

IMPACT OF THE WEAVING WELL-BEING PROGRAMME ON CHILDREN'S
SELF-EFFICACY AND EMOTION REGULATION



**An investigation into the impact of the Weaving Well-being Tools of
Resilience Programme on Primary School Children's
Self-Efficacy and Emotion Regulation**

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Declaration

I, Fiona O' Brien confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Fiona O' Brien

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IMPACT OF THE WEAVING WELL-BEING PROGRAMME ON CHILDREN'S SELF-EFFICACY AND EMOTION REGULATION

Abstract

Title: An investigation into the impact of the Weaving Well-Being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

Background: With referrals to child and adolescent mental health services in Ireland rising, the Department of Education and Science (DES) stipulated that by 2023, universal, evidence-based programmes should be delivered in all schools to teach core social and emotional competence and coping skills (DES, 2018; HSE, 2014). Resilience refers to a group of protective factors that when developed and applied by a person during difficult experiences or circumstances, can result in positive outcomes such as, the preservation of or return to good mental health (Luthar, Cicchetti, & Becker, 2000). Resilience-based social and emotional learning SEL programmes aim to increase protective factors and nurture the development of coping strategies and adaptive mental health (Fergus & Zimmerman, 2005).

Aims: Using a mixed methods approach, the aim of this research study is to examine the impact of the universal Weaving Well-Being Tools of Resilience (WWTOR; Rock & Foreman, 2016) programme on children's (aged 9-10 years) self-efficacy and emotion regulation skills.

Method: One hundred children in six fourth classes participated in this non-randomised, experimental between subjects designed study. Teachers participated in a twenty hour training programme prior to delivering the programme. Quantitative data including pre and post measures of emotion regulation and self-efficacy were collected from the children. Semi-structured interviews were conducted with a sample of children and teachers in the intervention group to gather qualitative information about their experiences of the programme.

Results: Two way repeated measures ANOVAS indicated that a time by group interaction for mean self-efficacy scores and mean emotion regulation scores were found to be non-significant. Qualitative data indicated that most children that were interviewed were using the WWTOR tools with some children reporting the programme had an impact on their emotion regulation.

Findings: No intervention effects were found in self-efficacy and emotion regulation. However, the children and teachers in the small quantitative study reported improvements in emotion regulation. Replication of the study with a more robust research design is required that includes random sampling and a follow-up assessment of child outcomes.

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Introduction

The main aim of this thesis is to investigate the effectiveness of a teacher led, universal resilience-based prevention programme called the Weaving Well-being Tools of Resilience (WWTOR) programme using a sample of one hundred children aged nine to ten years. The researcher's interest in the area of child mental health and in evaluating the effectiveness of this particular programme mainly came from completing a placement in the National Educational Psychological Service (NEPS). The WWTOR programme was being recommended by psychologists in the service to schools who reported that feedback about the programme from principals and teachers was very positive. During another placement, the researcher co-facilitated the FRIENDS for Life programme which is a cognitive-behavioural anxiety prevention programme with small groups of children (Barrett, 2004). Direct work with the children enabled the researcher to observe a perceived gradual increase in children's emotional awareness and ability to regulate their emotions as the course progressed. The empirical paper of the present thesis outlines the structure and findings of the first study to examine the effectiveness of the culturally relevant WWTOR programme with a relatively large sample size of fourth class children.

The first part of the present thesis is a systematic review of universal, teacher led resilience-based prevention programmes for primary school children. Using Gough's Weight of Evidence framework (Gough, 1997), a systematic review was conducted to critically appraise studies of teacher led, universal resilience based prevention programmes in the current literature base. Findings from the systematic review revealed that there are a limited amount of studies in this particular area. The vast majority of studies solely relied on quantitative data to measure outcome variables such as, emotion regulation and social skills (Novak, Mihic, Basic & Nix, 2017; Mishara & Ystgaard, 2006). This method of data collection did not capture children's experiences of the programmes or other potential benefits children may have gained from the programmes. Information regarding the social validity of interventions was not obtained or reported in the vast majority of studies in the review. The second component of the present thesis is the empirical paper which provides a detailed account of the research study that was conducted to evaluate the impact of the WWTOR programme. The findings from the review article in the present thesis and

the benefits of obtaining qualitative data influenced the researchers decision to collect both quantitative data using self-report measures and qualitative data using semi-structured interviews to evaluate study outcomes.

A pragmatic paradigm looks at the difference a phenomenon can make and gives researchers autonomy to choose the methods that are most suitable for answering the research question (Johnson & Onwuegbuzie, 2004). This type of paradigm allows for a mixed methods approach encompassing different world views and assumptions, as well as various forms of data collection and analysis (Creswell, 2003). Using a mixed methods approach to conducting research increases depth, breadth and quantitative data that provides a more detailed outline of the intervention that is being examined (Patton, 2002). The empirical paper in the present thesis outlines the rationale for conducting the study which was largely derived from the findings of the review article. Details about the aims and theories that are relevant to the research study and WWTOR programme are also outlined in the empirical paper of the present thesis.

The overarching aim of the WWTOR programme is to increase children's (aged 9-10 years) self-efficacy and emotion regulation which are two key internal factors that contribute to the development of resilience in individuals (Glantz & Johnson, 2002). Protective factors that contribute to a person's resilience include internal factors such as self-efficacy and problem solving skills as well as, external factors including support from family and or peers (Cowen et al., 1996; Fergus & Zimmerman, 2005; Lee & Stewart, 2013). Resilience refers to an individual's capacity to function effectively under adverse conditions or where a perceived threat is present (Grotberg, 1997). It is a fluid personality characteristic related to an individual's capacity to adapt (Wagnild, 2003). Masten (2001) proposed that resilience is not only useful when adverse events occur but that underlying systems (including, mastery motivation and self-regulation) that are already recognised as characteristic of human functioning, have substantial adaptive importance across a wide range of stressors and challenging situations.

A mixed methods approach was employed to provide a more in depth understanding about the resilience related protective factors of self-efficacy and emotion regulation that are evaluated in the research study outlined in the empirical

paper in the present thesis. Emotion regulation and self-efficacy are important components of resilience that can be nurtured (Glantz & Johnson, 2002). Self-efficacy beliefs can impact task choice, effort, perseverance, resilience, achievement and their emotional reactions to threat or failure (Bandura, 1997). Emotion regulation has been defined as a protective factor that builds resilience following stress or, a trait that contributes to developing resources to cope when confronted with adversity (Cohn et al., 2009). Relevant theories in relation to these constructs include Bandura's (1997) theory of self-efficacy and Gross and John's (2003) theory of emotion regulation. Bandura's (1997) theory of self-efficacy proposed that when children successfully complete tasks and ascribe their successes to their abilities, they foster a sense of self-efficacy. They develop a belief that they will be able to execute similar tasks in the future (Carr, 2016).

Gross and John (2003) defined emotion regulation as the process that influences the emotions an individual experiences, when he/she has various emotions and how emotions are communicated to others. When a person aims to regulate their own emotions they demonstrate intrinsic emotion regulation (Gross, 2015). A goal of the WWTOR programme is to increase children's intrinsic emotion regulation. Results deriving from the analyses of the quantitative and qualitative data are reported in the results section of the empirical paper in the present thesis. The discussion section of the empirical paper consists of a critical evaluation of the results in light of relevant theory and literature. Strengths and limitations of the research as well as directions for future research are identified and reflected on in this section of the empirical paper. Implications of the findings of the research study for research and educational psychology practice are also outlined in the discussion of the empirical paper.

The third component of the present thesis is the critical review and impact statement. This part of the thesis specifies the strengths and limitations of the research study from the researcher's perspective and relevant literature. Areas for future research are identified in view of the strengths and limitations of the research study. Unanticipated ethical issues that arose during the research study are outlined and reflected on in light of relevant ethical codes and literature. Finally, specific impacts and implications of the research study to educational psychology practice, child

mental health, the teaching profession and empirical literature base in this area are highlighted and reflected on.

Review Article

1.1 Introduction

It has been estimated that worldwide the incidence of mental health difficulties in children and adolescents is between ten and twenty per cent (Kieling et al., 2011). Miller and McCormack (1991) reported that children can experience a significant degree of pressure at home and in school in the form of family functioning difficulties, interpersonal disputes, and pressure to do well academically (Salzman and Goldin, 2008). These stressors can culminate in them experiencing similar physiological symptoms of distress as adults such as unexplained aches and pains (Miller & McCormack, 1991). It has been estimated that between ten and twenty percent of children experiencing mental health difficulties in the United Kingdom (UK) have received support from a specialist service (Davis, Day, Cox, & Cuttler, 2000). Data from the Healthy Ireland annual survey conducted in 2016 indicated that mental health difficulties were most common among 15-24 year olds (Department of Health [DoH], 2017). Young females were found to be the most vulnerable to developing mental health difficulties with 16 percent of this population reported to experience mental health difficulties (DoH, 2017).

Referrals to child and adolescent mental health services in Ireland are rising (Health Service Executive (HSE), 2014). Government policy has recommended that schools implement preventative programmes to try to prevent mental health difficulties occurring in children (Department of Education and Skills (DES), 2018). Guidelines published by the Department of Education and Skills stipulated that by 2023, universal, evidence-based programmes for entire classes and or schools should be selected and delivered in all schools to teach core social and emotional competence and coping skills (DES, 2018). According to Weare and Gray (2003), school-based universal and targeted programmes have resulted in improvements to children's psychological well-being and social integration in school. However, these guidelines provide educators with no recommendations regarding the effectiveness of different universal resilience-based SEL programmes for increasing children's social and

emotional well-being. Similar instruction has been issued to schools in the Prevent Duty paper devised by the Department of Education (DoE) (2015) in the UK. The paper recommends that educators foster the development of positive character traits including resilience, self-esteem, and confidence in their pupils (DoE, 2015).

The delivery of universal social and emotional learning (SEL) programmes in schools is a promising strategy to nurture affective, cognitive, and behavioural competencies among all children (Lawson, McKenzie, Becker, Selby, & Hoover, 2019). Social and emotional learning (SEL) enables individuals to acquire skills to identify and manage emotions, select and accomplish desired goals, form and maintain relationships, make appropriate decisions and effectively deal with interpersonal challenges (Weissberg, Goren, Domitrovich, & Dusenbury, 2013). A meta-analysis comparing 213 SEL universal school-based programmes for children and adolescents found the programmes had significant positive effects on specific social and emotional skills such as problem-solving, attitudes about self, others and school as well as higher levels of prosocial skills (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Effect sizes for the various social and emotional skills were established using Cohen's *d* in the review and ranged from 0.2 to 0.6 (Durlak et al., 2011). The reviewed SEL programmes had small positive effect sizes on academic achievement demonstrated on achievement tests and grades which were attributed to better adjusted and content students learning more (Durlak et al., 2011). The effective development of social and emotional knowledge and skills has been found to be correlated with improved well-being and academic performance (Guerra & Bradshaw, 2008). The SEL framework combines competence development and youth development approaches which emphasises the promotion of desired outcomes to decrease risk factors and enhance protective factors for positive adaptation (Benson, 2006; Horn, 2008).

Although there is a lack of consensus regarding the definition of resilience, it is largely thought to consist of a set of protective factors (characteristics and resources) that can be nurtured and applied during challenging experiences and situations (Luthar, Cicchetti, & Becker, 2000). Resilience-based SEL programmes aim to increase protective factors and nurture the development of coping strategies and adaptive mental health (Fergus & Zimmerman, 2005). Resilience theory proposes that

all children no matter what their mental health status benefit from acquiring resilience skills (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). Developing resilience skills in children can improve a child's ability to elicit support when experiencing adversity while nurturing their self-esteem and self-efficacy (Fenwick-Smith et al., 2018).

There is a scarcity of systematic reviews that evaluate the effectiveness of programmes that seek to increase resilience based protective factors in primary school children (Dray, Bowman, Wolfenden, Campbell, Freund, & Hodder et al., 2015). The current systematic review is the first in the current literature base to evaluate the effectiveness of universal SEL programmes that aim to increase resilience based protective factors in primary school children that are implemented by teachers. Educational Psychologists (EPs) have key roles in consultation, research and intervention (Scottish Education Executive Department [SEED], 2002). This information will allow EPs to recommend specific evidence-based universal resilience focused SEL programmes to a range of professionals. This may include those responsible for developing government policy which may provide educational professionals with guidelines for selecting appropriate evidence-based programmes in this area.

A comprehensive literature search was conducted and five studies were identified for review. Gough's (2007) Weight of Evidence Framework was used to evaluate the design, methodology and findings of the studies. The findings from the review are outlined. Conclusions and implications for future research, educational psychology practice, government policy and teaching professionals are discussed.

