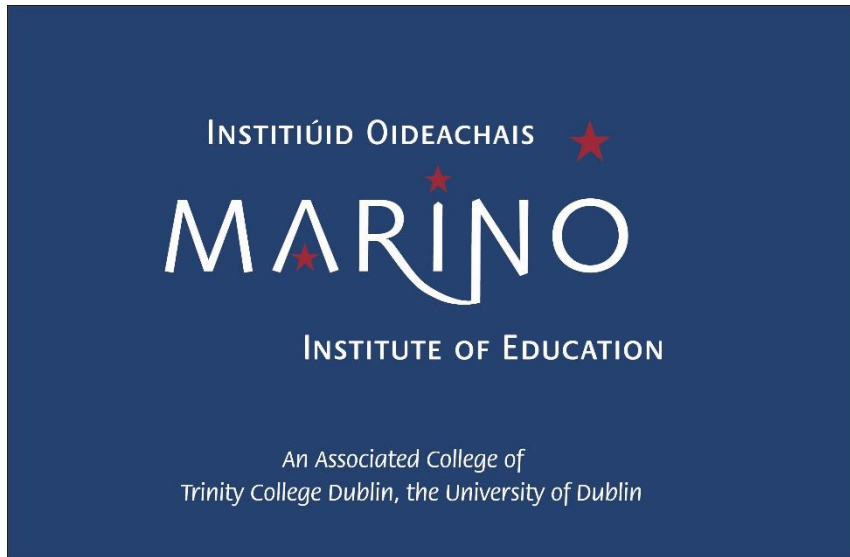




An exploratory study of the impact of a mindfulness intervention on the well-being and self-regulation skills of children in a senior primary school setting.

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Declaration

I hereby certify that this material, which I now submit for assessment on the programme leading to the award of the degree of Professional Master of Education, is entirely my own work and has not been taken from the work of others, save to the extent that such work has been cited and acknowledged within the text of my work. I further declare that this dissertation has not been submitted as an exercise for a degree at this Institute and any other Institution or University. I agree that the Marino Institute of Education library may lend or copy the thesis, in hard or soft copy, upon request.

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Abstract

Mindfulness has gained in popularity in recent years as an effective educational tool. Although gaining in popularity in Irish primary schools, it is lacking in terms of research in that context. The aim of this dissertation is to investigate the effects of a mindfulness intervention on the well-being and self-regulation skills of children in a senior primary school setting. The researcher explores the worthwhileness of using mindfulness in two senior primary school classrooms and evaluates the effects of its implementation.

A qualitative approach and an interpretivist paradigm were adopted throughout this research with an element of quantitative data gathering and analysis employed. Participants included 52 sixth class students, aged between 11 and 13 years old, in a mixed, vertical school. An open-ended situation questionnaire was distributed pre-intervention, to ascertain children's self-regulation skills. Semi-structured interviews were employed both pre- and post-intervention, with two class teachers, in order to explore teachers' perceptions of mindfulness and its benefits within the context of the Irish primary school setting.

Findings indicated that mindfulness was a beneficial addition to the classroom. Post-intervention, classroom behaviour appeared calmer and less reactive. Participants thoroughly enjoyed the mindfulness activities and they seemed to contribute to well-being and a more positive classroom climate. Mindfulness appeared to have particular effects on children with behavioural and learning difficulties, increasing their concentration skills and overall confidence.

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Chapter One: Introduction

This research project explores what impact the practice of mindfulness has on the well-being and self-regulation skills of children. The study aims to evaluate the worthwhileness of the practice of mindfulness in an Irish primary school.

Thich Nhat Hanh (1975), a renowned Buddhist monk reminds us that “we are sucked away into the future and we are incapable of actually living one minute of life”. Nhat Hanh proposed mindfulness, as the cure for this mindless living, he describes. A simple google search of the term mindfulness racks up 107,000,000 searches. This surge in popularity may indicate a yearning for quieter time and more mindful living in this busy age, where attention is a ‘rare commodity’ (O’Donnell, 2015).

Initially, the Western world’s adoption of mindfulness practices was primarily concerned with mainstream medicine and science. Mindfulness was employed to aid the relief of symptoms of chronic pain, anxiety, depression, even improving staff morale within corporations (Kabat- Zinn, 2005; Amy Saltzman, 2008; Singla, 2011; Chade-Meng Tan, 2012). In recent years, the effects of mindfulness on children and in education have been explored. In today’s modern, digital world there are increases in stressors and anxiety due to pressures that face children. This in turn results in an increase in social, emotional and behavioural difficulties. Mental Health Ireland (2019) stated that one in every ten children experience mental health problems in Ireland before the age of eighteen. Mindfulness is credited with strengthening children’s mental health and improving their overall well-being (Naughton, 2016; Weare, 2015; Malboef Hurtubise et al. 2017). The effects of mindfulness on children will be further explored throughout the Literature Review.

Although research has been conducted regarding mindfulness and its effects on children, there is limited research outlining the effect of mindfulness within the Irish primary school context. The researcher is an avid practitioner of mindfulness: and having experienced the benefits of mindfulness it would be remiss of the researcher to ignore the potential benefits it could have on children in an educational context. This inspired the researcher to investigate further the need for mindfulness in education, teacher's perceptions of mindfulness and the effect of mindfulness on children. Thus, the formation of the research statement: An exploratory study of the impact of a mindfulness intervention on the well-being and self-regulation skills of children in a senior primary school setting.

Pre-mindfulness intervention questionnaires were used to ascertain to what degree, if any, children utilise mindfulness-based coping strategies to self-regulate. Semi-structured teacher interviews were used to determine teachers' perceptions of mindfulness pre-intervention and the effects of mindfulness on the children participants post-intervention. An outline of the mindfulness intervention is included in Appendix A.

This dissertation comprises of five chapters. The Literature Review discusses the pertinent literature concerning mindfulness. It addresses the concept of mindfulness and the potential effects of the practice, particularly on children and in educational settings. The Methodology chapter outlines the research design. The research tools are discussed in depth alongside data collection, and data analysis. The limitations of the research, researchers' positionality, and pertinent ethical considerations are also examined. The Data Analysis and Discussion chapter addresses the findings that emerged from the research study. The thematically analysed themes are discussed at length. Lastly, the conclusion chapter presents a summary of the outcomes and recommendations for further study in the field of mindfulness and education.

Chapter Two: Review of Literature

This literature review explores a range of literature surrounding mindfulness. The review focuses on several key areas that inform this research on the impact of a mindfulness intervention on the well-being and self-regulation skills of children in a senior primary school setting. It begins by exploring the concept of mindfulness, outlining definitions of the term, acknowledging the roots of mindfulness and what it entails. It then focuses on the effects of mindfulness, particularly on children. It addresses the different effects mindfulness has on children generally, children with additional needs, learning difficulties and children from a low socio-economic background. Next, it concentrates on discussing the contribution of mindfulness on education both nationally and internationally. The positives and negatives of implementing mindfulness interventions is explored. Finally, it reviews teachers' perceptions of mindfulness and how they contribute or may contribute to the implementation of the practice within schools.

Understanding Mindfulness

Mindfulness has a wide range of definitions. Despite the wide range of definitions, there is a common theme of general receptivity, full engagement with the present moment and having an awareness and an acceptance of your emotions, thoughts and physical sensations (Meiklejohn et al., 2012; Kabat- Zinn, 1994). Mindfulness has been defined as the quietening of the mind, the thoughts, emotions and responses and noticing without analysis in order to observe information from the inner and outer worlds (Flook, 2010). Jon Kabat-Zinn, former professor of medicine at the University of Massachusetts, has been largely responsible for bringing the concept of mindfulness through meditation into mainstream medicine and science. He defines mindfulness as 'the awareness that emerges through paying attention on purpose, in the moment, and non- judgmentally, to the unfolding of experience moment by moment' (1994, p.4). Mindfulness can be considered from a neuroscience point of view

(Weare, 2013). It is suggested how mindfulness is not a figment of our imagination, but something that profoundly alters the structure and function of our brains, to cultivate positivity and efficiency.

The origins of mindfulness are rooted in the Buddhist goals of living with a focused and present body and mind (Singla, 2011). Many perceive mindfulness and its associated practices, such as meditation as esoteric, bound to religious beliefs (Black, 2010). Much research has defrayed these notions. Mindfulness and its practices can be assessed empirically and independent of religious, spiritual or cultural beliefs. Kabat-Zinn (2001) indicates, despite Buddhist roots, the importance of employing a secular application of mindfulness, a practice focused on attention rather than any religion. The Buddhist tradition is said to encourage the development of positive characteristics, such as compassion, judgement and composure (Kabat-Zinn, 1994). This Buddhist practice has infiltrated Western Culture in the past four decades, mainly through psychotherapeutic techniques, health promotion, and stress reduction and most recently in education (Singla, 2011).

