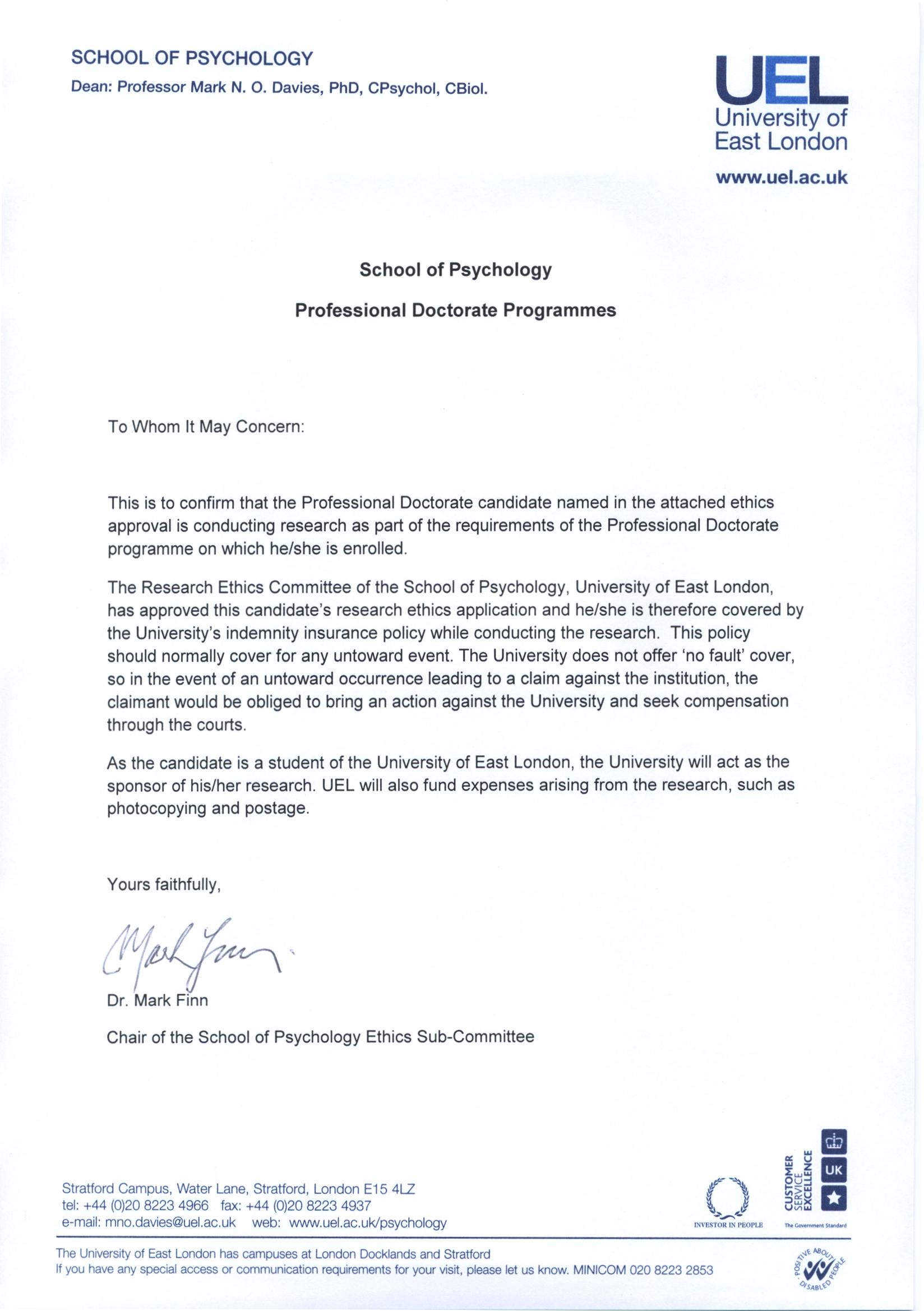
|  |  |  |
| --- | --- | --- |
| YES |  |  |

**MINOR CONDITIONS:**

**REASONS FOR NON APPROVAL:**

Assessor initials: CJvNDate: 7 February 2014

For the attention of the assessor: Please return the completed checklists by e-mail to [ethics.applications@uel.ac.uk](mailto:ethics.applications@uel.ac.uk) within 1 week.