1.2 Context and Rationale

Findings from a study investigating the mental health of youth in Ireland reported that one third of young people are likely to have had a mental disorder by the time they were thirteen years of age (Cannon, Coughlan, Clarke, Harley, & Kelleher, 2013). Anxiety was the most commonly reported mental disorder experienced by young people in this study (Cannon et al., 2013). A mental disorder is defined by clinically significant impairment in a person's thinking, emotion regulation or

behaviour that is related to dysfunction in the emotional, cognitive, behavioral and or developmental processes underpinning psychological functioning (American Psychiatric Association, 2013). Approximately half of youth who have a mental disorder meet the criteria for another disorder in this area (Kazdin, 2004). A recent HSE report indicated that there was an 11% rise in referrals for mental health services in 2014, with 42% of children and adolescents waiting in excess of six months to receive treatment (HSE, 2014). The recommendation that all schools should be implementing evidence based programmes to promote children's social and emotional development and coping skills by 2023, suggests there is a growing awareness at government level of the growth of mental health difficulties amongst children in Irish society (DES, 2018).

This approach reflects the growing emphasis in psychology on enhancing individuals positive attributes and preventing difficulties before they manifest (Diener & Seligman, 2002). According to the World Health Organisation (WHO) (2001), well-being refers to a person's ability to understand their potential, demonstrate resilience when confronted with daily stressors, look after their physical health and have a sense of purpose and attachment to the broader community. It is a process that requires on-going cultivation throughout life (WHO, 2001). There has been a growing emphasis on developing and monitoring peoples levels of well-being in recent years in the UK and internationally (New Economics Foundation, 2006; Office for National Statistics, 2014). Seligman (2011) proposed that the key characteristics of well-being include positive emotions, engagement, relationships, meaning and achievement. Attributes that contribute towards the development of these key characteristics are self-esteem, optimism, resilience, vitality and self-determination (Seligman, 2011).

One recognised pathway to building well-being in school children includes social and emotional learning (Noble, McGrath, Roffey, & Rowling, 2008). Schools in Ireland take a holistic approach to educating children that involves assisting them with developing cognitive, social and emotional skills they can apply when dealing with a variety of stressors (OECD, 2014). A literature review examining approaches on student well-being found that when well-being is at the heart of school's ethos, improvements in learning and academic achievement, pro-social behaviours and mental health outcomes have been found as well as higher levels of resilience in

children (Noble et al., 2008). Findings such as these highlight the benefits of adopting a universal approach to mental health promotion that accesses a substantial number of children in classes and or entire schools who would otherwise not access intervention (Weare & Nind, 2011).

A universal school-based approach to develop student's SEL is a promising strategy to increase children's achievement in academia and life (Zinns & Elias, 2006). A substantial amount of empirical studies exists that indicates that effective proficiency of social and emotional skills is correlated with enhanced well-being and greater school performance (Eisenberg, 2006; Guerra & Bradshaw, 2008). Findings from systematic reviews indicated that universal SEL interventions conducted with children and adolescents had moderate positive effects on participants self-esteem, self-confidence (Durlak & Weissberg, 2007; Sklad, Dieskstra, Ritter, Ben, & Gravesteijn, 2010) and social skills (Blad, 2017). Empirical evidence indicates that the most beneficial framework to improving well-being in educational settings is a multi-component, preventative, whole-school approach that works at both a universal and targeted level (DES, 2018). Other components of school-based SEL programmes that have been found to be effective include implementing programmes with younger children, family involvement, administering programmes with a high level of fidelity and delivering programmes over a period of nine to twelve months (Bjorklund et al., 2014).

The objectives of SEL programmes are to nurture people's self-awareness, self-management, social awareness, relationship skills and accountable decision-making (Collaborative for Academic Social, and Emotional Learning (CASEL), 2005). SEL interventions aim to promote children's social-emotional skills (for example, empathy and self-control) through the delivery of taught universal interventions delivered in schools (Gresham & Elliot, 2008; Humphrey, 2013). SEL theory views these skills as essential protective factors that can increase resilience to the occurrence and or continuation of mental health difficulties (Humphrey, Barlow, Wigelsworth, Lendrum, Pert, Joyce et al., 2016). According to resilience theory, resilience is an attribute that can be developed through exchanges between an individuals internal resources, directed responses to environmental stimuli and repertoires of protective factors (Luthar, Cicchetti, & Becker, 2000). The terms used

to define the concept of resilience and the attributes that contribute to the process and outcome differ greatly (Shaikh & Kuappi, 2010). According to Luthar et al. (2003), there is no one definition of resilience that is universally acknowledged and used. However, eminent researchers have proposed that resilience is a group of protective factors that when developed and applied by a person during difficult experiences or circumstances, can result in positive outcomes such as, the preservation of or return to good mental health (Luthar et al., 2003).

Protective factors are assets and resources that change in a beneficial way, the manner in which an individual reacts to adverse circumstances, and are believed to include both internal attributes for example, coping skills as well as, external factors such as, supportive family and school environments (Luthar & Cicchetti, 2000; Sun & Stewart, 2010; Lee & Stewart, 2013). Developing and applying protective factors when faced with adversity such as coping skills, self-efficacy, problem-solving, emotional literacy and peer socialisation enhances the likelihood of beneficial outcomes including the re-establishment of positive mental health or the impeding of negative mental health outcomes (Davydov, Stewart, Ritchie, & Chaudieu, 2010).

Universally enhancing children's resilience can act as a mitigating, supportive strategy that enhances mental health and may prevent future acute mental health difficulties occurring which require intervention (Panter-Brick & Leckman, 2013). One method for enhancing resilience in children is implementing SEL interventions in schools (Harlacher & Merrell, 2010). SEL programmes that are designed to develop resilience in children emphasise the acquisition of protective factors such as, coping skills, mindfulness, emotion awareness and regulation, empathetic relationships, self-awareness and efficacy as well as, help-seeking behaviour (Fenwick-Smith, Dahlberg & Thompson, 2018). Developing these skills or protective factors helps individuals to avert, reduce or overcome the impact of adversity (Grotberg, 1996). A growing body of empirical literature on the application of SEL programmes designed to build resilience related protective factors in primary school-aged children is emerging.

Yamamoto, Matsumoto, & Bernard (2017) employed a quasi-experimental design to investigate the effect of the You Can Do It! (YCDI) social-emotional, cognitive

behavioural programme on 94 children's (aged 9-10 yrs) levels of resilience, social support and anxiety. The YCDI programme was taught to children by the researcher who is a trained counsellor (Yamamoto et al., 2017). Resilience was measured using the Resilience in Elementary School Children scale (Tanaka, 2011). The construct was characterised as having five attributes in children including social competence, problem-solving skills, critical consciousness, autonomy and having a sense of purpose which includes goal setting (Zolkoski & Bullock, 2012). Resilient individuals in this study were considered to be able to deal effectively with difficulties (Werner, 1993). Children's pre-intervention levels of anxiety indicated that they were not anxious according to norms of Japanese children (Yamamoto et al., 2017). Findings from the study indicated that children who participated in the YCDI programme experienced significant gains in their levels of resilience and social support compared to children in the control group (Yamamoto et al., 2017).

Shoshani and Steinmetz (2014) examined the impact of a 15 session teacher led, school-wide, positive psychology programme on children and adolescent's (11-14 yrs) levels of self-esteem, self-efficacy, optimism, interpersonal sensitivity and internalising symptoms. The programme taught pupil's multiple positive psychology strategies including, gratitude, goal planning and setting (Shoshani & Steinmetz, 2014). Pupil self-report measures indicated that the intervention group experienced increased levels of self-esteem, self-efficacy and optimism post-intervention. Decreases in anxiety, general distress and depressive symptoms post-intervention were reported for pupils in the intervention group whereas, the control group reported significant increases in these areas (Shoshani & Steinmetz, 2014). A significant factor which limited the generalisability of the study's findings to the general population was that the intervention and control groups were recruited from the same school (Shoshani & Steinmetz, 2014). Obtaining self-report measures from teachers and or parents would have enhanced the reliability of the findings of the study and limited the risk of biased reporting in child self-report measures (Shoshani & Steinmetz, 2014).

Findings from a recently conducted systematic review that evaluated 11 studies investigating the effectiveness of resilience-enhancing, universal mental health programmes for primary school children, found that ten of the studies reported

improvements in resilience and protective factors including, coping skills and self-efficacy at post-intervention (Fenwick-Smith et al., 2018). Seven studies in the review utilised a control group and were considered to have provided more substantial evidence regarding study outcomes (Fenwick-Smith et al., 2018). A key element of several of the studies was that teachers delivered the programmes (Fenwick-Smith, Dahlberg, & Thompson, 2018). When provided with support from research and programme staff, teachers were reported to have implemented programmes successfully (Fenwick-Smith et al., 2018). In a minority of the reviewed studies, teachers adapted aspects of programme content to better suit children's levels of literacy (Fenwick-Smith et al., 2018). According to Fenwick-Smith et al. (2018), teachers play a key role in nurturing children's resilience, as they have a relationship with students, insight into their lives as well as their coping and support seeking mechanisms.

Findings from a literature review of 52 systematic reviews and meta-analyses examining school-based mental health interventions reported inconsistent results about the effectiveness of teachers implementing interventions compared to clinical staff (Weare & Nind, 2011). Three reviews indicated that teachers were not as effective as clinical staff (Wilson et al., 2003; Beelman & Losel, 2006; Wilson & Lipsey, 2006). However, findings from more recent reviews reported that teachers were just as effective as clinical staff in implementing interventions (Wilson & Lipsey, 2007; Diekstra, 2008). This was further reinforced by findings from a more recent meta-analysis which found that teachers and other school staff effectively implemented SEL interventions in schools (Durlak et al., 2011).

A scarcity of systematic reviews exist that evaluate studies investigating the effectiveness of teacher led, universal SEL interventions that aim to increase protective factors in primary school children (Dray, Bowman, Wolfenden, Campbell, Freund, Hodder, & Wiggers, 2015). The purpose of this systematic review is to evaluate studies examining the effectiveness of teacher led universal SEL interventions which aim to increase resilience related protective factors in primary school children. The review includes programmes implemented with primary school children aged five to twelve years, as findings from empirical studies indicates that the earlier mental health promotion and resilience programmes are delivered, the

larger the positive effect tends to be (Durlak & Wells, 1997; Zoritch, Roberts, & Oakley, 1998). In view of the findings from Fenwick-Smith, Dahlberg, & Thompson's (2018) and Durlak et al.'s (2011) review, only studies that utilise a control group and teachers to implement the programmes will be included in the review.

1.3 Review question

How effective are teacher led, universal SEL programmes at increasing resilience related protective factors in primary school children?

1.4 Key concepts and terminology defined

Population. Primary school-aged children aged 5-12 years.

Intervention. The objective of the review is to evaluate the effectiveness of universal, SEL interventions/programmes that aim to increase the levels of resilience related protective factor(s) in children. Universal refers to programmes that are implemented with all students within a class, year, or the entire school (Fenwick-Smith et al., 2018). SEL is the process of learning skills required to identify and manage emotions, develop empathy for others, make appropriate decisions, form and maintain positive relationships and deal with challenging scenarios effectively (CASEL, 2005). Protective factors are factors that positively change the way in which an individual responds to adversity and include internal factors such as, self-efficacy and coping skills as well as, external factors such as, family, peers and school support (Luthar & Cicchetti, 2000; Sun & Stewart, 2010; Lee & Stewart, 2013). Resilience refers to the skills that enable an individual to prevent, reduce or overcome the potentially damaging impact of adversity (Grotberg, 1996), via the application of protective factors including, coping skills, peer socialisation, the development of empathy, self-efficacy, seeking help, mindfulness and emotion regulation (Fenwick-Smith et al., 2018).

Control. The intervention must be compared to a control group. Including studies that use a control group allows researchers to control factors that could adversely impact the internal validity of studies such as maturational change in participants (Mertens, 2010). Studies with an active, wait-list, or no intervention control group will be reviewed.

Outcomes. Primary outcomes must be standardised measures that demonstrate changes in levels of one or more resilience related protective factor(s). Studies that include long term effects of interventions will be reviewed. Any additional findings such as, a decrease in internalising behaviours or an increase in academic outcomes will also be explored.

1.5 Literature search

An electronic search of databases including Sciencedirect, Academic Search Complete, PsychINFO and PsychArticles was conducted in August and September of 2019. When available, a filter was selected so that only studies written in English that are peer reviewed and published between 2005-2019 could be reviewed. The years from 2005-2019 were chosen so that studies in the review were conducted and published recently or relatively recently. The initial search produced 4,637 results. Titles were reviewed in light of inclusion and exclusion criteria reducing the study to 64 for screening abstracts. Of the 64 articles, 27 full text articles were more closely screened for inclusion and exclusion criteria. Out of the 27 articles, four met the inclusion criteria and were included for review. The remaining studies that were screened did not meet all of the inclusion criteria. Ancestral searches of the reference section of full text journal articles were screened for the title of studies that were relevant to the review. One study that met the inclusion criteria was sourced for the review using this method. In total, five studies were included for the current review (see table 3 for titles of included studies). Please see table 1 for further details of search terms used in database searches and table 2 for inclusion and exclusion criteria.