Mindfulness has been diversely used in Western culture. The practice has been used with both athletes and employees to improve focus and productivity, while also being used in the medical field for treatment of illnesses like chronic pain, anxiety, and depression (Kabat-Zinn, 2003). Kabat-Zinn discovered how mindful techniques could be utilised to counteract pain and depression. It has been noted that research studies with patients suffering from chronic pain and illness, participating in MBSR (Mindfulness-Based Cognitive Therapy) courses significantly reduced stress, anxiety, pain, depression, anger and physical symptoms (Saltzman & Goldin, 2008). Patients gained a more positive outlook and felt life was more meaningful and fulfilling.

An example of the diverse integration of mindfulness was the incorporation of mindfulness and meditation into an organisation as diverse and multicultural as Google

(Meng, 2012). It is concluded that mindfulness practice leads to strengthening one's emotional intelligence. Meng classified emotional intelligence into five separate domains; self- awareness, self- regulation, motivation, empathy and social skills. When these skills are strengthened, it enables us to create conditions for our own sustainable happiness (Meng, 2012).

Mindfulness-based applications appear to have been gaining traction in the last 30 years. Previously it was virtually inconceivable that mindfulness would find any legitimate secular role in the Western world. MBSR has been developed to prevent depressive relapses. Studies have shown the programme to be highly effective (Kabat- Zinn, 2005). Across America, MBSR programmes are presently being taught to patients, the homeless, even law students in many Ivy League colleges, NBA teams, and prison inmates. This is in efforts to reduce stress, cultivate clarity, greater emotional stability, and wisdom (Kabat-Zinn, 2005).

Mindfulness can act as an alternative treatment to aid in combating and decreasing aggressive behaviour (Rebecca Fix & Spencer Fix, 2013). Mindfulness-based interventions work similarly to Cognitive Behavioural Therapy, (CBT) (a treatment for anger management) by providing various cognitive skills that eventually lead to cognitive change (Del Vecchio and O'Leary, 2014). Mindful strategies provide skills to help self-regulation. This allows individuals to become more independent, providing coping mechanisms to counteract their own aggressive behaviour. (Baer, 2003).

Mindfulness and Children

Mindfulness is suitable for all ages, especially children (Burke, 2010). Mindfulness offers some distinct features, which make it attractive for children, such as; the use of metaphor and analogy (Greco & Hayes, 2008), concrete instructions, brief time periods and interactive physical activity (Zack, Saekow, Kelly & Radke, 2014). A Canadian study

evaluated the effectiveness of a mindfulness intervention on pre-adolescence and early adolescence. The study has shown that mindfulness has a considerable effect on children in terms of emotional-regulation and behaviour (Schonert- Reichl and Lawlor, 2010). After a nine-week mindfulness intervention, teachers noticed a significant decrease in aggressive behaviour, within the class. An improvement in positive and optimistic behaviour, was reported by teacher. The study concluded that more positive results were retrieved in pre-adolescence participants. This strengthens the belief that the implementation of whole school mindfulness approaches in primary school would be beneficial. Apparently, a correlation is evident linking mindfulness coping strategies with higher self-efficiency, higher wellbeing, less depression and anxiety, more positive behaviour and better academic performances (Gutman & Schoon, 2013).

In terms of basic brain functioning, emotions support executive functions, when they are well regulated, but hinder attention and decision making when they are not controlled and managed (National Scientific Council on the Developing Child, 2012). Children's ability to concentrate has a direct effect on their academic performance in school. Mindfulness practices require the practitioner to sustain their focus of attention on particular objects. For example, the breath, can be used to enhance student's ability to concentrate in school and enhance their self-regulation abilities (Thierry, Bryant, Speegle- Nobles & Norri, 2016).

It has been suggested that the reason for positive behaviour improvements among children, post-mindfulness intervention is due to its Buddhist foundations (Brown, Ryan and Creswell, 2007). As previously discussed, mindfulness aims to enable the practitioner to be present, aware and increase their behaviour repertoire to cope with challenging situations (Brown et al., 2007). This in turn allows the children to focus and self-regulate, contributing to positive mental health.

There is strong evidence pointing to a positive impact of mindfulness on mental health. Mental health is stigmatised in Ireland. Educating children about the prevalence of mental health problems and educating children in coping mechanisms, is a key step, in making mental health more relevant and important for students. The World Health Organisation (2003) stated: “Mental health is a most important, maybe the most important, public health issue, which even the poorest society must afford to promote, to protect and to invest in.” Mental Health Ireland (2019) declared that one in every ten children experience mental health problems in Ireland. Poor mental health affects our ability to cope with and manage our lives.

There is a certain complexity in navigating the digital, social media world. The added pressures that derive from this accelerated pace of life, support inattentiveness and anticipation for what is next (O'Donnell, 2015). In this study a whole school mindfulness approach, may serve to strengthen mental health and promote well-being. Although, it is argued that by implementing mindfulness in schools, there is an assumption that children need extra support (O'Donnell, 2015). With the added social pressures facing children, this may be true but perhaps incorporating mindfulness into the Irish classroom might provide mental health support to children. Mindfulness-based coping strategies has been recognized as contributing to positive mental health and self-esteem in children. Positive mental health and self-esteem would support children facing these newfound pressures, regarding social media, online bullying and peer pressure (Naughton, 2016).

Mindfulness in Educational Policy and Practice

Mindfulness has featured in several national documents referring to the promotion of children's mental health and well-being in schools. The National Council for Curriculum and Assessment (NCCA) have not created a Mindfulness programme for schools in Ireland, yet they have acknowledged the positive effects it has on a student's social and emotional

development and wellbeing. It is recommended that teachers implement mindfulness practices in the classroom, as a key skill to support learner's well-being alongside their intellectual development (NCCA, 2015). Despite the foregoing, teacher training in this practice is minimal. Mindfulness is a core social and emotional skill, and it is recommended that children should be explicitly taught it within education (Weare, 2015). It is suggested that mindfulness is the foundation of a more conscious education, which allows children to gain enhanced awareness for their inner self (Burke and Hawkins, 2012).

Mindfulness has been compared to as a new educational tool, one that educators can pass on to encourage children, not only to boost their academic performance, but also their own social and emotional learning. This is imperative in enabling the children to handle their emotions and feelings (Burke and Hawkins, 2012). Burke and Hawkins stress how in an education system where academics are in the forefront, mindfulness is the key to unlocking student's potential to learn how to accept themselves and others and how to engage in a constructive manner.

As previously examined, mindfulness has a substantial effect on wellbeing. Studies have shown that this positive impact on well-being has a knock-on effect on academic performance and attainment (Duckworth and Seligman, 2005). It is suggested if a child is better able to self-regulate and manage their emotions, it will in turn be of more benefit to their academic achievement than their IQ. This is due to increased competence socially and emotionally.

There is an emerging body of work to support the value of mindfulness in the area of educational disadvantage, specifically children with special educational needs and/or learning difficulties. Mindfulness-based interventions can foster positive behaviour, resulting in reduced anxiety and depression levels, and increased concentration, improving the overall well-being of such students (Malboef Hurtubise et al. 2017). A mindfulness-based

intervention was also found to be helpful in alleviating stress levels among parents of children with developmental delays (Neece, 2013). Findings concluded that parents became less reactive to their child's behaviour, this in turn resulted in reductions in the children's ADHD symptoms and attention difficulties.

Another element of educational disadvantage, that may influence children's behaviour and academic achievement was family background and ethnicity (Sektan, McClelland, Acock and Morrison, 2010). It was found that socioeconomic background has a direct impact on the child's ability to regulate their behaviour, which links to lower academic achievement. Family income and maternal education was particularly linked to academic achievement, while ethnicity was linked to lower achievement in vocabulary tests. Similarly, an Irish study, derived from the 'Growing Up in Ireland Research', found that children from immigrant families scored lower in vocabulary test than other children (Smyth, 2018). This was linked to anxiety about school, leading to poor quality student teacher relationships. As mentioned previously, mindfulness can be beneficial for emotional regulation and overall well-being, having a knock-on effect on academic attainment (Smyth, 2018). A study was completed on the impact of mindfulness on lower income and ethnically diverse children (Black and Fernando, 2014). Results exhibited improvement on overall classroom behaviour, including capacity for self-regulation, improved attention span, participation skills and demonstrating care and respect. Therefore, mindfulness could be particularly beneficial for children from poorer socioeconomic backgrounds, and ethnically diverse children who have been shown to struggle with these aspects of education.

In direct contrast to the positives Carol Craig (2009) disputes the implementation of adopting holistic, mindful approaches in education. She argues that rather than nurturing children's well-being we are undermining it. We assume negative feelings constitute a psychological disorder, such as depression. Craig believes that the implementation of mindful

initiatives, may change the nature of teaching, she reminds us that we are not ‘surrogate psychologists. Furthermore, it has been suggested that mindfulness should be implemented with caution (Byrne, 2017). Byrne highlights, how it may be overwhelming for a person suffering from poor mental health to ruminate on their thoughts, and could have an adverse effect, rather than the more common positive effects.