**University of East London**

**Professional Doctorate in Educational and Child Psychology**

**Risk assessment for research that is being conducted away from UEL.**

The focus of the Risk Assessment should be on the risks that researcher might be exposed to in the course of data collection. The ethics process largely deals with risks to the participants. This Risk Assessment should largely deal with the researcher’s safety. Most of the issues in terms of your safety will be covered by the national Practice Placement Partnership Framework and your bursary Local Authority Safe Working Practices. However any additional Risks that you may be exposed to in completing your data collection need to be detailed here.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Title of study | Location(s) of interviews | Name of local contact (if available) | Severity of hazard  (H, M, L) | Likelihood of hazard  (H, M, L) | Risk  (H, M, L) | Approved  (Yes/No) |
| **How can a school based mindfulness intervention help teenage girls who have experienced school related anxiety within the last year?** | Secondary school in South East London (Bursary LA) for intervention and one-to-one interviews after the intervention | Dr C D\_\_\_\_\_  (supervisor) | Low | Low | Low | Approved by UEL ethics committee February 2014 |

Trainee: Patricia Gilleece Signature: Date: 10/03/14

Director of Studies: \_\_\_\_\_\_\_\_\_\_\_ Signature: Date:

Dean of School or designate:

**Brief details of nature of potential risks and how these will be addressed:**

* *Potential risk –* students may find it difficult to concentrate or may feel uncomfortable during a mindfulness session. Researcher will stop the session immediately and inform this students form teacher and family. Student can take time out and is free to withdraw from the study at any time. Researcher will adhere to the school’s own safeguarding policy.

*Potential risk-* student may disclose difficulties in their personal life (they are not required to do so as part of this study). If this happens the researcher will inform their form teacher immediately and ensure they have someone to speak to as soon as possible. Researcher will also adhere to the school’s safeguarding policy.

*Potential risk-* fire or evacuation of the school in which research will be carried out. Researcher shall follow the school’s health and safety evacuation plan and become familiar with the closest exits in the event of a fire.

* *Mindfulness intervention with year 10 girls.*

*Ethical approval has been granted from UEL. Local Authority policies and procedures will be followed, in addition to any recommendations from the UEL ethics committees. The researcher has over two years of experience of working with secondary pupils and is experienced and skilled at facilitating groups of students through work as a teaching assistant and as a mainstream classroom teacher for 5 years.*

*All sessions will be held in the secondary school in South East London in a designated teaching room (the Special Educational Needs Co-ordinator’s classroom). Each session will be held once a week in school time during the afternoon (approximately 12.40-1.40pm). The facilities will be familiar to the participants with no potential risks or hazards.*

*At the end of the 8 week intervention some students will be interviewed. Emotional and personal issues will not be discussed and instead the interview will aim to explore how mindfulness has had an impact on teenage girls for whom school based anxiety has been an issue for the last 12months. The severity and likelihood of any risk is* ***low.***

Trainee: Patricia Gilleece Signature: Date:

Director of Studies: Signature: Date:

Dean of School or designate:

**Appendix Q**

**Excerpts from research diary**

***September 2013***

Ideas for research:

Well-being of teenage girls

Challenges they face in school, the support that is available to them in school how they cope when things are not going well.

Mixed methods:

Minor element questionnaires to a number of schools

Survey monkey for headteachers

Major: qualitative research

Interviews with girls who experience difficulty but avail of services in school

Interviews with girls who experience difficulty but do not avail of services in school and find it hard to talk about their feelings

Focus groups: how can schools continue to help students?

Spoke to my PEP – there has been a change to my research area as there may be too many challenges with getting access to the students as school may worry that certain challenges girls face may arise and there had not been enough support in place for them in school.

***October 2013***

Meeting with counsellors who work in a variety of schools in my borough. Really useful meeting as we discussed their current concerns and the cutbacks they have recently witnessed. I talked about my ideas re mindfulness and teenage girls and they all felt that it could be a really interesting useful piece of research to carry out.

Feeling relieved and excited, now have a plan in mind.

***6th of October***

Reviewed previous areas of interest

New idea is now to implement a mindfulness intervention with 8-10 teenage girls suffering from anxiety and then qualitative -> thematic analysis at the end of the intervention about their experiences.

Aiming to hand in my Research proposal for 13th of December

Do I need to approach schools now?

C\_\_\_\_\_\_\_ secondary school?

How many other schools?

How many additional students needed?

How many students actually would be enough?

What do I do if school identify far more than I can work with?

When? Before exams, during exams?

What pre and post measures.

Do I need to take part in mindfulness stress reduction therapy training?

Age group?

***7th of October***

Spoke with another school counsellor about my research. Got some really positive feedback and she would be keen to stay in contact to find out where I shall carry out my research.