Table 1

Database Search

Databases:	Search terms:
Academic Search Complete - 19 PsycINFO - 21 PsychARTICLES - 2 ScienceDirect - 19	“Strengths based intervention” AND “resilience” AND “children”
Academic Search Complete - 3 PsycINFO - 16 PsychArticles - 2 ScienceDirect - 1,817	“social emotional learning program OR intervention” AND “resilience” AND “children”
Academic Search Complete - 4 PsycINFO - 1 PsychArticles - 3 ScienceDirect - 45	“Social emotional learning program” AND “protective factors” AND “children”.
Academic Search Complete - 1,462 PsycINFO - 76 PsychArticles - 11 ScienceDirect - 184	“resilience” AND “school programs” AND “children”.
Academic Search Complete - 6 PsycINFO - 3 PsychArticles - 1 ScienceDirect - 33	“positive psychology interventions” AND “resilience” AND “children”.

<p>Academic Search Complete - 14 PsycINFO - 366 PsychArticles - 51 ScienceDirect - 478</p>	<p>“well-being programme” AND “resilience” AND “children”.</p>
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Table 2:

Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion	Rationale
1 Type of publication	Peer reviewed study	Not a peer reviewed study	Peer reviewed studies have been independently assessed for quality
2 Language	Study must be written in English	Study is not written in English	In order for the study to be understood, it must be written in English. Translators were not available for the purpose of this systematic review.
3 Intervention	The intervention is a universal SEL intervention designed to develop resilience and or at least one protective factor in children.	The intervention is not a universal SEL programme designed to develop resilience and or at least one protective factor in children.	Only universal SEL programmes that are designed to develop children's resilience and or at least one protective factor in children are being evaluated in the current review.
4 Study design	Must be a group design that reports between group outcomes and provides pre and	Not a group-based design. Study does not provide pre and post intervention outcome data.	Pre and post measures and between group outcomes enable the impact of the

	post intervention data.		intervention to be evaluated and comparisons made between studies. Universal SEL programmes should be implemented at school or class group level.
5 Control group	The study must have a control group	The study does not have a control group	Having a control group allows the effectiveness of the intervention to be determined by comparing it to another condition that is not exposed to the intervention.
5 Setting	The intervention must be conducted in a primary school setting during the school day.	The intervention is not conducted in a primary school and or during school hours.	SEL interventions designed to develop resilience in children are sometimes conducted in primary schools during school hours.
6 Data	The study provides empirical data	The study does not provide empirical data	Empirical data will allow the reviewer to examine the effectiveness of SEL interventions designed to develop resilience in children relative to the review question
6 Subjects	Subjects must be primary school children aged between 5-12	Subjects are not primary school children aged between 5-12	This is the age range stipulated by the review question

Table 3

Titles of Included Studies

Novak, M., Mihic, J., Basic, J., & Nix, L. R. (2017). PATHS in Croatia: A school-based randomised controlled trial of a social and emotional learning curriculum. *International Journal of Psychology*, 2, 87-95. DOI: 10.1002/ijop.12262

Mishara, L. B., & Ystgaard, M. (2006). Effectiveness of a mental health promotion program to improve coping skills in young children: *Zippy's Friends*. *Early Childhood Research Quarterly*, 21, 110-123. doi:10.1016/j.ecresq.2006.01.002

Harlacher, E. J., & Merrell, W. K. (2010). Social and emotional learning as a universal level of student support: Evaluating the follow-up effect of Strong kids on social and emotional outcomes. *Journal of Applied School Psychology*, 26(3), 212-229. doi:10.1080/15377903.2010.495903

Tunariu, D. A., Tribe, R., Frings, D., & Albery, P. I. (2017). The iNEAR programme: an existential positive psychology intervention for resilience and emotional well-being. *International Review of Psychiatry*, 29(4), 362-372. doi:10.1080/09540261.2017.1323531

Holen, S., Waaktaar, T., Lervag, A., & Ystgaard, M. (2012). The effectiveness of a universal school-based programme on coping and mental health: A randomised, controlled study of *Zippy's Friends*. *Educational Psychology*, 32(5), 657-677. doi:10.1080/01443410.2012.686152.

1.6 Critical Analysis: Gough's Weight of Evidence Framework

This systematic review analysed and synthesised the outcomes and methodologies of five studies that use experimental and quasi-experimental controlled designs. The studies methodological quality was assessed using an adapted version of the Kratochwill (2003) coding protocols from the APA Task Force on Evidence Based Interventions in School Psychology for group based designs. Coding criteria in WoE C was devised mainly by the reviewer and Kratochwill (2003). Each study was critically evaluated utilising Gough's (2007) Weight of Evidence Framework. The framework consists of four categories and assesses studies in relation to methodological quality Weight of Evidence A (WoE A), methodological relevance Weight of Evidence B (WoE B), relevance to the review question Weight of Evidence C (WoE C) and overall WoE (WoE D). An outline of each of the coding categories and calculation of weightings can be found in the appendix A, B, C and D. For the

purpose of this systematic review, a scoring system for weighting the evidence was applied across categories (see table 4).

The studies were carried out in the United Kingdom (Tunariu, Tribe, Frings, & Albery, 2017), Croatia (Novak, Mihic, Basic, & Nix, 2017), Lithuania and Denmark (Mishara and ystgaard, 2006), Norway (Holen, Waaktar, Lervag, & Ystgaard, 2012) and the United States (Harlacher & Merrell, 2010). All studies demonstrated the success of teacher led, universal, SEL programmes in increasing resilience related protective factor(s) in primary school aged children (see table 6 for the main characteristics of the studies). Four of the studies received an overall WoE D rating of ‘Medium’ while one study received a ‘Low’ WoE D rating (Tunariu et al., 2017) (see table 5 for an overview of the WoE ratings for the studies). There are numerous limitations to the methodology and designs of these studies relative to the review question, which will be examined in the following sections.

Table 4:

Scoring ranges

Weighting of Evidence	Score
High (3)	2.5 - 3
Medium (2)	1.5 - 2.4
Low (1)	0.1 - 1.4

Table 5:

Overview of the WoE ratings for each of the five studies (Gough, 2012)

Study	Methodological Quality (WoE A)	Relevance of design to present RQ (WoE B)	Relevance of findings to the present RQ (WoE C)	Overall Weighting (WoE D)
Harlacher, E. J., & Merrell, W. K. (2010).	2 (Medium)	2 (Medium)	1 (Low)	1.67 (Medium)
Holen, S., Waaktar, T., Lervag, A., & Ystgaard, M. (2012)	1.4 (Low)	1.67 (Medium)	2 (Medium)	1.69 (Medium)
Novak, M., Mihic, J., Basic, J., & Nix, L. R. (2017)	1.6 (Medium)	1 (Low)	3 (High)	1.87 (Medium)
Mishara, L. B., & Ystgaard, M. (2006)	1.6 (Medium)	2 (Medium)	3 (High)	2.2 (Medium)
Tunariu, D. A., Tribe, R., Frings, D., & Albery, P. A. (2017)	1 (Low)	1.3 (Low)	1 (Low)	1.1 (Low)

Table 6

Main characteristics and effect sizes of reviewed articles

<u>Study</u>	<u>Participants</u>	<u>Intervention</u>	<u>Protective factors measured</u>	<u>Outcome measures</u>	<u>(Cohen's <i>d</i>) Effect sizes</u>
Study 1					
Harlacher & Merrell (2010) United Kingdom	n= 106 54% female 46% male Age: 8.5 - 9.5 yrs	Strong Kids Twelve weekly 45 minute lessons and one booster session Topics include: emotion identification, anger management, thinking errors & problem solving.	Coping and social functioning	Seeking support and problem solving subscales of the Coping scale (Causey & Dubow, 1992).	<u>Post test</u> Coping: 0.67 SBSS-2: 0.82 <u>Follow-up</u> Coping: 0.58 SBSS-2: 1.13
Study 2					
Holen et al. (2012) Norway	n = 1,483 49.3% female 50.7% male	Zippy's Friends Twenty four weekly lessons.	Coping	Kidscope questionnaire (child questionnaire (child	Oppositional strategies (child report): -.380

Study	Participants	Intervention	Protective factors measured	Outcome measures	Effect sizes
	Mean age: 7.3 yrs	Topics include: Emotions, communication, relations and conflict resolution.		adolescent version for parents).	Oppositional strategies (Low SES children): -.433 Oppositional Strategies(girls) -.551 Active coping Strategies(girls) .258 Active coping strategies (parent report): .186

Study	Participants	Intervention	Protective factors measured	Outcome measures	Effect sizes
Study 3					
Novak et al. (2017)	568	Promoting Alternative	Prosocial behaviour	Prosocial behaviour -	Emotion
Croatia	53% male	Thinking Strategies (PATHS)	Emotion regulation	Social Competence	regulation: 0.18
	Mean age: 7 yrs	Sixty three lessons		Scale	Prosocial
		Two per week		Emotion regulation -	behaviour
				Social Competence	Lr risk children:
				Scale	0.35
					Emotion regulation
					Lr risk children:
					0.25
					Learning behaviour
					Lr risk children:
					0.25
					Decreased inattention
					Lr risk children:

-.22

Study	Participants	Intervention	Protective factors measured	Outcome measures	Effect sizes
				Hyperactivity Lr risk children	-.24
				Oppositional Behaviour Lr risk children:	-.33
				Physical aggression Lr risk children:-	-.29
				Decreased Withdrawn/ Depressed Lr risk children:	-.26

Study	Participants	Intervention	Protective factors measured	Outcome measures	Effect sizes
Study 4					
Mishara & Ystgaard (2006)	n = 850 50% female	Zippy's Friends Twenty four weekly lessons.	Coping and social skills.	Social Skills Questionnaire, Teacher Form	Social Skills , Teacher Form (Denmark)
Lithunia and Denmark	Mean age: 6.75 yrs	Topics include: Emotions, communication,		Observation form Schoolagers Coping Strategies Inventory. Social Skills Questionnaire, Student Form Elementary level	Cooperation:.65 Assertion:.57 Self-control:.69 Social Skills , Teacher form (Lithuania)
				Schoolagers Coping Strategies Inventory. relations and conflict resolution.	Cooperation:.84 Assertion:77 Self-control:.79
					Social Skills Student Form (Denmark) Cooperation:.25

Study	Participants	Intervention	Protective factors measured	Outcome measures	Effect sizes
					Assertion:.25 Self-control :.28 Empathy:.25
					Social Skills , Student form (Lithuania) Cooperation:.27 Assertion:.32 Self-Control:.36 Empathy:.35
					Teacher problem behaviour scales (Denmark) Externalising : .37 Internalising = .38

Study	Participants	Intervention	Protective factors measured	Outcome measures	Effect sizes
					Hyperactivity = .41 Teacher coping observations : 2.73 Schoolagers coping strategies inventory : Teacher problem behaviour scales (Lithunia) Externalising : .38 Hyperactivity:.43 Teacher coping observations = 3.00 Schoolagers coping strategies inventory :38.05
Study 5					
Tunariu et al. (2017)	n = 345 Male: 51%	iNEAR programme Seven weekly one hour lessons			
United Kingdom	Age: 11-12 yrs				

Study	Participants	Intervention	Protective factors measured	Outcome measures	Effect sizes
		Topics: Building positive identity (self-concept and self-relatedness), emotional regulation and relating to others, choice			
		and option (dealing with issues of social justice), building resilience through dealing with Uncertainty, growth and well-being	Environmental mastery, positive relationships with others, openness to diversity and challenge, intolerance of uncertainty. subjective sense of well-being	Psychological Well-Being Scale Environmental Mastery Psychological Well-Being Scale: Positive Relationships With Others Openness to Diversity and Challenge Scale Intolerance of Uncertainty Scale	Intervention effects not established

1.7 Participant information

A total of 3,361 children participated in the included studies. Around 1,779 of these children received an SEL intervention. The male to female ratio was 50 per cent in one of the studies (Mishara & Ystgaard, 2006). Two of the studies had a small gender bias towards males (51%) (Holen et al., 2012; Tunariu et al., 2017). Larger gender bias of 54% towards females (Harlacher & Merrell, 2010) and 53% towards males (Novak et al. 2017) were reported in two studies. Parent consent and child assent was obtained in studies by Tunariu et al. (2017) and Harlacher and Merrell (2010). Parental consent was obtained in two studies (Holen et al., 2012; Novak et al., 2017). Neither parental consent or child assent were reported to have been acquired in the study by Mishara and Ystgaard (2006). All participating children were between six and twelve years of age meeting the inclusion criteria in this area.