Mindfulness Initiatives and Interventions

Mindfulness-based programs have been increasingly implemented in schools internationally. They appear to foster three basic psychological needs: relatedness, competence, and autonomy skills (Malboeuf-Hurtubise, Joussemet, Taylor & Lacourse, 2017). It has been acknowledged how children’s experience with stress and pressure is a catalyst for schools to recognise the value of enhancing children’s social, emotional, mental, spiritual and cognitive well-being (Albrecht, 2014). Too often the focus in schools is competitive learning. Social and emotional learning is rarely prioritized (Caulfield, 2016). It is critical that children learn both simultaneously. The 3R’s denoted as resilience, healthy relationships and reflection may complement the traditional 3R’s - reading, writing and arithmetic (Caulfield, 2016).

In 2011, the Mindfulness Matters programme was sanctioned by the Department of Education. Created by Dr Ann Caulfield and Derval Dunford, the programme specialises in special techniques for children, to aid them in finding space essential to empowering themselves, encouraging children to live in the now and remain present (Mindfulness Matters, n.d).

The Mindfulness Matters programme contains the means to benefit both the student and teacher. The recognized benefits of the programme include: greater self-awareness, skillful techniques to deal with difficult thoughts and emotions, improved concentration, understanding of empathy and increased self- confidence (Hanh, 2011). These ‘benefits’

reflect strand units of the SPHE (Social, Physical, Health Education) curriculum for example self-awareness, developing self- confidence, feelings and emotions (NCCA, 1999).

Children's well-being is becoming a priority among national planners. The Department of Education and Skills' (DES) most recent strategy statement, *Action Plan for Education 2016-2019*; includes well-being as a priority objective in school communities, as it contributes to a successful school life.

An Irish study was carried out, with the objective of evaluating the effect of mindfulness interventions on children's well-being (O' Leary and Dockray, 2015). Data was collected from a sample group that completed group and at home mindfulness sessions, for the duration of 8 weeks. The intervention involved keeping a mindfulness diary to document thoughts, feelings, and emotions in the present moment. The intervention demonstrated reductions in stress and depression and increases in happiness and contentment. These findings were not present in the control participants, implying the potential benefit of incorporating mindfulness into daily school life (O' Leary and Dockray, 2015).

Triple R, an Australian mindfulness intervention programme was created to decrease negative emotional symptoms and promote resilience (Bannirchelvam, Bell & Costello, 2017). The programme consists of six, once a week, one-hour sessions and two booster sessions, carried out during school time. Triple R, standing for *robust, resilient, ready to go*, focuses on providing children with knowledge and skills, to become resilient and to strengthen their mental health (McCabe & Costello, & Roodenburg, 2017). In contrast with much of the research carried out on mindfulness interventions, this one concentrated on the child's voice regarding the acceptability of a school-based mindfulness intervention. Most of the children 'felt better' after doing the program and found it easier to 'stay calm' and 'pay attention'. The majority of participants agreed that Triple R was 'fun'. Although the findings were very positive, there were divided opinions on the guided audio meditation. Some

children found it ‘boring’ or difficult to engage with. Children appear to react better to meditation, guided live by a person in their presence, such as the class teacher or a mindfulness facilitator.

Kuyken et al (2013) presented a mindfulness intervention, that focused on developing a mindful skill set, for dealing with everyday stressors. They aimed to assess the feasibility and the efficiency of a mindfulness intervention, to enhance mental health and wellbeing. The participants showed significant stress and depression symptom reduction, in comparison to the control groups. In post-intervention follow ups, 80% of children admitted they had used the practice to varying levels.

Paws b is an English mindfulness intervention programme, designed for seven to eleven-year-old children. The programme comprises of six one-hour, whole class lessons. Paws b promotes well-being and resilience, offering knowledge and coping strategies applicable to children’s lives (Thomas and Atkinson, 2017). Research was completed a study on the Paws b programme assessing its worthwhileness. The children found the programme ‘highly enjoyable’ and ‘relaxing’, yielding benefits in three main areas: well-being, social competence and academic achievement (Thomas and Atkinson, 2017). Another study on the Paws b programme highlighted parallels in findings. It was suggested that the programme enhanced meta-cognition among participants, and that overall classroom behaviour greatly improved due to the intervention (Dorjee and Vickery, 2016).

Research presents many perceived benefits that emerged from the study of the effectiveness of these interventions, but limitations must be addressed. Many of these interventions were implemented for a period of a few weeks, such as Triple R, Paws b and Mindfulness Matters interventions. Results were obtained a brief period post-intervention. It is uncertain if similar results would emerge if these variables changed. For example, Burke and Hawkins (2012) address the limitations of mindfulness intervention research, they

discuss how there are a plethora of mindfulness and well-being programmes and although they have the children's best interest at heart, many fall short of providing the children with tools for sustained success. Critically analysing the limitations of mindfulness interventions, the researcher advocates that a whole school mindfulness approach is most successful for sustained success.

Mindfulness and Teachers' Perceptions

Literature suggests how people who are calm often emit a sense of calmness and trigger calm, relaxing vibes (Caulfield, 2016). Furthermore, teachers who display mindfulness and model mindful activities and self-regulatory skills, can become role models for children. Equipping oneself with coping strategies that promote resilience, healthy relationships and reflection will not only benefit oneself but one's students (Caulfield, 2016). Furthermore, in order to motivate and encourage mindful strategies, teachers need to practise what they preach (Shonin & Van Gordon, 2015). For teachers to actively and effectively promote mindfulness, they need to incorporate a level of authenticity.

Research has highlighted the success of teacher mindfulness interventions (Roeser et al., 2013). They believe teachers can learn and apply such skills to their own lives, positively affecting their professional lives. Mindfulness has been referred to as an experiential tool, rooted in personal experience. To model the skillset, one must experience it first (Piotrowski, Binder, Schwind, 2017). Mindfulness training would equip teachers with the relevant skills, to cope more efficiently with the inherent social-emotional and cognitive challenges, faced within the classroom. Additionally, teachers become role models for the children, modeling good self-regulatory skills, qualities of awareness and efficient stress management.

The prevalence of stressors and burnout among school personnel, is all too common (Sharp and Jennings, 2015). Educators can suffer a depletion of physical and emotional

energy, due to the emotional engagement required within the classroom. Mindfulness intervention would not only benefit the children but would also provide the school personnel with the tools to manage daily stressors. This supports the concept that a whole school approach to mindfulness, would be superior and most effective (Cheek et al.,2017).

Similarly, a study was carried out integrating mindfulness practices into preservice teacher education. This study found mindfulness led to significant improvements in effective classroom teaching practices (Hirshberg, Flook, Enright and Davidson, 2020).

An interesting qualitative study compares the differences between mindful and mindless classroom practices (Capel, 2012). It is suggested that a teacher who is more mindfully aware, creates more enriching and creative lessons. The teacher can focus on the present and teach more relevantly and meaningfully for the students. This positively affects both the teacher's performance, the student's academic performance and overall well-being.

Conclusion

This literature review examined a range of definitions that exist for mindfulness and the various advantages that the practice can have on stress reduction, efficiency and in alleviating the symptoms of mental illnesses, such as anxiety and depression. The effect of mindfulness on children was explored, along with its contribution to the strengthening of self-regulation skills and cultivating positive mental health. The value of mindfulness in education was then considered, with research suggesting that mindfulness can be beneficial in enhancing emotional regulation, behaviour management, mental health, and academic performance contributing to overall well-being.

The interventions discussed provide evidence that the benefits of mindfulness-based interventions may be wide ranging within schools. This does not come without limitations. The overbearing curriculum, focused on academic achievement, provides little time for the

introduction of interventions. Teacher training in mindfulness and competence have also been considered. It is suggested that mindfulness has a direct impact on teachers and their well-being and an indirect effect on student's capacity to learn effectively. While there are some misgivings about the need for mindfulness in education, as they may label children or accentuate psychological issues, the overwhelming positive evidence would suggest that the implementation of mindfulness would have a hugely positive impact on children.

The literature seems to provide evidence, that it is worthwhile engaging with mindfulness in schools. This researcher's study hopes to uncover some insight in regard to that. It is to the Methodology chapter that this study now turns to present the research design.

Chapter Three: Methodology

This chapter presents an account of the methodologies and practices employed within this research project. This chapter elucidates how the aims of this study have been pursued and how the findings emerged. Research tools, data collection, and data analysis will be addressed, along with limitations of the research, researchers' positionality, and pertinent ethical considerations.

The overarching aim of this research is to investigate the worthwhileness of implementation of mindfulness into primary schools. The researcher intends to investigate the extent to which children employ mindful techniques and how these techniques impact self-regulation skills and well-being. After reviewing the literature, the following research statement was formed: *An exploratory study of the impact of a mindfulness intervention on the well-being and self-regulation skills of children in a senior primary school setting.*

Approach

Initially, this research was due to be carried out within a mixed methods paradigm. On account of the unprecedented school closures due to Covid-19, the post-intervention surveys could not be carried out. This altered the research design, as the quantitative element to the pre-intervention survey was replaced by the qualitative data collected by the pre- and post-intervention interviews and the researcher journal.