-Spoke with CD today about the fact that I already have quite a few strong beliefs about the importance of mindfulness and how this could affect the findings from my study. I am going to continue to use this journal to talk about how I accept these beliefs and how I am trying my best not to let them get in the way of this study.

Action: discuss with CD in supervision, forward diary extracts to MR!.

***Pilot day***

Thankfully a large group of girls came today. Few more than I had anticipated but really happy to see so many made it. After a few minutes it became clear that quite a few were keen to be involved as they saw this intervention as an easy way to miss class. A few girls were placed in the group due to attendance issues and thankfully there were a number of girls who were genuinely keen to be involved as they have previously experienced school related anxiety and are keen to learn some ways to deal with this.

**What have I learned from today :**

I tried to pack too much into one hour

The girls said that they wanted time at the end to discuss what they had done and how they could incorporate their techniques into the week ahead

Breathing techniques are really useful

Some of the girls were embarrassed to try out mindfulness

Others found it hilarious and just wanted to sit and laugh

A large group is not ideal for this intervention

The girls preferred the mindfulness exercises led by myself and not the audio tape with the American man

The students who seem keen to be involved are those that are reluctant to speak out in the group, they came to me afterwards

Very few are keen on filling in an online journal sadly, a few feel that they do not want to share their thoughts during this process

Many students are worried about practicing mindfulness in private in case friends/family see them and tease them

None of the participants had heard of mindfulness

All students found the counting exercise particularly challenging

***Session 4:***

Great to hear such good feed back from the participants

I do struggle sometimes when they tell me about the challenges they face in school. I really want to address them but we don’t always have time.

So far – It has been useful to encourage the students to write down fear/anxieties/worries on a post it and we leave them to one side and address them at the end of the session

Full on session!! I really need to have some extra time in supervision to talk about some of the difficulties these students experience (can’t quite believe how much they go through at school)

Difficulties with large group of pupils at the start of the intervention.

Number of these students were not interested in using mindfulness, they saw it as a way out of lessons. Staff felt they may benefit as they had been in trouble recently due to late attendance/high number of absences. These girls joining the original members of the group caused a number of difficulties and consequently many of the original group members were reluctant to open up and talk about how they had used mindfulness the benefits, any setbacks etc.

Some days were difficult for me. I was trying to juggle being on placement with a number of difficult cases to work on. The group members came along to each session and wanted to talk about a number of things that had happened to them. They were encouraged to write everything down as they came in to each session and we left it to one side so it could be discussed at the end of the session. This was easier to manage but it was not easy to listen to some of the things that they have been through, eg being teased by other students, difficulties at home with their family, etc. It was always very useful to debrief with my tutor at university and my supervisor on placement. At the time I had monthly peer supervision at work and peer support groups at university so it was helpful to use that time to talk through the difficulties these students encounter in their lives otherwise I would have carried a lot of guilt around with me, I felt I should be able to help them more than I was able to. I find it challenging to hear that others are going through difficult phases in their lives, we did not always have the time to work on this in the group. I spoke to the school SENCo on a regular basis and I informed her of some of the difficulties they were going through so that she could inform their form teacher if she felt it was necessary.

Interviews at the end went well with the students. The amount of positive feedback was a pleasant surprise. Unfortunately it was not so easy to get time with their form tutors. Instead, support staff and the school SENCo gave feedback.

Really beneficial to get feedback at the end of each session, not only to make improvements but to allow the students to have their say and play a role in the way that sessions are delivered. Learned a lot about my own practice and how I work through the feedback I received from the girls.

School contacted me about the intervention and the benefits for the students. They became aware that EPs do not just observe, consult and assess. Thankfully they became keen to buy in extra visits for intervention work as they could clearly see the benefits associated with them.

Interventions that schools need to offer. From this study I became interested in offering training to support staff on mindfulness for their own private practice and the benefit it can have when used with students.

So far I can see the following are really important

-Resilience

-Happiness

-Success

-Optimal functioning

-Schools need to create an awareness of school related anxiety and the benefits of mindfulness

-Positive thinking can have control over intelligence, attention, creativity, well-being.

-Stress can be useful sometimes, not always

*-Coding: had no idea this would be such a nightmare. There is no way I could get through it without the support from \_\_\_ in the office and \_\_\_\_ as my ‘peer researcher’. Im embarrassed to say that \_\_\_\_ managed to generate codes I had not even considered. We sat down and went through everything, hoping this will pay off in the long run.*

*Glad I did not outsource the transcribing, no point. I don’t have the money, also it makes more sense to do it myself and get a greater feeling for the data.*

*\_happy that other classmates have gave me a range of tips for cutting parts of my data out and putting it into separate envelopes. Tried this last night and it helped.*

*What I have gained from this research*

Can see the value of mindfulness now from my own practice and from the feedback from the students and teachers.