The children in the included studies attended primary schools. One study specified that participating schools were from both urban and rural areas (Holen et al., 2012). Mishara and Ystgaard (2006) reported that half of the children in their sample attended schools in Vilnius. The other half of the sample attended schools in the county of Fyn, but it was not specified whether these areas are urban or rural (Mishara & Ystgaard, 2006). A description of the types of areas schools are located in was omitted from the majority of included studies (Novak et al., 2017; Tunariu et al., 2017; Harlacher & Merrell, 2010). The ethnicity of children was reported and presented graphically in one study (Harlacher & Merrell, 2010). Holen et al.'s (2012) study reported obtaining information from parents about the ethnicity of their children. Some information about the ethnicity of children's parents was provided in the study (Holen et al., 2012). None of the other studies reported information regarding the ethnicity of participants (Tunariu et al., 2017; Noval et al., 2017; Mishara & Ystgaard, 2006).

Holen et al. (2012) reported that the vast majority of children (75.9%) lived with both parents. Minimal information was provided regarding parental/family characteristics in the majority of studies. Data about the level of education children's parents achieved was used as an indicator of socio-economic status in Holen et al.'s 2012 study. Parents level of education was described as 'low' if parents had been to

high school (which represented 454 children's parents) and 'high' if they had received higher education (which represented 818 of children's parents). This means of differentiation was employed because of the low rate of social inequality in Norway (Holen et al., 2012). Schools or classes were matched in terms of family socio-economic status in two studies (Novak et al., 2017; Mishara & Ystgaard, 2006). No further details regarding family socio-economic status was provided in either of these studies. No details about socio-economic status were specified in the other two studies (Harlacher & Merrell, 2010; Tunariu et al., 2017). None of the studies provided information about the prevalence of special educational needs (SEN) or emotional and or behavioural difficulties in their samples. Researchers may not have felt comfortable requesting this personal information about children and their families from schools and parents. The scarcity of information regarding the background of participants and schools limits the representativeness and generalisability of study findings to the general population.

1.8 Sample size

There was a lot of variation regarding the sample sizes used in the studies. Harlacher and Merrell's (2010) study used a homogeneous sample size of 106 participants, which limited the generalisability of the study's findings. Out of all the studies, Holen et al.'s (2012) study had the largest sample size of 1,483 participants. In all studies, participants were divided between intervention and control group conditions. Participants were split between two implementations of the intervention in Lithuania and Denmark in Mishara and Ystgaard's (2006) study. The Denmark implementation had control and intervention groups whereas, the Lithuania implementation did not have a control group for some measures.

Effect sizes were reported in four of the studies. The results of power calculations to determine an appropriate sample size in order to establish effect sizes were not reported in any of the studies. Medium to large effect sizes were reported in Harlacher and Merrell's (2010) study. The study received a 'Medium' rating for effect size criteria in WoE A. Small (and medium) effect sizes were reported in three of the studies which lead to them being allocated a 'High' rating for effect size in WoE A

(Mishara and Ystgaard, 2010; Holen et al., 2012; Novak et al., 2017). Mishara and Ystgaard's (2006) study reported that due to the small number of participants in each class, statistical tests were limited in their ability to determine appropriate sample sizes for each class. Tunariu et al. (2017) received a 'Low' rating for effect size in WoE A as effect sizes could not be established in their pilot study due to the limited sample size. Tunariu et al.'s (2017) study reported on the findings of the first of two implementations of the iNEAR intervention.

1.9 Research design

As the current review aimed to evaluate studies that measured the effectiveness of SEL programmes that aim to increase resilience-focused protective factors, only quantitative studies with pre and post intervention data and a control group were included in the review.

Holen et al. (2012) and Novak et al. (2017) randomised schools to either the intervention or control groups in their studies. The authors of the former study acknowledged that schools were not randomly selected to participate in their study. At the time the study was conducted, 25 per cent of schools in Norway were implementing social skills training with children in primary schools (Holen et al., 2012). Schools that took part in the study may have been improving before participating in this research study (Holen et al., 2012). To truly determine whether the effects that were reported in this study can be attributed to the intervention (Zippy's Friends), the authors should have excluded schools that were delivering social skills interventions. Using random assignment to allocate participants to control conditions decreases the chances of bias in study samples (Vogt & Johnson, 2011). By including schools that may have been delivering social skills interventions, the authors may not have used a sample of schools that was representative of Norwegian primary schools. In Harlacher and Merrell's (2010) study, both teachers and children were randomly assigned to study conditions. Use of random assignment and a control group in three of the studies resulted in them receiving 'Medium' ratings for the comparison group criteria in WoE A.

An established alternative treatment to the study intervention can be implemented with an active control group (Chin & Lee, 2008). This allows researchers to establish the degree to which the study intervention is effective compared to the alternative treatment the active control group receive (Chin & Lee, 2008). Using an active control condition can allow researchers to identify the specific elements of interventions that may contribute to post-intervention changes experienced by participants in the intervention group (Karlsson & Bergman, 2015). Alternative kinds of control conditions such as, no intervention or wait-list, may provide absolute effects, but they do not give any insight regarding the elements of the interventions or context within which the intervention was conducted that may contribute to its effectiveness (Karlsson & Berkman, 2015). As none of the studies used an active control group, all studies received a 'Low' rating for comparison group in WoE B.

To ensure schools were as similar as possible across intervention and control groups, two of the studies matched schools or students for specific characteristics prior to pre-intervention data collection. Schools in Novak et al.'s (2017) study were matched across a number of factors including, neighbourhood characteristics, family socio-economic status, percentage of children receiving free lunches, class and school size. In Holen et al.'s (2012) study, schools were matched in pairs based on school socio-economic profile, percentage of special teaching and ethnic minority backgrounds of children before being randomly assigned to the intervention or control group conditions. Students were matched regarding age and gender in Tunariu et al.'s (2017) study. Post-hoc analysis was conducted to determine whether there were any significant differences between the experimental and control groups in two of the studies (Mishara & Ystgaard, 2006; Harlacher & Merrell, 2010). At pre-test, the control group in the Danish sample was found to have significantly higher scores than the experimental group in all social skills scales apart from the Assertion scale (Mishara & Ystgaard, 2006). Significant differences were also found between third and fourth grade students pre-test levels of use of SEL skills and social functioning in Harlacher and Merrell's (2010) study. Additional analysis in the form of a gains score analysis was conducted to compare students scores on these outcome variables across assessment time points (Harlacher & Merrell, 2010). The gains score analysis

confirmed that increases found in teacher reported social functioning in the treatment group compared to the control group were accurate across assessment time points (Harlacher & Merrell, 2010).

Classes were not reported to be randomised to intervention or control groups in two of the studies (Tunariu et al., 2017; Mishara & Ystgaard, 2006). Harlacher and Merrell (2010) conducted the study with third and fourth grade students from the same school. Tunariu et al. (2017) also carried out their study using classes from the same school. Children in the control and experimental groups were matched in terms of age and gender in this study. Tunariu et al. (2017) reported that using students from the same school for both the control and intervention groups may lead to contamination effects where students communicate with each other about their participation in the research which could limit the generalisability of the study findings.

Harlacher and Merrell (2010) was the only study that conducted a follow-up assessment. Follow-up assessments are important for determining whether the effect of an intervention is maintained over a period of time (Hill, Woodward, Woelfel, Hawkins, & Green, 2016). Follow up data collection was conducted two months post-intervention in Harlacher and Merrell's (2010) study. The authors of this study acknowledged that follow-up data collection should be conducted over a longer period of time to ascertain whether intervention effects are present for extended lengths of time in future studies (Harlacher & Merrell, 2010). The use of one school to recruit participants as well as, the lack of follow-up data collection and randomisation of participants to study conditions, contributed to Tunariu et al.'s (2017) study receiving low overall weightings for WoE A and C.

1.10 Control group

Three of the studies used a wait-list control group (Harlacher & Merrell, 2010; Mishara & Ystgaard, 2006; Tunariu et al., 2017). Holen et al. (2012) and Novak et al. (2017) both employed a no intervention control group. All five studies received a 'Low' rating in WoE B for the type of comparison group they used. This in turn

contributed to 'Low' overall weightings in WoE B for both Novak et al. (2017) and Tunariu et al. (2017). Use of an active comparison group was the most methodologically relevant design for this review, as it allows for the comparison of intervention effects against maturation effects and a different intervention (Mertens, 2010).

1.11 Measures

A variety of measures were used to measure a range of resilience related protective factors across the included studies. The most commonly measured protective factor was social skills or functioning in this area (Mishara & Ystgaard, 2006; Harlacher & Merrell, 2010; Novak et al., 2017; Tunariu et al., 2017). Three of the studies measured children's coping skills (Tunariu et al., 2017; Holen et al., 2012; Mishara & Ystgaard, 2006). Novak et al. (2017) measured emotion regulation. Environmental mastery, openness to diversity and challenge, intolerance of uncertainty and children's perceived sense of well-being were measured in Tunariu et al.'s (2017) study.

Due to all five studies measuring the effectiveness of different interventions and using a wide variety of measures to measure similar and different constructs, making comparisons between studies is difficult. Studies by Mishara and Ystgaard (2006) and Holen et al. (2012) are the only studies that employed multiple methods and multiple sources for collecting data on each studies outcome variables. Providing information from multiple sources regarding children's coping allowed for the triangulation of data in two of the studies (Mishara and Ystgaard 2006; Holen et al.2012). The majority of measures used in Mishara & Ystgaard's (2006) study demonstrated acceptably high reliability coefficients of .7. These factors enhanced the quality of the studies methodology and research design and contributed to the study receiving 'Medium' and 'High' ratings for measurement criteria in WoE A and WoE B. Holen et al. (2012) also received a 'High' rating for using multiple sources of measurement in WoE B. The reliability of measures in this study was either not reported (Kidscope Questionnaire) or reliability coefficients were reported based on the sample used for establishing the measures norms (Strengths and Difficulties Questionnaire (SDQ)).

This resulted in Holen et al.'s (2012) study being allocated a 'Low' rating for measurement in WoE A. Child and teacher self-report measures were employed in Harlacher and Merrell's (2010) study which was allocated a 'Medium' rating for sources of measurement in WoE B. This was the only study that received credit for including a follow-up measure in WoE B. Novak et al. (2017) and Tunariu et al. (2017) only used one informant and received a 'Low' rating for sources of measurement in WoE B.

There was variation regarding the reliability of some of the measures that were used in the studies. The reliability of the observation form that was devised based on the Schoolagers Coping Inventory was not reported in Mishara and Ystgaard's (2006) study. The Cronbach's alpha co-efficients for the Social Skills Questionnaire, Student Form sub-tests were low in the Danish sample in this study. Novak et al. (2017) and Tunariu et al. (2017) both reported high Cronbach's alpha co-efficients for all measures used in their studies. However, it is not clear whether the Cronbach's alpha co-efficients reported in Tunariu et al.'s (2017) study were calculated based on the study sample or norms associated with the different measures. Cronbach's alpha coefficients were calculated for all measures used with the study sample in Harlacher and Merrell's (2010) study. Coefficients for the internal consistency of the Strong Kids Knowledge test was adequate across assessment time points (pre-test - .56, post-test - .66, follow-up - .70) (Harlacher & Merrell, 2010). Cronbach's alpha coefficients for the remaining measures used in this study across assessment time points were high (Harlacher & Merrell, 2010).

Measures were used to assess a variety of emotional and behavioural difficulties in two of the studies such as, conduct problems (Holen et al., 2012) and inattention (Novak et al., 2017). The use of both parent and teacher forms of the Strengths and Difficulties Questionnaire allowed for multi-source data to be collected for outcomes of this measure in Holen et al.'s (2012) study. Three of the studies received a 'Medium' overall rating for WoE B indicating that there is little variation between the studies in relation to this. Two of the studies received higher ratings for overall WoE B (Harlacher & Merrell's, 2010; Mishara & Ystgaard, 2006), with Harlacher and Merrell (2010) receiving the highest overall rating for WoE A. This suggests that

these studies are the most methodologically relevant for this review and the outcomes from these studies may be of more value.