Although the research technically advocates a pragmatic mixed methods paradigm, it is mainly reliant on qualitative data, thus falling under the qualitative, naturalistic, and ethnographic paradigm (Cohen, Mannion & Morrison, 2007), (Kivunja & Kuyini, 2017). Qualitative research is recommended for exploring people's behaviour, which is appropriate for this study (Creswell, 2003). This interpretative paradigm approach allows a greater understanding of the subjective world of human experience (Guba & Lincoln, 1989). It

allows the researcher to delve into the interpretations of participants and understand their individuality. This outlook is reflected in the research design. Researching experiences requires a multiplicity of methodological approaches, thus, the assortment of various qualitative instruments employed. This research intends to investigate the impact of a mindfulness intervention on the well-being and self-regulation skills of children in a senior class setting. The use of semi-structured interviews, open-ended situation-based questionnaires and a learning journal, place the study within the interpretative paradigm.

Research Tools

Questionnaire

The researcher constructed a five question open-ended situation-based questionnaire in which the children explained how they would deal with various situations (Appendix B). Gafni, Hadar, Milman & Sheinman (2018) conducted an investigation into children's usage of mindfulness based coping strategies. They utilised an open-ended situation questionnaire. The researcher has modelled and adapted the questionnaire based on that employed by Gafni, Hadar, Milman & Sheinman, (2018). The altered situations include;

- (i) Stressed before a test.
- (ii) Finding it difficult to fall asleep.
- (iii) Encountering someone angry/ annoying.
- (iv) Needing to concentrate.
- (v) Being disappointed in yourself.

The objective of the questionnaire was to analyse the children's coping mechanisms. The researcher aimed to determine how, and if children employed mindfulness based coping strategies, to help them cope with daily stressors, or the contrary. The questionnaire focused on researching the children's experiences, rather than 'the child'. This gave the child a voice

and recognised the child's experiences as unique and valued, reinforcing the idea that children encounter situations in an individual and idiosyncratic manner (Greene & Hogan, 2011).

The researcher facilitated a mindfulness intervention. This comprised of daily mindful activities, for a ten-day period. The sessions lasted from 10 – 30 minutes daily. The children engaged in mindful activities, such as mindful breathing, mindful listening, mindful movement, and gratitude activities. A summary of the activities completed in the intervention is outlined in Appendix C. Following the children's interactions with the mindfulness-based techniques, a similar open-ended situation questionnaire was to be distributed to the children for completion. The post-intervention questionnaire was not completed. This will be further discussed in the limitations section below.

Advantages and disadvantages of an open-ended questionnaire:

Open-ended questionnaires prove useful when retrieving opinions and experiences (Bailey, 1994: 120). They enable participants to explain their responses and opinions, not limiting them to a pre-defined category (Hinds, 2000). The open-ended questionnaire was attractive for this research, as it maximised the chance of obtaining honest and personal comments, which was the objective of this questionnaire (Cohen, Manion & Morrison, 2011). There are some drawbacks associated with the use of open-ended questionnaires. Firstly, open-ended questions require more time for completion. The researcher had limited access to the participants. One of the allocated 30-minute slots was utilised for questionnaire completion, rather than mindful activity. Due to the open-ended nature of the questions, some less relevant information was retrieved. This prolonged the data analysing process.

Semi-structured teacher interviews

Semi-structured teacher interviews were held, with two class teachers pre- and post-mindfulness intervention. The questions asked are outlined in Appendix D. The two participants, (6th class teachers) answered open-ended questions, regarding their personal opinions of mindfulness and its effects, and relevance with the classroom context (Bell, 2014). Firstly, the researcher questioned the teachers on their perceptions of the effects of mindfulness pre-intervention. Secondly, the researcher then inquired if the teacher had recognised any changes (positive or negative) in the children's behaviour, concentration, or performance post-intervention. Each interview lasted roughly fifteen minutes.

Advantages and disadvantages of semi-structured teacher interviews:

Interviews, whether structured or the contrary, provide in depth information (Hinds, 2000, Wilkinson). Interviews allow for the development of alternative questions where suitable, depending on answers given by the interviewees (Kvale, 1996). The main disadvantage to the interviewing process was the time constraint, the transcription of the fifteen-minute interviews was time consuming.

Learning Journal

A researcher learning journal was employed to present how the children embraced and reacted to the mindful activities. This research tool contained observations, memories and researcher notes from the ten-day mindfulness-based intervention, that took place with the sixth-class children. Because of the enforced changes to the data collection, this tool was substituted for the post-intervention questionnaire, to ensure that the richness of the study's data would be maintained.

Data Analysis

As previously discussed, the researcher retrieved both qualitative and quantitative data. The data collected from both the questionnaire and semi-structured interviews, have

been thematically analysed. The researcher has developed patterns evident across the data collected, forming themes. This has allowed for a greater understanding of the participants' experiences and opinions, which was critical in this research (Clarke & Braun, 2013). The researcher analysed the data according to Clarke and Braun's (2006) six phases of thematic analysis. Phase one involved familiarisation with the data and 'repeated reading' of data retrieved from the pre-intervention questionnaire, the semi-structures interviews, and the learning journal. Phase two, focused on generating initial codes from the data. Phase three prompted the search for themes. Followed by stage four, in which the researcher reviewed the themes that had derived from the data. Phase five, involved defining and naming the themes, such as, implementation factors, the effect of mindfulness on children and children's positive engagement with mindfulness. Finally, phase six contributed to the interpretative analysis of the themes.

The data retrieved was initially highly qualitative. Quantitative data was left until the completion of the data collection process, the quantitative data derived from the qualitative data in this research (Dawson, 2009). Specifically, quantitative analysis was used to decipher the pre-intervention questionnaire. Descriptive statistics were employed to report and compare the type of coping strategies used by participants in the questionnaire – mindful, rooted in mindfulness or other. This data was placed succinctly into a line graph. Line graphs are pragmatic in displaying trends (Cohen, Mannion & Morrison, 2007). The quantitative data was utilised to reinforce the qualitative data (Miles, & Huberman, 1994). Although, statistics often obliterate individuality, they inform the researcher 'how many' or what is most common, which is why they were used in this study (Green & Hogan, 2011).

Validity, Reliability, Triangulation and Bias

Triangulation was defined as the use of the multi-method approach throughout data collection, it is recommended when studying aspects of human behaviour (Cohen, Manion & Morrison, 2011). Both semi-structured interviews and open-ended, opinion-based questionnaires and a researcher learning journal have been utilised. The key in triangulating was the same thing from different perspectives (Bell, 2014). The researcher aimed to recognise similar themes, from both the student questionnaire and the semi-structured teacher perspective interviews. This allows for critical examination of the meaning of mismatches, or similarities retrieved from data collection (Laws, Harper, Jones & Marcus, 2013). Mismatches in findings were not received. The research tools provided similar data and so the themes formatted were applicable to the three research tools – the questionnaire, teacher interviews and the researcher learning journal. This increased the researcher's confidence in the findings.

Regarding reliability, the researcher endeavoured to produce similar results under constant conditions. The primary test for reliability took place during the wording of the questionnaire, and the interview question formation. Reliability was also tested during the piloting of the instruments (Bell, 2014). Alterations were made post piloting, to establish reliability (Silverman, 2011).

To ensure validity, the researcher structured the research to provide credible conclusions (Bell, 2014). Appropriate instrumentation for gathering data was implemented. An appropriate time scale was employed, and consistency throughout data gathering was implemented (Cohen, Manion & Morrison, 2011). Making use of both qualitative and quantitative data is an effective way of demonstrating validity, thus the researcher employed both methods of data collection and research (Cohen, Manion & Morrison, 2011). Regarding

the semi-structured teacher interviews, bias was minimised to decrease the chances of invalidity. This was ensured through the use of broad, non-biased, non-leading questions. The questions were piloted to ensure validity.

Validity and reliability are often questioned regarding samples. In efforts to avoid data distortion due to the sample, many factors were considered when creating the sample. Representation had to be considered. The researcher had to find the minimum sample size, that would allow for accurate representation and amass enough data due to time constraints. Two classes of 6th class were decided. 52 sixth class children participated in the study, 32 males and 20 females.

Piloting the Research Tools

The researcher piloted both the questionnaire, and the teacher interviews. The researcher tested how long it took recipients to answer the questions, and that all questions were clear and appropriate. The pilot group for the questionnaire was of the same age as the sample (11-13 years old). Volunteers were questioned after completion of the research tools. Their responses allowed the researcher to review the questions asked in the questionnaire and the interviews and make necessary amendments (Bell, 2014). This process minimised the chances of experiencing difficulties with the distribution of the questionnaire and analysis of the data. Feedback from pilots eliminated any ambiguities in phrasing or wording of the questions. It also checked the readability of the questions on the questionnaire (Cohen, Manion & Morrison, 2011).

Limitations of the Study

In this research, data was extracted from children's writing. This placed pressure on their writing abilities and expressive tendencies. This may have led to slight issues with interpretation or inhibited some participants in expressing their opinions. Qualitative data can

be flexible, speculative and subjective (Silverman, 2000). Silverman addresses ‘anecdotalism’ as a concern, when engaging with Qualitative research. Anecdotes may obstruct the information, required in the questionnaire. The researcher endeavoured to compose questions that were clear in nature, to dissuade the use of anecdotes.