This study has encouraged me to carry out more therapeutic interventions on placement and ideally on a regular basis when I start to work as a main grade psychologist in the next few months.

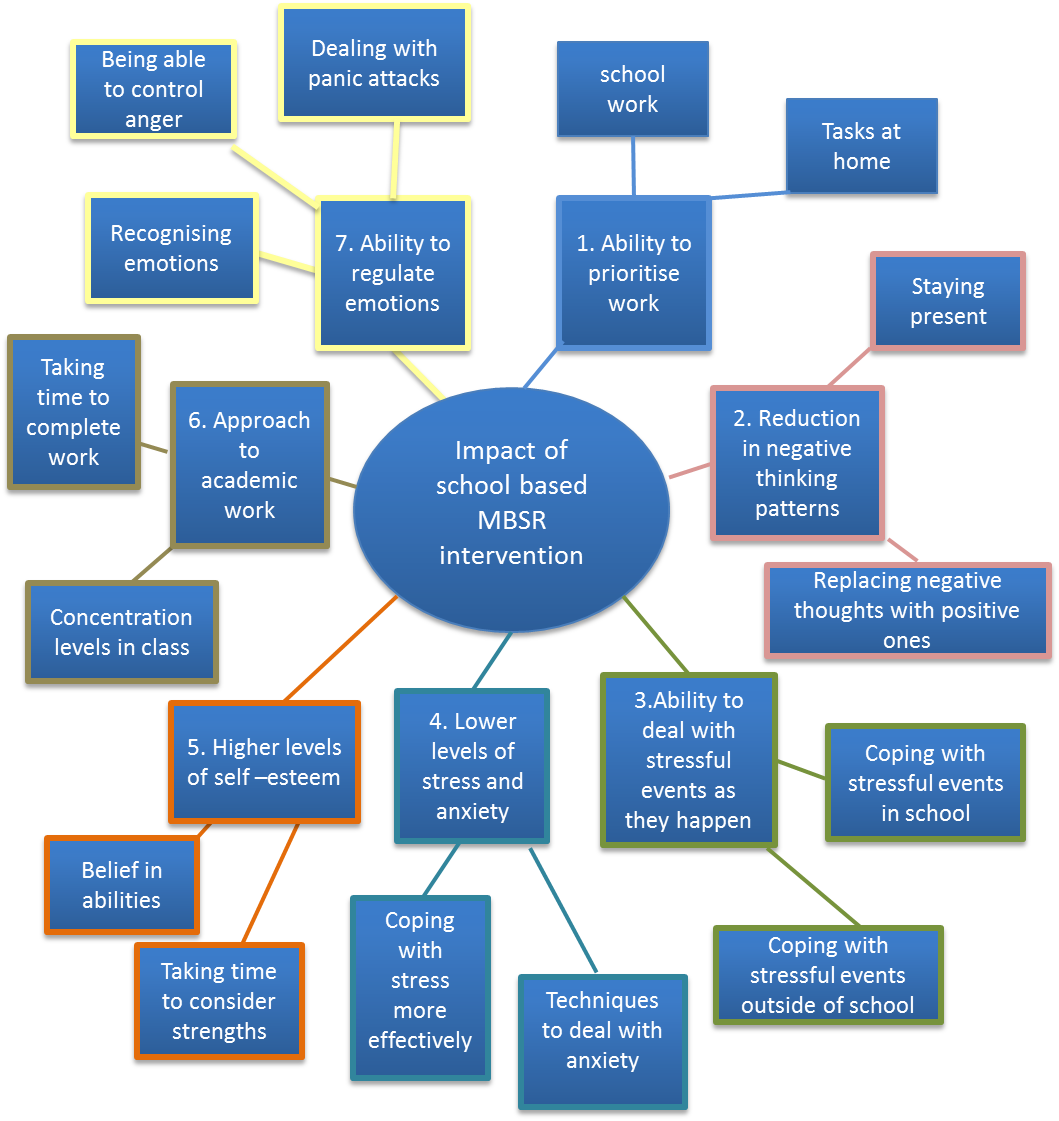
The research has learned the following from carrying out this research

* It is extremely important to be mentally be in a good place before meeting up with students who are experiencing difficulties on a regular basis
* Mindfulness is clearly beneficial for staff and for students
* Meeting together in a safe, open space not only to use mindfulness meditation but to talk about school and life in general was highly beneficial for all involved
* Mindfulness meditation in a small group with 5 – 8 students works best as students can feel comfortable and can be open about any difficulties they are encountering
* Don’t be afraid to laugh at yourself
* Try not to take yourself too seriously
* The interviews revealed that mindfulness is not for everyone, accept that and try to not take this criticism personally
* It is not only beneficial to practice mindfulness in a group but also in private on a regular basis where possible

‘Don’t believe everything you think’ Biegel (2009) Very important for my own practice of mindfulness, for my progression on the doctoral training, for days when I was having doubts about my research and if it would ever be ‘good enough’.