1.12 Intervention implementation

All five studies met the inclusion criteria of implementing a universal programme that aims to increase resilience related protective factors in primary school children. All programmes in the review were multi-component and did not require parental involvement. The PATHS programme consists of 63 lessons and was implemented during a nine month period (Novak et al., 2017). Zippy's Friends has twenty four lessons and was delivered over a six month period in two of the studies (Holen et al., 2012; Mishara & Ystgaard, 2006). Tunariu et al.'s (2017) study evaluated the effectiveness of the iNEAR programme which consisted of seven weekly lessons. The Strong Kids programme has twelve weekly lessons (Harlacher & Merrell, 2010). The intervention programme investigated by Novak et al. (2017) was described as being a social and emotional learning programme. Descriptions of the interventions that were delivered in the other studies all aim to enhance various key aspects of social and emotional learning such as, emotion regulation and acquiring social skills to maintain interpersonal relationships (Novak et al., 2017; Mishara & Ystgaard, 2006; Tunariu et al., 2017; Harlacher & Merrell, 2010). They can all therefore be considered SEL programmes. All studies met the inclusion criteria for being delivered by a teacher in a primary school setting. A programme or curriculum of lessons was referred to in all studies, suggesting teachers delivered a structured, manualised intervention.

All five studies reported that teachers received training in delivering the various interventions. Tunariu et al.'s (2017) study was the only study that did not specify the duration of the training teachers received in delivering the iNEAR programme. Teachers in Harlacher and Merrell's (2010) study received minimal training of one hour prior to commencing teaching the Strong Kids programme to children. As a result, these studies did not meet the WoE C criteria for providing teachers with a minimum of one day's training in delivering the studies interventions. Three studies received credit in WoE C for providing support/supervision to teachers and delivering

a minimum of one days training to teachers in delivering the programmes (Holen et al., 2012; Novak et al., 2017; Mishara & Ystgaard, 2006). These studies received 'Medium' (Holen et al., 2012) and 'High' (Novak et al., 2017; Mishara & Ystgaard, 2006) overall WoE C weightings. Teachers were provided with four days of training to deliver the PATHS programme in Novak et al.'s (2017) study. This study implemented the longest intervention which lasted for two school terms (Novak et al., 2017). Certified PATHS trainers provided training to teachers in this study. No background information is reported regarding who delivered training to teachers in three of the studies (Harlacher & Merrell, 2010; Holen et al., 2012; Tunariu et al., 2017). It seems likely that trainers may have been provided from the non-profit organisation (Voksne for Barn) which was reported to be responsible for delivering the Zippy's Friends intervention in Norwegian schools (Holen et al., 2012).

Supervision was provided to teachers in two of the studies while they implemented interventions (Mishara & Ystgaard, 2006; Novak et al., 2017). Support and consultation was described as being provided "regularly" by local Coordinators to teachers in Mishara and Ystgaard 's (2006) study. Monthly observations of teachers delivering PATHS lessons were observed by local Coaches in Novak et al.'s (2017) study. Out of a total of sixty three PATHS lessons, this is the equivalent of nine lessons that teachers received feedback on. This is a small amount of supervision in light of the total number of lessons teachers were expected to deliver in the programme. Teachers in Holen et al.'s (2012) study received three one day counselling sessions while delivering Zippy's Friends intervention. This support was accessed by 45.7% of participating teachers. It is unclear what these day long counselling sessions consisted of. No details regarding supervision or support were provided in Tunariu et al.'s (2017) study and Harlacher and Merrell's (2010) study resulting in both studies receiving a 'Low' rating for this in WoE C.

Various methods were employed in the different studies to monitor and determine programme fidelity. Three of the studies received a 'Medium' rating for fidelity in WoE A (Harlacher & Merrell, 2010; Novak et al., 2017; Mishara & Fidelity, 2006) and the other two studies received a 'Low' rating for fidelity. The authors of Harlacher and Merrell's (2010) study conducted joint coding sessions to monitor whether the programme was being delivered with fidelity. Fidelity for 31% of the

lessons was found to be in excess of 85% in this study. Inter-rater reliability for the fidelity measure was reported to be 97% (Harlacher & Merrell, 2010). A description of the fidelity measure used in the study was not provided. Mishara and Ystgaard's (2006) study received credit for providing supervision to teachers in WoE A however, this was not the method used in the study to determine the fidelity of programme implementation. Independent Evaluators were used to collect data from teacher completed session reports that were completed after each session and post-intervention teacher interviews. Session reports asked teachers to provide details such as, the attendance of children for each session, whether the session was delivered as planned and the perceived degree to which children enjoyed each session.

Scaled questions were used during post-intervention interviews with teachers to gather information including, their impressions of the programme and whether they perceived the programme to be effective. Mishara and Ystgaard (2006) reported that according to data from session reports and teacher interviews, the intervention sessions were "generally completed as planned". Mean scores from teacher's responses to the scaling questions in session reports and teacher interviews were provided by the authors. High mean scores were given by teachers for adequacy of the training provided, supervision received and teacher's overall impression of the programme. Moderate mean scores were given for teachers perceived view of children's enjoyment of sessions, usefulness of sessions and the clarity of the facilitators notes. This was the only study that provided statistics regarding children's attendance in intervention sessions. No information was provided in the study regarding the background or training Independent Evaluators may have received prior to collecting data about fidelity.

Local coaches who provided supervision to teachers in Novak et al.'s study completed check lists while observing teachers deliver intervention sessions. Quality of programme implementation was reported as being high (90-95%). The accuracy of this statistic could have been made more reliable through cross referencing check list ratings with another independent coder. Short computer-based questionnaires were completed by teachers in Holen et al.'s (2012) study after each lesson which yielded information about any adaptations teachers made to lessons. Information was also provided by teachers in the questionnaires regarding the amount of lessons they

taught to children, training they attended and support they received whilst implementing the programme. The vast majority of teachers (85%) reported delivering all intervention sessions. A minority of teachers (13.4%) reported making minor deviations from the programme manual. Although a high percentage of teachers reported delivering all intervention sessions to children, self-report measures are subject to reporter bias, which potentially makes these statistics less reliable.

Direct methods of appraising fidelity including, observation by trained observers are considered to be more valid than indirect methods such as, pencil and paper or technology based surveys (Swindle, Selig, Ruttledge, Whiteside-Mansell, & Curran, 2017). Studies in the field of mental health have found statistically weak associations between therapists self-reported ratings of intervention implementation and direct methods of fidelity, with therapist self-reported ratings for fidelity being higher than observers ratings (Swindle et al., 2017). Out of the four studies that used a method to assess programme fidelity, Harlacher and Merrell's (2006) use of observation to obtain inter-rater reliability was the most reliable method used among these studies. However, the use of the study's authors instead of two independent raters to rate the fidelity of programme sessions may have resulted in biased ratings of fidelity in this study.

Three of the studies used a method to assess programme implementation, delivered a minimum of two days training to teachers in implementing the programme and provided ongoing support to teachers (Holen et al., 2012; Novak et al., 2017; Mishara & ystgaard, 2006). The inclusion of these variables was reflected in the 'Medium' and 'High' overall weightings that were allocated to these studies in WoE C.

1.13 Findings

All five studies provided evidence of changes in specific resilience-related protective factors following the implementation of the teacher led, universal SEL programme interventions. In study number one, the Harlacher and Merrell study, medium and large effect sizes were found at post intervention and follow up for the treatment group's perceived use of SEL skills as measured via the child report Coping

Scale and the Social-Emotional Assets and Resiliency Scales-Child (SEAR-C) Self-Report Version (Harlacher and Merrell, 2010). There was a small non-statistically significant decrease in Coping Scale scores and a statistically significant decrease in SEARS-C scores for the wait-list group at post-intervention (Harlacher & Merrell, 2010). Large effect sizes were reported for social functioning on the teacher rated School Social Behaviour Scales (SBSS-2) at post-intervention and follow up for the treatment group in this study. Although the wait-list group also demonstrated an increase in SBSS-2 scores the treatment group demonstrated a higher increase than the wait-list group (Harlacher & Merrell, 2010). These findings were limited by the homogeneous nature of participant characteristics which limits the generalisability of the findings to children from more diverse backgrounds (Harlacher & Merrell, 2010).

In study three, the Novak study, children in the intervention group demonstrated a small statistically significant improvement in emotion regulation compared to children who did not receive the intervention. No intervention effects were found across study groups for the remaining six outcome variables including pro-social behaviour and learning behaviour (Novak et al., 2017). Sub group analyses in this study indicated that children in the intervention group who were described as lower risk (more likely to have above average scores on the three positive behaviours and below average scores on the six negative behaviours) demonstrated small effect sizes for increased levels of pro-social behaviour and emotion regulation compared to children in the control group. Small effect sizes were also found for lower risk children in the intervention group for learning behaviour, decreased levels of inattentiveness, hyperactivity, oppositional behaviour, physical aggression and withdrawn/depressed behaviour compared to their control counterparts (Novak et al., 2017). No statistically significant intervention effects were found for higher risk children in study groups (children more likely to have below average scores on three positive behaviours and above average scores on the six negative behaviours) on any of the outcome variables (Novak et al., 2017).

In study two, the Holen study, a significant decrease (small effect) in the use of oppositional coping strategies and a significant increase (small effect) in parent reported active and support seeking coping strategies as measured by the Kidscope

scale was found in the intervention group in Holen et al.'s (2012) study. There was a slight decrease in parent rated scores for active coping skills in the control group at post-intervention (Holen et al., 2012). A small significant decrease was found in teacher reported Strengths and Difficulties Questionnaire impact scores for boys in the intervention group in this study. A similar finding in this outcome was not found for boys in the control group. In terms of subgroup analyses in this study, child rated oppositional coping strategies significantly decreased in girls and children in the low socio-economic status group who received the intervention relative to their control counterparts (Holen et al., 2012). There was a small significant increase in parent rated active coping skills in girls in the intervention group compared to girls in the control group. A similar increase was not found in parent rated active coping strategies for boys in the intervention group relative to boys in the control group.

In study number four, the Mishara and Ystgaard study, medium effect sizes for social skills based on data from teacher observations were found in the Lithuanian and Danish intervention groups relative to the respective control groups. Small effect sizes for social skills were found based on data from interviews with children from both countries compared to their control groups (Mishara & Ystgaard, 2006). A medium and small effect size for coping was reported based on teacher observations for children in the Lithuanian and Danish intervention groups compared to the control group for each country (Mishara & Ystgaard, 2006). Data from interviews with children in the Lithuanian and Danish samples indicated improvements (small effect sizes) in coping compared to control groups from both countries (Mishara & Ystgaard, 2006). Decreases in problem behaviours including hyperactivity and externalising behaviours were also found for children in the intervention groups but not the control groups in this study (Mishara & Ystgaard, 2006).

Due to the limited sample size in study number five, the Tunariu study, it was not possible to detect meaningful effect sizes for the outcome variables. The authors of this study indicated that data collection was incomplete in this study and results were based on a first wave of data (Tunariu et al., 2017). Statistically significant increases in well-being, self-efficacy, positive relationships with others, openness to diversity, and dealing with uncertainty were found in the intervention group at post-intervention relative to the control group (Tunariu et al., 2017).

The overall rating for WoE D was the same for programmes that were implemented over shorter (Harlacher & Merrell, 2010) and longer periods of time (Novak et al., 2017). This is inconsistent with findings from meta-analyses which indicated that programmes that were implemented over nine and twelve months were found to be more effective than those delivered over a shorter period of time (Bjorklund et al., 2014; Diekstra, 2008). Overall, four out of five of the studies that were reviewed demonstrated small to large positive effects on several outcome variables following the implementation of the different resilience-based prevention programmes (Harlacher & Merrell, 2010; Holen et al., 2012; Novak et al., 2012; Mishara & Ystgaard, 2006).

1.14 Limitations of findings.

Methodological limitations and issues with the research designs of the studies resulted in four studies receiving a 'Medium' weighting for WoE D and one study receiving a 'Low' weighting for WoE D (Tunariu et al., 2017). Two of the studies referred to their sample sizes as being small which limited the generalisability of the studies findings (Harlacher & Merrell, 2010; Tunariu et al., 2017). The limited sample size ($n = 354$) used in one of the studies resulted in the authors not being able to establish effect sizes for outcome variables (Tunariu et al., 2017). Aside from Holen et al.'s (2012) study, the remaining studies do not provide important information about participant characteristics such as, socio-economic status. Only two of the studies reported details regarding the ethnicity of participants in their studies (Harlacher & Merrell, 2010; Holen et al., 2012). Without this information it is hard to decipher which children in the wider population the studies findings are generalisable to.