Another limitation that was considered, was the possibility of unconscious biases in the way people may respond to surveys, often concaving to social desirability (Greene & Hogan, 2011). Specific to this research, the participants were asked to explain how they would deal with certain situations. Some people might feel uncomfortable or embarrassed disclosing this information honestly. This might have inhibited honest data.

Initially one of the main constraints attached to this research, was the time period. There was a window of five weeks to complete the teacher-based interviews, the open-ended situation- based questionnaire twice and the mindfulness intervention. As a result of unprecedented school closures, due to the COVID-19 pandemic, some research was not completed. The post-intervention situation-based questionnaire was to be employed to ascertain children’s dispositions, in regard, to utilising mindfulness-based coping strategies after exposure to such techniques. Unfortunately, due to the nature of the closure and the short notice provided, the researcher did not get to circulate and facilitate the post-intervention questionnaire. This was of great disappointment to the researcher, as it truncated the findings anticipated post-intervention and the comparison of pre- and post-intervention findings.

The post-intervention questionnaire was replaced by the researcher’s learning journal, containing observations from the intervention. This alternative allowed for some perspective on how effective the intervention was. The researcher could provide some insight on how the participants engaged and responded to the mindful activities, promoted throughout the ten-

day intervention. The researcher is aware that the learning journal may appear subjective and skewed, but the researcher has observed and looked at the intervention objectively in efforts to minimize the chances of biased data.

Positionality of the Researcher

It is essential to consider the positionality of the researcher, in order to evaluate potential influences on or implications for the research. The researcher has an avid interest in mindfulness, practicing it regularly. Having experienced the benefits of mindfulness and meditation personally, the researcher is inclined to believe there are a plethora of benefits to be gained from the practices. The researcher is aware of her attitudes and opinions on the effects of mindfulness on children. However, as mindfulness was not prevalent, during her primary schooling, the researcher lacked understanding on how mindfulness would affect primary school children. The researcher was keen to investigate the effect of mindfulness and to trial the practice in a classroom setting

Aware of her own views, the researcher has endeavoured throughout to minimise the effect of bias. Regarding data collection and analysis, this was accomplished in a subjective manner. Data analysis developed with the establishment of themes that derived from participants' opinions and attitudes within the qualitative data, which were primarily used as a source of triangulation, but also to inform the study in as subjective a manner as possible.

Ethical Considerations

Ethical considerations are of utmost importance when conducting any research. Strong ethical standards must underpin all research (Cohen, Mannion & Morrison, 2007). This research project has been conducted in accordance with the ethical guidelines of Marino Institute of Education.

The most prominent areas of ethical concerns that arise during a social research study include the invasion of privacy, deception, lack of informed consent and harm to participants (Bryman, 2015). The researcher took appropriate steps to eliminate the likelihood of any ethical issues. Consent forms were distributed to all participants, in advance of research. Signed consent forms were retrieved from the Board of Management, the teachers, the children, and their parents / guardians (Appendix A) before the commencement of any research activities. Children, including the very young, have the right to be consulted in matters that affect them. They deserve to be treated as participants, rather than projects (Dockett, Einarsdóttir and Perry, 2011). Thus, the requirement to complete a consent form, seeking their permission to participate in the research. The participants were informed that their information would remain confidential. Interviewees and participants mentioned throughout the research received pseudonyms to ensure anonymity.

The research that took place was overt, the researcher was open and honest about the research agenda. It was the participant's prerogative to participate, or withdraw their consent, at any point (Dawson, 2009). The children were made aware of their rights to withdraw their consent at any point, throughout the research. It was imperative that the researcher established a trusting and secure environment for the children participating, as they shared personal, lived experiences (Harcourt & Conroy, 2011). This environment was established through the explanation of the research and the presence of both the class teacher and the researcher in the room during activities, and the distribution of the questionnaire. This trust creates a more honest results, as it minimises the chances that the children feel the need to provide the 'right' answer to the questions (Grover, 2004).

Conclusion

This chapter illustrated the processes that have taken place, regarding the methodology of this research project. A qualitative approach was adopted in this study, complemented by a quantitative element. This was deemed the most suitable method, considering the research question and the sample size. The advantages and the disadvantages of the research tools were considered and critically analysed. Validity, reliability, triangulation, and the possibility of bias have been considered. The data analysis plan was addressed, along with researcher positionality, ethical considerations and research limitations. The following chapter, Data Analysis and Discussion, discusses the findings that derived from the methodology addressed.

Chapter Four: Data Analysis and Discussion of findings

This chapter analyses the findings that emerged from the quantitative and qualitative methods, that were employed in this study and discusses them in the light of the literature. The data was collected through semi-structured teacher interviews, a situation-based questionnaire and the researcher's learning journal. It is important to note here, that the situation-based questionnaire was analysed through both a qualitative and quantitative lens. Descriptive statistics have been employed to demonstrate the quantitative data. Qualitative data was analysed thematically. The study's findings emerged from a thematic analysis of the quantitative data, collected from the questionnaires and the qualitative data collected from the teacher interviews. The data was analysed by coding and the significant codes were then clustered, to form themes and sub-themes, as per Clarke and Braun's (2006) six phases of thematic analysis. Those themes and sub-themes, were then discussed in the light of the literature considered in Chapter Two and new relevant studies.

Quantitative Data

52 students completed the questionnaire (n=52). Of the cohort of 52 students, 20 were female (n=20) and 32 were male (n=32). The children were 6th class students in a mainstream, vertical, Catholic school.

The children's responses to the open-ended situation-based questionnaire were analysed using qualitative, thematic coding (Clarke & Braun, 2013). The researcher adopted a similar quantitative analysis style to Sheinman, Hadar, Gafni, and Milman (2018) for analysing the situation-based questionnaires. This entailed the creation of a multiple response system from the data. This is demonstrated in Table 2. Firstly, a mindfulness scale was devised. If a child responded with a formal mindfulness based coping strategy, they received two points for that answer (e.g. "I focus on my breathing, taking deep breaths in and out").

Coping strategies, that were not categorised formally as mindfulness-based, but were related to that mindset, received one point for their response (e.g. “I listen to calming music”). Responses, with no relationship to mindfulness-based strategies, received zero points (e.g. “Watch TV until I’m tired”). Next, a situation-based score was formulated for each child. This score consisted of the sum of their mindfulness points. This resulted in one score representing each child’s use of strategy. The scores ranged from 0 (no use of mindful strategy), to the highest score 7 (use of mindful strategy for three situations and one practice rooted in mindfulness mindset).

Eight students provided one mindfulness-based response for one of the situations, six students provided two mindfulness-based responses and four students provided three mindfulness-based responses. Mean scores were generated across the individual scores for all five situations. The mean scores ranged from zero to seven. This score represented each student’s disposition to employ mindfulness-based coping strategies, in everyday situations.

It is worth noting, that the mean scores appear ‘low’. For example, if a child responded with a mindfulness-based strategy for each of the five situations, their mean score would reveal two. It is also important to point out, that the purpose of the points system was not to ‘assess’ children’s responses. The intention was to analyse the data using the most effective method.

The mean mindfulness-based scores and distributions across the five situations are evident in Figure 1. Girls displayed a substantially higher disposition to practice mindfulness-based coping strategies than boys at this ‘pre-intervention’ stage. This is seen in Figure 1 below.

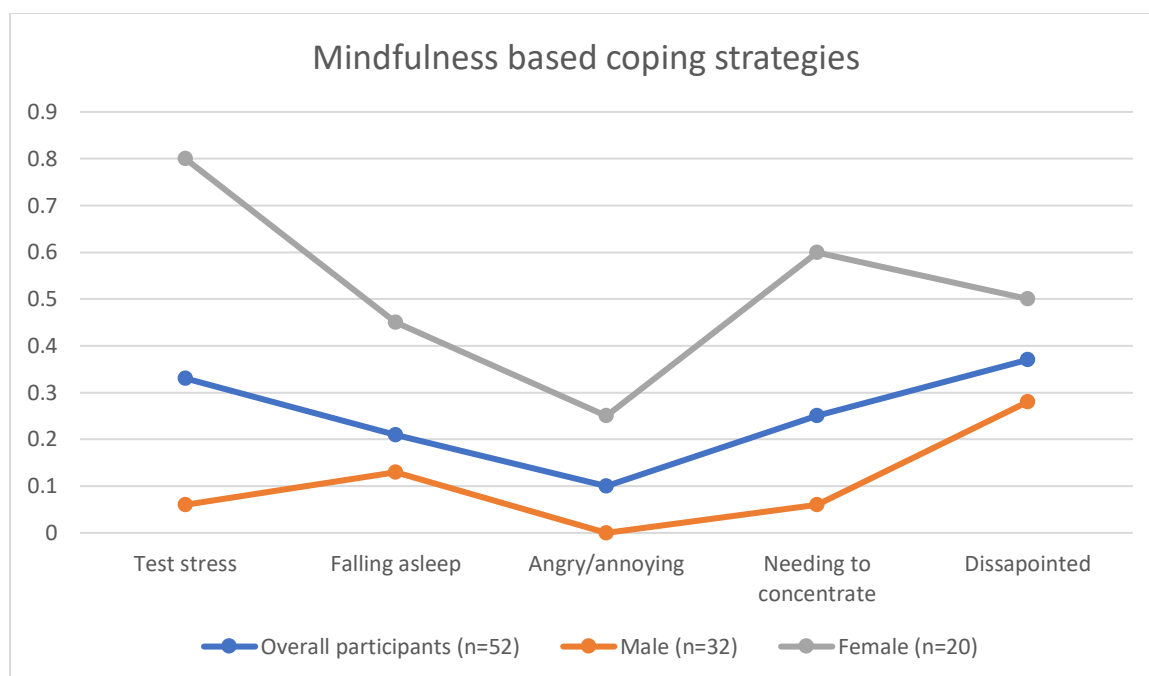


Figure 1. *Students' mindfulness-based coping scores.*

When responding to the situation *encountering someone angry/annoying*, of the 52 participants who responded to this question, 29 reported that they would ignore the 'annoying' or 'angry' person. Methods such as these are based on avoidance rather than coping. This makes the researcher question whether some children have the necessary coping strategies to confront situations and deal with them appropriately. In response to the situations, *stressed for a test* or *finding it difficult to fall asleep*, a range of responses was elicited, but once again most responses were dependent on 'trusted' adults, technology, or avoidance.