**Figure 1:**

**Thematic Master Map**



**Table 2**

Example of coding process

-Example of codes agreed between researcher and peer researcher

Code with \* new code introduced by the peer research

|  |  |  |
| --- | --- | --- |
| **Theme** | **Code** | **Code (no. assigned when going through transcript)** |
| Description  1. Ability to prioritise work |  |  |
|  | School work | Exercises in class |
| (sub-theme) |  | Work in study hall |
| a)School work |  | Coursework |
| b)Tasks at home | Non-school work | \*Chores at home  Helping family  Helping friends |

**Table 5**

**SPSS output - Well-being scores**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Descriptive Statistics** | | | | | | | | |
|  | N | Mean | Std. Deviation | Minimum | Maximum | Percentiles | | |
| 25th | 50th (Median) | 75th |
| well\_being\_score\_pre | 5 | 27.6000 | 4.72229 | 23.00 | 34.00 | 23.5000 | 26.000 | 32.5000 |
| well\_being\_score\_post | 5 | 36.4000 | 4.33590 | 30.00 | 40.00 | 32.0000 | 38.0000 | 40.0000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ranks** | | | | |
|  | | N | Mean Rank | Sum of Ranks |
| well\_being\_score\_post - well\_being\_score\_pre | Negative Ranks | 0a | .00 | .00 |
| Positive Ranks | 5b | 3.00 | 15.00 |
| Ties | 0c |  |  |
| Total | 5 |  |  |
| a. well\_being\_score\_post < well\_being\_score\_pre | | | | |
| b. well\_being\_score\_post > well\_being\_score\_pre | | | | |
| c. well\_being\_score\_post = well\_being\_score\_pre | | | | |

**Table 6**

**SPSS output - Spence Children’s Anxiety Scale scores**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Descriptive Statistics** | | | | | | | | |
|  | N | Mean | Std. Deviation | Minimum | Maximum | Percentiles | | |
| 25th | 50th (Median) | 75th |
| scas\_pre\_score | 5 | 61.8000 | 9.41807 | 47.00 | 71.00 | 53.0000 | 64.0000 | 69.5000 |
| scas\_post\_score | 5 | 59.8000 | 7.46324 | 50.00 | 69.00 | 53.0000 | 59.0000 | 67.0000 |

Figure \_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ranks** | | | | |
|  | | N | Mean Rank | Sum of Ranks |
| scas\_post\_score - scas\_pre\_score | Negative Ranks | 4a | 3.00 | 12.00 |
| Positive Ranks | 1b | 3.00 | 3.00 |
| Ties | 0c |  |  |
| Total | 5 |  |  |
| a. scas\_post\_score < scas\_pre\_score | | | | |
| b. scas\_post\_score > scas\_pre\_score | | | | |
| c. scas\_post\_score = scas\_pre\_score | | | | |

**Table 7**

**SPSS output - Mindfulness Attention Awareness Scale**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Descriptive Statistics | | | | | | | | |
|  | N | Mean | Std. Deviation | Minimum | Maximum | Percentiles | | |
| 25th | 50th (Median) | 75th |
| mindfulness\_pre | 5 | 29.6000 | 5.12835 | 26.00 | 38.00 | 26.0000 | 27.0000 | 34.5000 |
| mindfulness\_post | 5 | 52.8000 | 6.72309 | 44.00 | 60.00 | 46.0000 | 54.0000 | 59.0000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ranks** | | | | |
|  | | N | Mean Rank | Sum of Ranks |
| mindfulness\_post - mindfulness\_pre | Negative Ranks | 0a | .00 | .00 |
| Positive Ranks | 5b | 3.00 | 15.00 |
| Ties | 0c |  |  |
| Total | 5 |  |  |
| a. mindfulness\_post < mindfulness\_pre | | | | |
| b. mindfulness\_post > mindfulness\_pre | | | | |
| c. mindfulness\_post = mindfulness\_pre | | | | |