Some of the studies used measures with low internal consistency such as, the Social Skills Questionnaire, Student Form in the Danish sample (Mishara & Ystgaard, 2006). Reliability coefficients were not reported for the Kidscope questionnaire in Holen et al.'s (2012) study. Using measures with low or no internal consistency reduces the reliability of the findings in both of these studies. Only one study used a direct method to assess the fidelity of programme implementation (Harlacher &

Merrell, 2010). Although, inter-observer agreement was high (97%) for 31% of programme sessions, the use of the researchers who conducted the study to rate sessions makes this statistic less reliable due to the potential for biased reporting to occur. Aside from Tunariu et al.'s (2017) study which did not report information about programme fidelity, there was also an over reliance on self-report methods for assessing fidelity in the remaining studies. There is evidence of a lack of experimental control in Holen et al.'s (2012) study. The authors of this study acknowledged that improvements in children could have been made prior to them taking part in the intervention due to a quarter of schools in Norway delivering social skills training to primary school aged children. The other four studies do not mention any other interventions that may have adversely impacted internal validity.

1.15 Study design.

For different reasons some of the authors of the studies were restricted in their ability to randomly assign schools, classes and or students to intervention and control groups. Mishara & Ystgaard (2006) reported that due to practical reasons students could not be randomly assigned to intervention and control conditions. The same school was chosen to recruit participants for both study conditions in two of the studies which may have resulted in contamination effects (Tunariu et al., 2017; Harlacher & Merrell, 2010). In order to obtain a sample that is truly representative of the sample from which participants are drawn, random assignment increases the likelihood that participants across study conditions will be as equal as possible on all known and unknown extraneous variables at the beginning of the research study (Vogt & Johnson, 2011). Without random assignment, the representativeness of samples in the studies may have been limited .

Studies in this review used either a no treatment or wait list control group design. These type of control group designs are considered to be weaker than an active control as they do not control for non-specific intervention effects and it is harder to differentiate the treatment effects (Lindquist, Wyman, Talley, Findorff, & Gross, 2007; Freedland, Mohr, Davidson, & Schwartz, 2011) . The use of an active control group design would control for other factors that could have impacted on intervention

effects including differential expectations (Boot, Somons, Stothart, & Stutts, 2013). Only one of the studies included a follow up assessment of outcome variables (Harlacher & Merrell, 2010). Three of the studies recommended that long term follow up should be conducted in future studies to establish whether the different interventions demonstrate long-term effects (Holen et al., 2012; Mishara & Ystgaard, 2006; Novak et al., 2017). The authors of Tunariu et al.'s (2017) study reported that they intended to carry out follow up data collection at multiple time points up to twelve months post-intervention.

Four of the studies relied solely on self-report measures to obtain data regarding outcome variables that were measured. Mishara and Ystgaard's (2006) study used both teacher observations to rate items measuring children's social and coping skills as well as, structured interviews with children to obtain further data about the study's outcome variables. Self-report measures used in the studies may have been subject to biased reporting from respondents due to factors such as, social desirability bias (Shoshani & Steinmetz, 2014). A recommendation for future research studies that was made in Mishara & Ystgaard's (2006) study to reduce the risk of biased ratings and or observations being reported, is to use blind observers instead of teachers that are delivering the programme to conduct observations and rate behaviours on outcome variables. The use of multiple evaluation techniques and methods should be used by researchers to obtain a more in-depth understanding about the outcomes of a study (Darbyshire, MacDougall, & Schiller, 2005). One of the studies relied solely on teacher self-report measures to gather data about the different outcome variables which limited the analysis of outcomes (Novak et al., 2017). Four of the studies obtained data from children through self-report measures. Obtaining data from children using this method did not allow for children's experiences of the interventions or any other perceived benefits of the interventions to be established.

Only one study in the review obtained qualitative data regarding children's experiences and views of the study's intervention (Mishara & Ystgaard, 2006). It has been recommended that the views of children should be elicited in decision making processes that impact them (Psychological Society of Ireland [PSI], 2017). Article 12, in the United Nations Convention; '*The Childs Opinion*' (Childrens Rights Alliance, 1998) stipulates that the child's opinion must be considered and taken into account in

all issues that impact him or her. According to Hogan and Gilligan (1998), children can be very articulate and richer data can be obtained by encouraging them to express their views about research they have participated in. A limitation of this systematic review is that studies which evaluated universal, resilience based SEL interventions using qualitative data were excluded. The literature search indicated that a minimal amount of studies exist which used qualitative data to evaluate interventions. Gough (2007) recommended that all research studies in a particular area should be reviewed even if the studies have different research designs. A notable strength of the review is that it provides evidence for the effectiveness of universal, resilience-based SEL programmes that were implemented by teachers. Findings from previous systematic reviews that have compared the effectiveness of clinical staff and teachers in implementing universal SEL programmes with children are inconsistent (Dieskstra, 2008; Weare & Nind, 2011; Wilson & Lipsey; 2007). The findings from the current review add to the growing empirical evidence base which indicates that teachers are effective in delivering manualised, multi-component, universal SEL programmes with children.

1.16 Implications and Recommendations for Future Research

This review highlighted the need for higher quality studies to be conducted in this area using randomised controlled trials. Hierarchies of evidence indicate that randomised controlled trials which incorporate the use of a control group and random assignment are considered the gold standard of research designs due to their ability to reduce bias or rival causal explanations in studies findings (Bryman, 2016). Researchers conducting future studies ought to conduct a power calculation to determine an appropriate sample size that is potentially able to detect effect sizes. Using larger sample sizes in future studies will decrease the risk of sampling error and increase the generalisability of studies findings. Prior to pre-intervention data collection, researchers conducting future research in this area ought to collect and report information about participant characteristics to highlight which children in the general population the findings of studies are applicable to. Participants in samples should be more heterogeneous in terms of participant characteristics so that findings

from studies are generalisable to children from a range of diverse backgrounds (Harlacher & Merrell, 2010).

To reduce the risk of biased reporting researchers should use observational data and independent assessors when measuring fidelity integrity (Fenwick-Smith et al., 2018). To assess whether intervention effects strengthen or weaken over time, future research studies should incorporate a long term follow up into their research design. This will inform researchers whether or not interventions that aim to develop protective factors in children help to prevent the occurrence of future mental health difficulties (Holen et al., 2012). Researchers also need to conduct sub-group analyses in future research studies to further clarify whether interventions are more or less effective with certain groups within the population such as, males and children who are at increased risk for developing mental health difficulties (Holen et al., 2012; Novak et al., 2017).

Self-report measures of outcome variables in future studies should be completed by multiple informants to increase the reliability of data obtained using this method. Many factors can influence teachers views of SEL programmes such as, their perceived ability to teach SEL, not viewing SEL as part of their role, not enough time to teach SEL due to pressure to teach the curriculum and perceiving SEL as not being useful for children (Domitrovich et al., 2008; Han & Weiss, 2005; Walker, 2004). As there is very little empirical information regarding children and teachers views about different resilience based prevention programmes, future studies ought to include a qualitative component to obtain this information. Adding a qualitative component to future studies would enable researchers to evaluate the social validity of teacher led, universal resilience based prevention programmes from children's and teachers perspectives.

The Psychological Society of Ireland (PSI) (2017) stipulates that children's views should be taken into account in relation to decisions that affect them. Including a qualitative component would allow for children's perceived views and experiences of different programmes to be established. The majority of the samples in the studies consisted of children between six to eight years of age, indicating that a slightly higher level of empirical evidence exists which suggests that these kind of SEL

programmes are effective in increasing resilience related protective factors with this age group. To ascertain children's and teachers views about universal resilience-based SEL programmes, both qualitative and quantitative data should be obtained in future research studies. Not only will this provide data regarding the social validity of programmes it may highlight specific intervention effects that are not demonstrated in quantitative data. This will also broaden researchers and EPs understanding of the aspects of programmes that are beneficial and work well and the components of programmes that are challenging and affect the effective delivery of programmes.

1.17 Implications for Educational Psychology practice

Relatively recent statistics from the Health Service Executive (2014) indicated that referrals for children to mental health services increased by 11 per cent. Gaining access to mental health services for children and adolescents is hard for families in Ireland due to the limited availability of services (Coyne, McNamara, Healy, Gower, Sarker, & McNicholas, 2015). Educational Psychologists (EPs) working in schools are in an ideal position to inform and recommend to management evidence-based universal SEL programmes that increase resilience related protective factors in children (Roffey, 2015). The current systematic review provides EPs with specific information regarding the effectiveness of a number of teacher led, universal resilience based prevention programmes that they may inform schools and teachers about. Further studies investigating the effectiveness of teacher-led universal resilience based prevention programmes are required to further ascertain the effectiveness of different programmes with the general population and with sub-groups of children in the population, especially children deemed at high risk of developing mental health difficulties.

1.18 Conclusion

In conclusion, the current systematic review provides some empirical evidence for the effectiveness of teacher led, universal resilience-based prevention programmes for primary school children, particularly for children aged 6-8 years old. The generalisability of studies findings are limited due to the inclusion of small sample

sizes in a minority of studies (Tunariu et al., 2017; Harlacher & Merrell, 2010), a lack of randomisation at the participant, class and or school level in studies and limited information about sample characteristics in most studies (Tunariu et al., 2017; Novak et al., 2017; Mishara & Ystgaard, 2006). The limited amount of studies in this area indicates the need for experimental studies with larger more diverse samples to be conducted to provide further insight into the effectiveness of this type of intervention. Future studies should use observational evaluation and independent assessors to evaluate implementation fidelity. Multiple methods and informants should be used to obtain further insights into child outcomes. This will allow for the triangulation of the data and enable researchers to make more informed reliable inferences about the data.

Empirical studies currently provide very little insight into how teacher led, universal resilience-based prevention programmes are received by children. Future studies should aim to evaluate the social validity of these programmes by obtaining qualitative data from child participants and teachers implementing programmes. This would provide further information regarding children's lived experiences of programmes and any perceived intervention effects that have not been identified in studies that only gathered quantitative data. Further empirical studies with more robust research designs are needed to further ascertain the effectiveness of teacher led, universal resilience based prevention programmes. Studies should longitudinally measure indicators of children's mental health to decipher whether these interventions act as a buffer for preventing mental health difficulties over an extended period of time.

One study in the review obtained qualitative data regarding children's experiences and views of the study's intervention (Mishara & Ystgaard, 2006). It has been recommended that the views of children should be elicited in decision making processes (Psychological Society of Ireland (PSI), 2017). Article 12, in the United Nations Convention; '*The Childs Opinion*' (Childrens Rights Alliance, 2010) stipulates that the child's opinion must be considered and taken into account in all issues impacting him or her. According to Hogan and Gilligan (1998, p. 12), children can be very articulate and richer data can be obtained by encouraging them to express their views about research they have participated in. It is therefore important that both qualitative and quantitative data regarding children's experiences of participating in

teacher led, universal SEL programmes are incorporated into future research studies. EPs are trained to evaluate interventions (Roffey, 2015). It is imperative that EPs continue to involve themselves in evaluating universal SEL programmes that aim to increase resilience related protective factors in children, as this will enhance children's resilience and potentially lower the incidence of mental health difficulties in this population.

The effectiveness of a universal prevention programme on children's self-efficacy and emotional regulation: a mixed methods, quasi-experimental study of the Weaving Well-being Tools of Resilience programme.

2.1 Introduction

Mental disorders are the leading cause of disability worldwide in children and young people between the ages of 10 and 24 years, with around half of mental disorders manifesting in adolescence, largely between the ages of 12 and 18 years (Gore, Bloem, Patton, Ferguson, Joseph, Coffey et al., 2011). Internationally, it has been estimated that between 10 and 20 per cent of children and adolescents experience mental health difficulties (Kieling, Baker-Henningham, Belfer, Conti, Ertem, Omigbodun et al., 2011). According to a European Interview Health Survey that was conducted in 2014, the incidence of chronic depression reported in Ireland was 12.1% (Eurostat Statistics Explained, 2018). Findings from the European Interview Health Survey indicated that Ireland along with Portugal, Germany and Finland had the highest incidence of reported depression for adolescents aged 15 years and over in the European Union at this time, with rates of chronic depression greater than 10 per cent in these countries (Eurostat Statistics Explained, 2018). The individual and societal consequences of mental health difficulties are extensive and include lower quality of life, reduced economic efficiency and output as well as increased demand for health and social care services (Belfer, 2008). A recent Health Service Executive report indicated that there was an 11% rise in referrals for mental health services in 2014, with 42% of children and adolescents waiting in excess of six months to receive treatment (HSE, 2014). The Department of Education and Skills (DES) (2018) recently published guidelines recommending that all schools should be implementing evidence based programmes to promote children's social and emotional development and coping skills by 2023. This suggests that at government level there is a growing awareness of the mental health needs of children in Irish society and the necessity for evidence based programmes to address these difficulties (DES, 2018).