Qualitative data

The qualitative data has derived from semi-structured teacher interviews, a situation-based questionnaire and a researcher learning journal. As previously discussed in Chapter Three, a post-intervention situation-based questionnaire was to be employed, to ascertain children's disposition to utilising mindfulness-based coping strategies after exposure to such techniques. Unfortunately, this has proven to be a limitation as the researcher was unable to

conduct the questionnaire, due to unprecedented school closures as a result of the Covid-19 pandemic. The post-intervention questionnaire has been substituted with the researcher's own learning journal, containing observations from the intervention.

The themes that emerged from the qualitative data analysis are highlighted below in Table 1. Some themes were anticipated to emerge, and other themes were not anticipated. Literature displays, how mindfulness interventions can produce calming and self-regulating effects. The children's eagerness to participate and engage in the activities was not anticipated to the extent that occurred. It was expected that some children may participate with some apprehension or indifference. All children participated eagerly and with openness, some children, that would be typically boisterous, concluded the intervention having adopted more than the researcher anticipated.

Table 1. *Summary of themes emerged from thematic analysis.*

Research Tool	Theme	Subthemes
Open-ended situation-based questionnaire	Mental health	Self-regulation skills
Pre-intervention semi-structured teacher interviews	Implementation factors	Time constraints Teacher training
Post-intervention semi-structured interviews	The effect of mindfulness on children	Self-regulation skills Children with additional needs Well-being
Researcher Learning Journal	Children's positive engagement with mindfulness Gender comparison	Well-being

Mental Health

One theme that consistently emerged from the data collected was the adverse effects of modern-day pressures on children's mental health. When children were asked to describe how they would deal with various situations, technology was a prominent 'coping strategy' described. When presented with the situation, *finding it difficult to fall asleep*, 13 children (25%) said they would use their phone to aid them in this situation. One participant said, "I would watch some YouTube videos on my phone until I felt sleepy", while another participant shared, "I usually just snap some of my friends and talk to them". This fast-paced online world generates unnecessary stress for children of this age. They are exposed to constant stimulating and digital interaction. Throughout the mindful intervention, the children's eager and active engagement reflected a craving for silence and calmness. By the end of the intervention, the children were requesting this 'relaxing' time. It became clear that the children were longing for alternative skills.

Both Teacher One and Teacher Two emphasised concern for mental health and well-being. Teacher Two explained:

"Today there is terrible, added pressures on children. Some children in my class suffer badly with mental health issues, I won't get into that today, but it is a reality for children at this age. The constant of social media is bound to have a detrimental effect on their mental health. I would worry, most of this class have phones with snapchat Instagram and Ticktock. Their spare time is spent interacting on social media."

One in three Irish children are likely to have experienced some type of mental disorder, such as anxiety or depression, before they begin secondary school (Cannon, Coughlan, Clarke, Harley, & Kelleher, 2013). Children are experiencing more complex emotional and behavioural difficulties at a much younger age (Mc Elvaney, Judge & Gordon,

2017). It is suggested that teachers are paramount in recognising and dealing with mental health issues, within their classroom (Gott, 2003). In the pre-intervention questionnaire, one male responded to *being disappointed in yourself*, stating: “I am always disappointed in myself, that’s why I am so depressed”. Another child admitted, “I never really sleep that’s why I’m in a bad mood all the time”. Mindfulness is a practice that can strengthen mental health. Positive mental health contributes to well-being (Weare, 2015; Malboef Hurtubise et al. 2017). As discussed in Chapter Two, the Literature Review, mindfulness provides children with the skillset to self-regulate, more effectively. This promotes independence among children, as they have the coping mechanisms to counteract their own negative thoughts or tendencies. The need for this ‘help’ is necessary now more than ever, due to the high social pressures facing children today (Naughton, 2016).

The objective is not to begin pathologizing the everyday problems and complications that children encounter, but to equip children to cope with such adversity (O’ Hanlon, 2000). Often, children’s problems can be managed through empathy and self-understanding (O’ Hanlon, 2000). These skills can be developed and nurtured through mindfulness.

Implementation Factors

One main concern that permeates both interviewees’ opinions regarding mindfulness is the feasibility of its implementation. This refers to both time constraints and teacher training. Both Teacher One and Teacher Two expressed this concern. Teacher One stated, pre-intervention:

“I believe there is great value in the mindfulness practice, and I would love to incorporate it into the classroom but in a 6th class it is difficult to find free time. There is so much content to cover, and you want to ensure that they are prepared for

secondary school. Non-core subjects can get pushed to the side never mind something like mindfulness.”

Teacher Two similarly stated:

“I would love to spend more time on mindfulness but realistically it wouldn’t happen, unless it was integrated into other subjects like SPHE.”

Teachers are challenged with overcrowded curriculums, there is a time battle between core subjects and non-core subjects (Mc Coy, Smyth & Banks, 2012). Many teachers, including the teachers interviewed, question the feasibility of implementing ‘another’ subject into the school week.

Rather than adding another subject, literature suggests a whole school ‘culture shift’, the implementation of mindfulness as a school practice rather than a discrete timeslot (Cheek et al., 2017). It may be questioned if a whole school approach is enough, without a discrete timeslot to explicitly teach mindfulness skills and practices. An American study tested the effect of adopting a whole school mindful culture. Mindful activities were integrated into the academic curriculum, rather than limiting mindfulness to discrete lessons. They concluded that a whole school approach is most effective, but it needs to be employed over a long period of time, to maximise results (Cheek et al., 2017).

In schools today, emphasis is placed on the busy academic-based curriculum. Adopting a more humanistic approach to education, would promote the development of the whole person, developing the physical, social, emotional and spiritual attributes of the child (Noddings, 2005). Academic learning and social and emotional learning need to happen simultaneously for effectiveness (Caulfield, 2016).

Furthermore, both Teacher One and Teacher Two acknowledged their inexperience in facilitating mindfulness within the classroom. Teacher Two, admits she would benefit from CPD courses or from following a programme:

“I would love to integrate mindfulness into the classroom, but I don’t feel confident enough to complete it properly myself. I think if I was to bring it into my classroom, I would have to practice it myself. I would need to do some courses on it or follow a programme for guidance or something.”

Similarly, Teacher One reveals she lacks confidence in the area.

“Personally, I don’t think mindfulness suits my personality. I mean I wouldn’t be able to guide the children; I don’t really have that calmness in me. I would need to practice mindfulness myself and become accustomed to the practice, before I would feel confident in teaching it.”

This is in line with the idea that teachers need to practice what they preach (Shonin & Van Gordon, 2015). For teachers to actively and authentically promote mindfulness, they need to participate in mindful activities themselves. As discussed in Chapter Two, people who are calm and mindful, often emit a sense of calm and reflection, becoming role models (Caulfield, 2016). Therefore, equipping oneself with and modelling effective, mindfulness-based coping strategies and good self-regulatory skills, not only benefits oneself but one’s students. If teachers had a greater understanding of the core principles and understandings of mindfulness, their confidence would grow and benefit their students.

The Effects of Mindfulness on Children

Self-regulation Skills

Both Teacher One and Teacher Two emphasised the positive effects experienced by their classes post-intervention. Both teachers suggested the children were more in control of self-regulation skills. Teacher One acknowledged how the children were “calmer and more positive” post-mindful activity. Teacher Two discussed an improvement in class concentration levels and behaviour, and explained it in this way:

“The children are visibly more focused and certainly calmer directly after completing mindful activity. When you completed the mindfulness in the mornings, I found the children were better able to concentrate throughout the day, especially all morning anyway. If these practices you taught us were continued religiously, I do believe they would have a major impact on concentration levels and behaviour.”

This finding resonates with the literature concerned with mindfulness-based interventions. Mindfulness is often found to improve concentration skills among children. It enhances and fosters better self-regulation, allowing children to focus (Hanh, 2011). Mindfulness interventions can also increase positive behaviour. Providing children with the skills to emotionally regulate and cope with daily stressors, has a positive knock-on effect on their behaviour (Schonert-Reicht and Lawlor, 2010). Improvement in concentration levels and behaviour provides more opportunity for focused learning, positively impacting academic attainment (Duckworth and Seligman, 2005).

The pre-intervention questionnaire revealed some hostile and reactive coping mechanisms. For example, one child stated, “When I’m disappointed in myself I usually punch my wall and cry”. In response to encountering someone annoying, one participant claimed, “I would punch them if they don’t leave me alone”, while another participant admitted he would “curse at them”. These responses came from male participants. Female responses were less explicit, with no participant disclosing aggressive or hostile responses.

Perhaps continued mindfulness practice might ameliorate aggressive, reactive behaviours and be of benefit to counteract hostile tendencies. This is in line with Schonert-Reichl and Lawlor's findings, post-nine-week mindfulness intervention. They found that there was a drastic decrease in aggressive behaviour exhibited, within the class in question (Schonert-Reichl and Lawlor, 2010).

Children with Additional Needs

Literature suggests that mindfulness interventions can positively affect children with additional needs, academically, behaviourally and socially (Weare, 2015). Teacher One disclosed that the intervention appeared to particularly impact two children within the class. Child A has been diagnosed with ADHD and Child B with ASD. From the researcher's observation, these children were extremely engaged in activities throughout the intervention. Teacher One stated:

"I noticed an effect on a few students in particular – Child A actively practices the five figure or the triangle breathing activity when he is stressed or frustrated. He appears to be more focused and calmer after practicing these activities, which is something he struggles with greatly. Long may it last."

Mindfulness has been shown to aid children to regulate their attention, positively impacting academic activities. Although relevant to all children, this is a particularly beneficial skill for children with ADHD to adopt (Singh et al., 2015) (Malboeuf-Hurtubise, Joussemet, Taylor & Lacourse 2017) (Thomas & Atkinson, 2017). One of the main purposes of mindfulness is to become more 'present'. Along with this sense of presence, children may find they are better able to pay attention and concentrate, in turn improving academic results (Weare, 2015). In turn, children may develop a renewed sense of confidence and assurance, improving their mental health.

“Child B appears more relaxed after completing a mindful activity. He is less stressed out about things. Even witnessing him participating in the activities was a shock as he wouldn’t usually participate so actively and willingly, without additional support.... These changes in behaviours are apparent after such a short space of time, it makes me wonder the impact continued mindfulness would have of children with additional needs.”

Child B, diagnosed with ASD, participated actively in each of the mindful activities. Teacher One explained that the activities had a positive effect on his behaviour. Mindfulness can improve positive behaviour and stress levels among children with ASD (Albrecht & Keenan-Mount, 2016).

Gender Comparison

Literature provides strong evidence that females respond more effectively to mindful activity. It has been suggested that females maintain higher levels of worry in comparison to males (Kertz & Woodruff-Border, 2011), (Muris, Merckelbach, Meesters, & van den Brand, 2002). The mindfulness intervention had greater influences on their mental health and well-being in comparison to the male participants (Carsley et al, 2017).

Contrary to that opinion, the researcher found that male participants were more actively engaged and responsive, despite preconceived notions. The majority of male participants seemed more sceptical of the activities, initially. By the end of the intervention, the male participants were more actively engaged and competent in completing activities – meditation, breathing exercises. If research had progressed as originally planned, it would have been interesting to compare the pre- and post-intervention questionnaire responses, regarding gender interaction and disposition to employ mindfulness based coping mechanisms, after exposure to the skills.

Positive Engagement with Mindfulness

Additionally, both interviewees noticed the children's enjoyment of the intervention. Teacher's admitted there was an increased air of positivity post-mindful activities. This would suggest the activities were positively affecting the participants well-being. Teacher One revealed that the children anticipated the session daily with excitement.

“The children loved it and that's the main thing! They would be wondering what time mindfulness was happening each morning. I think they enjoyed the break, the time to switch off and relax.”

Likewise, Teacher Two maintained that the children “enjoyed every minute” of the intervention.

“They enjoyed every minute of it, from the breathing exercises, the music and especially the mindful movement session. Seeing how much they enjoyed it is motivating, I need to get into it.”

From the researcher's point of view, it was evident that the children who participated in the intervention, enjoyed it immensely. The children actively engaged and developed their skills over the two-week intervention. They listened to the researcher attentively and embraced the skills modelled. A major improvement in mindful skills was evident by the conclusion of the intervention. The researcher is confident that the number of children employing mindful based coping mechanisms would have risen above the current mean score, if tested. The enjoyment experienced by the children would contribute to the children's overall well-being.

Conclusion

In this chapter, the researcher presented the findings that emerged from the open-ended situation-based questionnaire, semi-structured teacher interviews pre- and post-intervention and the researcher's learning journal. Quantitative data displayed how children cope with everyday stressors. Female participants demonstrated a higher disposition to employing mindful based coping strategies, although the scores were still low.

A plethora of positive effects that derived from the findings were examined. Post-intervention, children appeared better enabled to concentrate and focus after mindfulness sessions. Overall classroom behaviour was calmer and less reactive. Most importantly, the children enjoyed the practices.

It can be asserted from the findings that the teachers interviewed, displayed a level of openness to adopting mindfulness in schools, but a hesitation regarding time constraints and training was highlighted. Although acknowledging the need for more wellbeing and mental health support in schools they worried about its feasibility.

This dissertation now turns to Chapter Five, the concluding chapter where the findings will be reiterated and recommendations for future research will be presented.

Table 2. *Categories, student excerpts, and mindfulness-based coping index.*

Category	Student excerpts	Mindfulness-based coping index
Using mindfulness-based skills	"I practice gratitude and think about all the great things in my life"	2
	"I listen to mindfulness music or do guided meditation with my mum"	2
Mindful breathing	"Close my eyes and take deep breaths in and out"	2
	"I focus on my breathing, taking deep breaths in and out"	2
	"Take deep breaths and relax"	2
	Take deep breaths and then concentrate"	2
	"Count my breaths and take deep breaths"	2
Mindful movement – yoga	"I do some yoga with my mum"	2
Mindful listening	"I would go for a walk in the woods and listen to the sounds of nature to relax"	2
Reflecting and understanding	"I would think about how I could do better next time and not be disappointed"	1
	"Close my eyes and think about nice things"	1
Positive thoughts	"Focus on all the good things I've done not just the bad"	1
Positive self-talk and affirmations	"Believe in myself"	1
	"Stay positive"	1
	"Think positive"	1
Music	"Listen to calming music"	1
Food or drink	"Get a snack"	0
	"Have something to eat"	0
	"Chew some chewing gum"	0
	"Get a drink of water"	0
	"Get a hot drink to soothe me"	0
	"Stay hydrated"	0
Counting	"Count sheep"	0
	"Count to 10"	0
Technology distraction	"Go on my phone"	0

	"Listen to videos on YouTube"	0
	"Go on YouTube"	0
	"Watch some tick tock videos"	0
	"Watch some TV"	0
	"Watch TV until I'm tired"	0
Non-technology distraction	"Read a book"	0
Physical activity/exercise	"Go for a walk"	0
	"Go play some football to forget about it"	0
Seeking an adult	"Talk to my mum or dad"	0
	"Tell my nannie"	0
	"Tell my teacher how I'm feeling"	0
	"Tell a trusted adult"	0
Resting	"Go to bed"	0
	"Try and forget about it and go to sleep"	0
Reducing external distraction	"Put my earphones in and ignore everything else"	0
	"I just close my eyes and try to think"	0
Ignoring, avoiding situations	"Ignore them"	0
	"Leave them alone"	0
	"Go and hide in the toilet"	0
Distancing oneself from the situation	"Walk away from them"	0
	"Go to my room and lock the door"	0
Reacting aggressively	"Curse at them"	0
	"Punch them if they don't leave me alone"	0
Thinking hostile thoughts	"Punch my pillow or the wall"	0
	"Shout at them"	0
	"I imagine kicking them"	0
Emotional self- expression	"Cry"	0
	"Go to my room and cry"	0
	"Act ok in public and go home and cry"	0
Associative response	"Study harder" (for test)	0
	"Go to bed" (For trying to sleep)	0
Never happened	"I've never been stressed for an exam"	0
	"I always can go to sleep"	0

Chapter Five: Conclusion and Recommendations

Mindfulness has been defined as ‘the awareness that emerges through paying attention on purpose, in the moment, and non-judgmentally, to the unfolding of experience moment by moment’ (1994, p.4). This research study set out to investigate what impact a mindfulness intervention would have on the well-being and self-regulation skills of children, in a senior primary school setting.

The Literature Review informed the learning that was critical to the writing of this dissertation. A review of pertinent literature provided an insight into the effect of mindfulness on people in general and particularly on children, the use of mindfulness as an educational tool in promoting overall well-being and in the development of self-regulation skills. It led to a deeper understanding of mindfulness and the process involved in the practice and suggested the worthwhileness of the implementation of a mindfulness intervention in an Irish primary school.