The impact of mental health difficulties and related risks highlight the need to investigate the effectiveness of universal school-based prevention programmes which seek to develop protective factors and nurture resilience in children (Institute of

Medicine, 2009). Acquiring effective coping strategies and emotion regulation skills in early life tends to safeguard psychological health and can foster resilience across the lifespan (Kaunhoven & Dorjee, 2017). Resilience is a personality characteristic that is malleable and can be developed (Wagnild, 2003). It refers to the process of, ability for and result of successful adjustment when confronted with challenging or adverse situations (Masten, Best, & Garmezy, 1990). A lack of agreement exists regarding the definition of resilience (Shaikh & Kuappi, 2010). The features that contribute to the process or outcome of resilience continue to alter within the literature (Shaikh & Kuappi, 2010). Fenwick-Smith, Dahlberg, and Thompson (2018) highlighted that a difficulty that exists with creating and evaluating resilience based programmes is the lack of consistency regarding the definition of resilience and its associated skills.

It has been proposed that resilience refers to a group of protective factors that when developed and applied by an individual who is faced with adversity may lead to advantageous outcomes such as, the preservation of or return to well adjusted mental health (Luthar, Cicchetti, & Becker, 2000; Davydov, Stewart, Ritchie, & Chaudieu, 2010). Protective factors can come from within a person such as, coping skills or they can be external to a person and may include beneficial supports such as, caring peer and or family relationships (Hodgson, Abbasi, & Clarkson, 1996). Some protective factors in the form of personal qualities that have been reported to assist children to cope when dealing with adversity include, possessing an easy temperament, autonomy, self-reliance, sociability, effective coping strategies and communication skills (Brooks, 1994; Jacelon, 1997; Polk, 1997; Werner, 1992; Wright & Masten, 1997). Other protective factors that have been named in previous research include, self-efficacy, problem solving, emotion regulation and social skills (Davydov, Stewart, Ritchie & Chandieu, 2010). Resilience can be strengthened through exchanges between an individual's internal resources, directed responses to environmental stimuli and groups of protective factors (Luthar et al., 2000). Universal resilience-based interventions that aim to enhance resilience are not only beneficial for children who are at risk but they also provide early intervention for children in the general population which enhances and safeguards their mental health when they do inevitably experience adversity (Fenwick-Smith et al., 2018).

According to Harlacher and Merrell (2010), one way of developing resilience in children is through teaching social and emotional skills in schools. Internationally, there has been a growing interest in the development of children and adolescent's social and emotional well-being as a means to nurturing and protecting mental health in this population (OECD, 2015). The aims of social and emotional learning (SEL) programmes are to foster people's self-awareness, self-management, social awareness, relationship skills and accountable decision-making (Collaborative for Academic Social, and Emotional Learning (CASEL), 2005). SEL programmes seek to promote children's social-emotional skills for example, empathy and self-control through the delivery of taught SEL curriculums (Gresham & Elliot, 2008; Humphrey, 2013). SEL theory views these skills as essential protective factors that can increase resilience against the occurrence and or continuation of mental health difficulties (Humphrey, Barlow, Wigelsworth, Lendrum, Pert, Joyce, et al., 2016).

Universal interventions are aimed at entire populations or groups of individuals not recognised as experiencing or being at risk of developing mental health difficulties (Weisz, Sandler, Durlak, & Anton, 2005). They are therefore an appropriate strategy to implement when seeking to nurture the mental health of children in the general population (Dray, Bowman, Wolfenden, Campbell, Freund, Hodder et al., 2015). Rose (2001) highlighted that the majority of individuals with mental health difficulties are not those considered to be at high risk but those who have some risk and are part of a normally distributed population. Every individual at some stage in their life will encounter adversity, therefore implementing techniques to nurture resilient thinking early in peoples lives may minimise the occurrence of future mental health problems developing (Fenwick-Smith et al., 2018). Schools have been identified as ideal settings for the implementation of universal interventions as a large number of children can be reached over an extended length of time (Domitrovich, Bradshaw, Greenberg, Embry, Poduska, & Lalongo, 2010).

A limited number of studies exists which examines the effectiveness of teacher led, universal resilience based prevention programmes for primary school children. Existing research studies in this area all incorporated a comparison group and demonstrated evidence of changes in resilience-related protective factors subsequent to programme implementation (Mishara & Ystgaard, 2006; Harlacher & Merrell,

2010; Holen et al., 2012; Novak et al., 2017; Tunariu., 2017). Large, medium and small effect sizes were reported across a range of resilience-related protective factors in these studies including, coping skills, social functioning, self-efficacy and emotion regulation (Mishara & Ystgaard, 2006; Harlacher & Merrell, 2010; Holen et al., 2012; Novak et al., 2017). Small effect sizes were also reported in some of the studies for emotional and behavioural outcomes (Novak et al., 2017; Holen et al., 2012; Mishara & Ystgaard, 2006). Small effect sizes were found for children described as being lower risk (more likely to have above average scores on the three positive behaviours and below average scores on the six negative behaviours in the measures used in the study) for learning behaviour, decreased levels of inattentiveness, hyperactivity, oppositional behaviour, physical aggression and withdrawn/depressed behaviour compared to lower risk children in the control group (Novak et al., 2017). A significant decrease (small effect) in children's use of oppositional coping strategies as measured by the Kidscope scale was reported in Holen et al.'s (2012) study. A significant decrease was also found in the intervention group's teacher reported Strengths and Difficulties Questionnaire impact scores compared to the control group in this study. Sub-group analyses indicated that child rated oppositional coping strategies significantly decreased in girls and children in the low socio-economic status group in this study compared to their control counterparts (Holen et al., 2012). A small teacher rated decrease in overall mental health difficulties in boys in the intervention group was reported (Holen et al., 2012). The same finding was not found for boys in the control group in this study (Holen et al., 2012).

Studies conducted by Mishara and Ystgaard (2006), Holen et al. (2012) and Harlacher and Merrell (2010) collected data using multiple sources. Mishara and Ystgaard (2006) collected data using multiple methods (teacher self-report standard questionnaires and child interviews where interviewers administered The Schoolagers Coping Inventory to collect quantitative self-report data using this measure). Qualitative data from teachers who reported that the programme in their opinion helped children cope with problems on a day to day basis reinforced findings from the quantitative data in this study (Mishara & Ystgaard, 2006). Existing studies investigating the effectiveness of teacher led, universal resilience-based prevention programmes largely rely on self-report measures to obtain data with some studies

using only one source to collect this type of data (Novak et al., 2017; Tunariu et al., 2017). It is worth noting that self-report measures are prone to biased reporting (Shoshani & Steinmetz, 2014). To monitor and counteract the possible effects of biased reporting, multiple methods and informants should be used when measuring outcome (Haynes & Hieby, 2004).

Studies in this area mainly obtained data via secondary sources i.e from teachers and or parents using standardised self-report measures. Quantitative data was obtained from child participants in a few studies for some outcome variables using self-report measures (Holen et al., 2012; Harlacher & Merrell, 2010). Using quantitative methods to collect data leaves out the views children have of universal resilience-based prevention programmes. According to Article 12 of the United Nations Convention on the Rights of the Child (1989), "Every child has the right to say what they think in all matters affecting them, and to have their views taken seriously". Including the child's voice in the evaluation of interventions enables children to become active participants in the study (Martin & Buckley, 2018) and is associated with better outcomes for children (Wolfson, 2010). Children can make significant contributions to issues that involve them and they ought to be listened to (McTavish, Streelasky, & Coles, 2012). Participatory methods including having discussions with children and engaging them in drawing or writing have been increasingly employed to collaboratively establish and explore children's views about various topics (O' Kane, 2008). These research techniques give children a means to communicate their views and provide a possible way to enable children to contribute to decision making that is relevant to them (McTavish et al., 2012).

According to Darbyshire, Macdougall and Schiller (2005), further insights from the findings of studies takes place when numerous evaluation measures and methods are employed. Observational appraisal and the use of independent evaluators are considered to be more reliable methods of monitoring and assessing programme fidelity than self-report methods (Durlak & Dupre, 2008). A limitation of two of the available studies investigating this type of prevention programme is that self-report measures were completed by teachers who delivered the intervention (Mishara & Ystgaard, 2006; Holen et al., 2012). A disadvantage of using self-report methods with

persons directly involved in some way with the programme is that these methods are subject to biased reporting (Fenwick-Smith et al., 2018).

Only one available study exists that included a follow-up as part of the research design which demonstrated that intervention effects were maintained at a three month follow-up (Harlacher & Merrell, 2010). With regard to sample characteristics, the use of small homogeneous samples is a limitation in two studies evaluating different teacher led, universal resilience based prevention programmes (Harlacher & Merrell, 2010; Tunariu et al., 2017). The small sample size in Tunariu et al.'s (2017) study contributed to effect sizes not being established in this study. The majority of studies that investigated, universal resilience-based prevention programmes used samples of children aged 6-8 years, highlighting that there is a lack of empirical studies that have been conducted with pre-adolescent children (Holen et al., 2012, Mishara & Ystgaard, 2006; Novak et al., 2017).

In light of these limitations, the current study aimed to add to the minimal literature base of empirical studies of teacher led, universal resilience focused prevention programmes by investigating the effectiveness of an Irish designed universal positive psychology programme called the Weaving Well-being Tools of Resilience programme (WWTOR). Children aged 9-10 years learn evidence-based positive psychology tools in this programme such as, putting things into perspective and positive reappraisal (Forman & Rock, 2016). The application of the tools in the WWTOR programme aims to facilitate the development of resilience related protective factors including, self-efficacy and emotion regulation skills in children (Forman & Rock, 2016). The theory underpinning the WWTOR programme is Seligman's (2011) PERMA theory which proposed that the key elements of well-being are positive emotions, engagement, relationships, meaning and achievement. The growth of these elements are underpinned by the development of individuals self-esteem, optimism, resilience, vitality and self-determination (Seligman, 2011).

While the WWTOR programme is underpinned by the PERMA theory, the aim of the programme is to develop children's resilience by increasing two resilience related protective factors which are self-efficacy and emotion regulation (Forman &

Rock, 2016). Emotion regulation and self-efficacy are two key aspects of resilience that can be developed (Glantz & Johnson, 2002). Self-efficacy refers to an individual's ability to control events that impact his or hers life (Bandura, 1994). Self-efficacy beliefs are reliable predictors of behaviour, such as the degree of effort a person will put into doing an activity, the length of time they will persevere when dealing with challenging experiences and how resilient they will be when confronted with difficult situations (Pajares, 2002). Higher self-efficacy has been reported to be correlated with more effective task completion, but children with lower levels of self-efficacy tend not to persevere with problem-solving a task and therefore, low self-efficacy may maintain psychological difficulties (Carr, 2016, p. 41). Increased levels of self-efficacy have been found to be correlated with feeling in control, having positive thoughts about the self, helpful decision making and being able to regulate one's emotions in response to threat or failure (Bandura, 1997; Benight & Cieslak, 2011). Emotion regulation refers to the ability an individual has to effectively deal with adverse emotional states (Gratz & Roemer, 2004). It entails the intentional or unintentional mechanisms aimed at managing emotional experiences including, avoidance, reframing and rumination (Gross, 2007).

Delivering culturally sensitive programmes enables children to generalise the learning they gain from SEL programmes to settings outside the classroom (Irvine & Hawley, 2011). A mismatch between a specific intervention and the needs, principles and expectations of those wanting to implement it may be a substantial obstruction to implementation, and as such a key variable in the transferability of interventions is their modifiability (Castro, Barrero, & Martinez, 2004). One of the findings from research studies examining the effectiveness of the FRIENDS for Life programme with Irish samples of pre and early adolescents is that the majority of the activities in the programme were culturally inappropriate and required adapting to suit an Irish sample (Henefer & Rodgers, 2013; Ruttledge et al., 2016). The findings from these studies highlight the need for an empirical study which examines the effectiveness of a culturally sensitive, universal mental health promotion programme with a sample of children living in Ireland.

Developmental neuroscience indicates that significant changes take place in the brain during pre-adolescence (Blakemore & Mills, 2014). This in turn provides a

window of opportunity to use explicit instruction to make a substantial difference in the promotion of children's social and emotional competence (Blakemore & Mills, 2014). The WWToR programme is currently being implemented with children aged 9-10 years in approximately one thousand primary schools in Ireland. Currently no empirical study exists that examines the effectiveness of the WWToR programme. Up until recently research in relation to children's well-being has been mainly quantitative and has not taken into account the rich and dynamic perspectives of children (Hamilton & Redmond, 2010). The views of children and adults in relation to issues that affect children can differ (Bourke & Geldons, 2007). There is a growing recognition of the importance of obtaining children's views in order to further understand the concept of well-being and to advance strategies to enhance it (Soutter, 2011).