In the Methodology chapter, the research design was presented. It described the story of how the research was conducted, within a qualitative, interpretive paradigm with a quantitative element. With regards to research tools, open-ended situation-based questionnaires were distributed to participants (n=52) pre mindfulness intervention. Semi-structured interviews with two class teachers pre- and post-intervention, ascertained teacher’s perceptions of mindfulness and the effect of the mindfulness intervention.

The Data Analysis and Discussion chapter presented the findings that emerged from the research. The findings were thematically analysed. The themes that emerged included children’s coping strategies, the feasibility of mindfulness intervention, the effect of mindfulness on children and children’s positive engagement with mindfulness. A range of sub-themes were also elicited. These themes were then discussed in the light of the literature.

In summary, findings suggested that the incorporation of mindfulness within the primary school context, would provide a multitude of benefits and positive effects on the wellbeing and self-regulation skills of children. As a corollary of the positive benefits on the children, overall classroom behaviour and learning improved. Teachers displayed an openness to integrating mindfulness practices in schools, having witnessed the positive effects on children's well-being and self-regulation skills post-intervention. After the 10-day intervention teachers found that overall classroom behaviour was calmer and that children were less reactive. It was also acknowledged that the children had 'fun' engaging with mindfulness, positively impacting their emotional well-being. Although teachers displayed an openness to mindfulness implementation, they were also dubious in regard to the feasibility of its implementation within an already overcrowded curriculum. During the pre-intervention, semi-structured interviews, both Teacher One and Teacher Two discussed the potential implementation issues of integrating mindfulness into Irish primary schools. Interestingly, post-intervention these 'issues' such as time constraints and teacher training, were not highlighted or considered. The teachers admitted they would continue to implement forms of mindful activities after witnessing the positive effects of mindfulness on children, particularly the most vulnerable children.

There has been a surge in enthusiasm regarding mindfulness in recent years. In our hectic, socially connected world, quiet time has steadily been gaining appeal and traction. This is evident in the children's enthusiasm for mindful activities and their adoption of the practice. The findings of this study would seem to concur. The children's engagement and enthusiasm for mindfulness seem to suggest that an overstimulated generation, may be craving for and thriving on still space in their lives.

The research statement sought to investigate the effect of mindfulness on children's well-being and self-regulation. Mindfulness has played an integral role in the researcher's

life. Having experienced its positive effects, she decided to explore the worthwhileness of employing it within her classroom. The findings suggest that mindfulness positively affected the children's wellbeing. The participants' engagement with and their enjoyment of the intervention contribute to that positivity. This researcher suggests that integrating mindfulness into the classroom would serve to create an environment that emphasises well-being and holistic development, which would serve to complement rather than conflict with academic attainment.

The findings have demonstrated how mindfulness has had particular effects on children with learning difficulties, behavioural difficulties and also children that may have become disengaged with the educational system. Often, a teacher can find it more difficult to 'get through' to these children. In many of these cases, one thing is clear. Mindfulness worked. Embarking on her upcoming teaching career, the resolve of the researcher in regard to incorporating mindfulness into her classroom practice has been strengthened by engaging in this study.

Recommendations for further research derive from the limitations of this research that were presented in the Methodology Chapter. The limitations provide opportunity for further exploration in the area of mindfulness. Firstly, a larger student sample size would generate richer data and more robust results. Furthermore, data could be collected from a variety of educational contexts. This would present an interesting insight into the differences in mindfulness adoption, within different types of schools, with different school approaches. As there is an absence of research exploring the similarities and differences in male and female engagement with mindfulness, a comparative study would provide interesting findings. Also, much of the research presents findings based on a short mindfulness intervention, this research included. Additional research should be carried out to ascertain the effect of

sustained mindfulness interventions. Finally, focus groups could be considered for further research, as they will allow for a greater insight into children's perceptions.

It is evident from the findings of this study that mindfulness- from its ancient origins to the present-day versions of the practice, serves as an effective approach in promoting wellbeing in children and developing their self-regulation skills. It can serve as an effective counterbalance against the pervasive encroachment of technology in everyday life. The findings have not only inspired the researcher to incorporate mindfulness within her classroom but has strengthened her resolve to broaden the practice to assist the most vulnerable of our children in their formative school years.

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Appendices

Appendix A: Letters of Consent



13th February 2020

Board of Management,

Dear _____ and Members of the Board of Management,

My name is Sarah Keane and I am currently studying to obtain a Professional Master of Education from Marino Institute of Education. As part of this programme, I am conducting research in the area of mindfulness and well-being. My research is under the supervision of _____ and is titled '*An exploratory study of the impact of a mindfulness intervention on the well-being and self-regulation skills of children in a senior primary school setting.*'

This project wishes to investigate attitudes of children towards mindfulness. The data collection for the project includes the completion of an open-ended situation questionnaire with students from 6th class. The children will be asked to explain how they would react and deal with various situations.

I am aware that this is a very busy time of year for you and your school and I would greatly appreciate your assistance with this project. I cannot foresee any risks associated with individual and school participation in this study. The information gathered will be treated with the appropriate privacy and the relevant data protection guidelines. Once the data has been collected, the questionnaires will be destroyed. No information relating to the school or the individual participants will be identified in the research. As your school would be the site for data collection, a copy of the results can be made available to you if requested.

Please note that the pupils involved are under no obligation to participate in this study, and consent forms will be sent to the children's parents in advance for permission to conduct this research.

If you have any further questions regarding this research, please feel free to get in touch using the email address listed below. Finally, I would like to thank you for taking the time to consider my research request.

Kind regards,

Sarah Keane.

Email:

Phone:

Signature: _____

13th February 2020

Dear Parent/Guardian,

My name is Sarah Keane and I am currently studying to obtain a Professional Master of Education from Marino Institute of Education. As part of this programme, I am conducting research in the area of mindfulness and well-being. This dissertation is investigating how children employ mindful techniques in their everyday life and the benefits attached to mindfulness in education. The Board of Management and the principal, _____, have given me permission to conduct this research in the school. I am now requesting your consent for your child to take part in this study.

If you and your child agree to take part in this study, your child will be asked to complete a situation-based questionnaire in which they will be asked how they would react to various situations. The questionnaire will take approx. 30 minutes and will take place during school hours.

The information gathered will be treated under data protection guidelines. No information regarding your child will be revealed in the research and information will be stored securely.

If you agree to allow your child to take part, please fill out the consent form below.

Finally, thank you for taking the time to consider this request.

Yours sincerely,

Sarah Keane.

Please complete one of the two options below:

1. I allow my child _____ to take part in this research.
(Print child's name)
2. I do not allow my child _____ to take part in this research.
(Print child's name)

Parent/Guardian Signature: _____

Date: _____

Dear Student,

I am doing a project on *mindfulness*. Mindfulness is the process of slowing down, noticing our thoughts, our feelings, and anything else that is around us and happening right now. I am interested in finding out more about your opinion on the topic. I will be coming into your class to give you the chance write down your thoughts on the topic. I will distribute a questionnaire with different questions to fill out. Your teacher will be in the class when this happens. You do not have to take part if you do not want to, and anything you contribute will not be shared with others in the school.

Yours sincerely,

Ms. Keane.

Consent Form (Child)

Please complete one of the two options below:

1. I _____ am willing to take part in this research.
(Your name)
2. I _____ am not willing to take part in this research.

13th February 2020

Dear Teacher,

I am conducting research in the area of mindfulness and well-being. I wish to investigate attitudes of children towards mindfulness. I am interested in finding out more about your opinion on the topic. I would like to conduct a brief interview pre and post intervention with you. Your participation is not mandatory, although it would be invaluable and much appreciated. Your anonymity will be respected throughout the research.

Yours sincerely,

Sarah Keane.

Consent Form

Please complete one of the two options below:

1. I _____ am willing to take part in this research.
(Your name)
2. I _____ am not willing to take part in this research.

Appendix B: Pre-intervention Open-Ended Situation-Based Questionnaire



Please tick the box below:

Male ☐

Female ☐

Write down what you would do if you found yourself in these situations:

Stressed before a test:

Finding it difficult to fall asleep:

Encountering someone angry/ annoying:

Needing to concentrate:

Being disappointed in yourself:

Thank you for your participation.

Appendix C: Outline of Mindfulness Intervention

Session One:	Distribution of questionnaire Introduction to mindfulness intervention
Session Two:	Mindful breathing activities
Session Three:	Mindful listening activities
Session Four:	Mindful breathing – addition of music
Session Five:	Wellness walk – incorporating mindful listening and breathing
Session Six:	Mindful movement
Session Seven:	Mindful action – gratitude
Session Eight:	Mindful breathing
Session Nine:	Meditation – body scanning activity
Session Ten:	Wellness walk – incorporating mindfulness skills

Appendix D: Semi-Structured Interview Questions

Pre-intervention questions

1. What are your perceptions of mindfulness?
2. In your opinion what affects do you think mindfulness can have on children?
3. Have you ever implemented mindfulness into your classroom?
4. How do you think Irish primary schools may be able to support mindfulness interventions or initiatives within classrooms?

Post-intervention questions

1. Have you recognised any changes, positive or negative, in the classroom since the mindfulness intervention?
2. Would you consider integrating mindfulness practices into your classroom?