The current study aims to improve on previous research studies by obtaining both qualitative and quantitative data to form an in depth understanding of children's experiences of the WWToR programme. The main objective of the study is to examine whether the WWToR programme has an effect on children's emotion regulation whilst taking into account children's self-efficacy. Data will be provided via the completion of self-report measures by children and semi-structured interviews conducted with eight children and four teachers from the intervention group.

2.2 Research questions

1. What effect if any, does the WWToR programme have on children's self-efficacy?
2. Taking self-efficacy into account, what effect if any, does the WWToR programme have on children's emotion-regulation?

Methodology

2.3 Description of the Weaving Well-being Tools of Resilience programme

The Weaving Well-Being Tools of Resilience (WWToR) programme for children aged nine to ten years who are in fourth class is part of the Weaving Well-Being programme that consists of developmentally tailored programmes for primary school children from second class up to sixth class (Forman & Rock, 2016). The programmes

for each class consists of ten lessons that aim to teach children specific emotion regulation skills (Forman & Rock, 2016). The aim of the fourth class Tools of Resilience programme is to teach mostly positive psychology evidence-based skills including, mindfulness, problem-solving, putting things into perspective, healthy distraction, character strengths and cognitive re-framing to nurture resilience related skills in children including, self-efficacy, self-esteem and emotion regulation (Forman & Rock, 2016) (see Appendix F for an outline of the tools taught in the WWTOR programme).

The WWTOR programme is designed to be delivered by teachers. Lessons are taught during ten consecutive weeks. Methods to teach children the skills include, power point slides that explain the concepts and skills, experiential activities such as, following a mindfulness script and activities that children complete in class in their pupil activity workbooks (Forman & Rock, 2016) (see Appendix G for an example of a WWTOR programme lesson). Video clips of one of the creators of the programme demonstrating some of the skills are included in class lessons. Children are required to complete a short homework assignment at home to reinforce their learning and use of concepts and skills that are taught in each lesson (Forman & Rock, 2016). Teachers are required to review concepts that were taught in the previous lesson and relevant homework task at the beginning of each new lesson (Forman & Rock, 2016). Each lesson of the programme has optional supplementary activities/cross-curricular activities teachers can complete with pupils to reinforce pupil's understanding of programme concepts and skills that are taught. Supplementary activities teachers can do with children to enhance their use of the planning pen tool for example include, children critically evaluating the reasons why a plan of theirs did not work and what they could do differently to make their plan work (Forman & Rock, 2016). Suggested cross-curricular activities for boosting children's use of the planning pen include allowing the children to research excellent problem solving plans by historical figures (Forman & Rock, 2016). The pupil activity book includes a parental pull out of a detailed outline of the lessons and key skills the programme teaches each week to inform parents about the concepts and skills children acquire from participating in the programme. In the parental pull out of the lessons and skills, parents are asked to

encourage and remind their children to use the different skills and to assist children with some of the homework activities.

2.4 Research design

A non-randomised, repeated measures quasi-experimental design was used to evaluate the impact of the WWToR programme by comparing children's levels of self-efficacy and emotion-regulation skills in the intervention and control groups. This type of design allowed for inferences to be made about the effects of the independent variable (WWToR) on the dependent variables (self-efficacy and emotion regulation) (Brink and Wood, 1998). The random assignment of study conditions to schools and classes would have reduced sampling error however, random assignment in schools is usually not acceptable or possible (Borman, 2002). The time frame to recruit participants was short in this study which in turn did not allow for random sampling or assignment of schools or classes to study conditions. Participants were matched across age and were almost evenly matched across gender. The study is a two by two mixed design with time as a repeated measures factor with pre and post-intervention as levels and group is a between subjects factor with intervention and control as levels. Using a repeated measures design allows for potential intervention effects to be monitored and tracked over time. In the current study, children's levels of self-efficacy and emotion regulation are assessed just before the WWToR programme was implemented by class teachers and ten weeks later when teachers finished delivering all sessions of the programme.

2.5 Paradigm

A pragmatic paradigm using a mixed methods approach was used in the study. This type of paradigm allowed the researcher to consider different world views and assumptions, as well as employing various forms of data collection and analysis (Creswell, 2003). Pragmatism enables a researcher to select the methods or combination of methods that are most suitable for answering the research question (Johnson & Onwuegbuzie, 2004). Employing both quantitative and qualitative research methods yields more robust research findings and allows for triangulation of

the data (Bryman, 2016). Clarke et al. (2015) successfully demonstrated the benefits of including a qualitative method with a sub-sample of children in their study. The participatory methods employed in the study further reinforced the findings obtained from the quantitative data of children in the intervention groups use of active coping strategies (Clarke et al., 2015). Children are skillful communicators and meaning makers and they have a right to express their views in relation to matters that affect them (Children's Rights Alliance, 1998; Clarke & Moss, 2005). In view of the limited amount of studies that take into account child participants perspectives about teacher led, universal resilience-based prevention programmes in the current literature base, the current study employs semi-structured interviews with children to gather data about their experiences of the WWTOR programme. Adding this qualitative method to the study design allowed the researcher to form an understanding about children's experiences and perceived benefits if any of the programme in light of the research questions and current literature in relation to this kind of intervention.

2.6 Participants

Results from a G power analysis indicated that a sample of 158 was required to detect an effect size of 0.25 with power at 95% at an alpha at 5%. Due to the short time frame to recruit participants it was not possible to obtain a sample size of 158. A total of 115 participants completed pre-intervention questionnaires. Due to absence from school, post intervention data collection could not be carried out with 15 participants. A total of 100 fourth class students aged 9-10 years (54% female, 46% male) completed both pre and post intervention questionnaires. Results from independent samples t-tests indicated that there was no significant difference between males and females in mean CERQ-k time one scores $t(98) = .827, p = .41$. There was also no significant difference between males and females in mean self-efficacy time one scores $t(98) = .303, p = .76$.

Due to time constraints it was not possible to recruit a larger sample size. The children's ethnicity is predominantly Irish. A total of 55 students were in the intervention group and 45 students were in the control group. Students in the

intervention group were in four different fourth classes from the same school. The school the participants in the intervention group attend is located in a large town on the northern edge of Dublin county. Participants in the control group were from two fourth classes in schools located in an urban town close to Dublin city.

2.7 Procedure for recruiting participants

The researcher devised an email briefly describing the WWTOR programme, the aims of the study and what would be required of the teachers and children if they participated. Schools in Dublin city and county were selected from the Department of Education website and principals of the schools were emailed the initial email in June, 2019. Two principals responded to the initial email expressing interest in the study and requesting further information. Both principals were then emailed information leaflets and consent/assent forms for principals, teachers, parents and children (see appendices H, I, J, K, L, M, N, O) . After consulting with the fourth class teachers in the schools, the two principals confirmed that they would like to participate in the study. Neither of these schools were doing the WWTOR programme in their schools prior to participating in the study. Both of these schools made up the control group.

An initial email outlining the study and its aims was emailed to one of the Directors of the WWTOR programme. The Director then forwarded the email to ten teachers who had completed teacher training in the WWTOR programme within the previous six months. The Director also provided details about the study to teachers who participated in a 20 hour summer school training programme in July, 2019. Four teachers that teach in the same school and who intended to begin delivering the programme with their fourth classes in September, 2019 expressed interest in participating in the programme. The researcher emailed the information leaflets and consent/assent forms to the Principal of the school the four teachers teach in (see appendices P, Q, R, S, T, U, V, W). Subsequent to this, the Principals and teachers agreed to participate in the programme.

2.8 Measures

The Coping Emotion Regulation Questionnaire Child Version (CERQ-k) was used to collect pre and post intervention data collection about children's emotion regulation (Garnefski, Rieffe, Jellesma, Terwogt, & Kraaij, 2007) (see appendix X). The scale is designed for children 9 yrs and older. The CERQ-k consists of thirty six items which measure nine adaptive and maladaptive cognitive coping strategies (Garnefski et al., 2007). The nine subscales are self-blame, other blame, acceptance, planning, positive refocusing, rumination, positive reappraisal, putting into perspective, and catastrophizing (Garnefski et al., 2007). Each subscale consists of four items (Garnefski et al., 2007). The response format for the items is a five point scale and includes a choice of the following response options 1 = Almost never, 2 = Sometimes, 3 = Regularly, 4 = Often, 5 = Almost always. (Garnefski et al., 2007). Higher scores on a subscale indicates higher use of the cognitive coping strategy (Garnefski et al., 2007). Cronbach's Alpha co-efficients for the study sample range from .55 to .85. The CERQ-k is reported to have convergent and construct validity (Garnefski et al., 2007). This scale was chosen to measure children's emotion regulation as it provides detailed information about their level of cognitive coping. Please see the table 7 for the Cronbach's alpha co-efficients for each of the subscales of the CERQ-k for study sample.

Table 7

<i>Cronbach's Alpha co-efficients for CERQ-k subscales</i>	
Acceptance	.66
Positive refocus	.55
Put into perspective	.65
Refocus on planning	.60
Positive reappraisal	.83
Catastrophising	.55

Rumination	.60
Other-blame	.85
Self-blame	.65

The ten item Self-Efficacy sub-scale of the Resiliency Scales for Children & Adolescents (RSAC) was used to assess children's levels of self-efficacy (Prince-Embury, 2007) (see appendix Z). The scales are designed for children aged 9-18 years (Prince-Embury, 2007). The self-efficacy subscale was chosen to measure self-efficacy in the study as the language in the items are child friendly and assess children's problem-solving, decision making and doing things well to capture a range of expressions of self-efficacy (Prince-Embury, 2007). The total raw score for the scale is calculated by adding scores for each item. The minimum raw score a participant can obtain on the self-efficacy subscale is 0 and the maximum score is 40 (Prince-Embury, 2007). Each participants raw score was converted to a scaled score by referring to norm tables provided in the RSAC manual that contain scaled scores for children age 9-11 years (Prince-Embury, 2007). Scaled scores range from 1 to 19 (Prince-Embury, 2007). Participants scaled scores were categorised as Low (≤ 4), Below Average (5-7), Average (8-12), Above Average (13-15), High (≥ 16). The Cronbach's alpha co-efficient for the study's sample is .77. The scales demonstrates strong concurrent and criterion validity (Prince-Embury, 2007).

Semi-structured interview questions mainly focused on gathering information about the perceived impacts teachers may have noticed in their students as a result of participating in the WWTOR programme (see appendix Z for semi-structured interview questions for teachers). Information was also obtained about whether teachers observed or heard about their student's use of specific tools and their opinion of the WWTOR programme. Questions in semi-structured interviews with children gathered information about the learning each child may have acquired from the WWTOR programme and their opinion of the programme (see appendix Y for semi-structured interview questions for children). Teachers and children were also asked whether they would recommend the programme to teachers or children in others schools.

2.9 Data collection

After obtaining signed consent forms from the Principals and teachers of all intervention and control schools parent and child information leaflets as well as parent consent forms and child assent forms were provided to all participating schools in September, 2019. The researcher arranged a time and date with the six fourth class teachers via email in September and December, 2019 to complete pre and post intervention data collection with the children who had provided assent and who had parental consent to participate in the study. Pre intervention data collection was conducted in control and intervention classes a few days prior to teachers beginning to deliver the first lesson of the WWToR programme. Post-intervention data for intervention and control groups was collected two days after teachers finished delivering the WWToR programme to their students.

Children who did not provide assent or have parental consent to participate in the study continued with school work while the participating children completed the self-report questionnaires. During both data collection time points, the researcher explained the purpose of the study and instructions for completing both of the questionnaires using age appropriate language to participants in the intervention and control classes. Participants in the control group were told by their teachers in the presence of the researcher that they will be learning about the WWToR programme in school in January 2020. Participants in both the intervention and control classes were told by the researcher that a project about the WWToR programme was being conducted to see if the programme helps children to learn tools in the programme to help them to manage their feelings. Children were informed that the questionnaires that they complete in September and December will help me (the researcher) to figure out whether the tools in the WWToR programme help children to manage their feelings or not.

Before reading each item of the questionnaires to participants, the researcher answered any questions the children had about the questionnaires and checked that they understood how to complete each questionnaire. The children were also reminded during both data collection time points that their participation in the study was voluntary and that they could stop participating at any time. Children were also

reminded that their answers on the self-report questionnaires were private and to only look at their own questionnaires. All six teachers remained present in each classroom for the duration of pre and post data collection.

After post-intervention self-report measures were completed by children in the intervention group in December 2019, the researcher conducted four individual semi-structured interviews with the class teachers and eight individual semi-structured interviews with children in an empty classroom. It was decided that eight children would be an appropriate amount of children to interview due to the limited amount of time that was available to collect and analyse the quantitative and qualitative data. Each teacher in the intervention classes asked the children who had parental consent and who had provided assent to participate in the study if they would like to participate in a short conversation with the researcher that would be recorded about their views and experiences of the WWTorR programme. Teachers selected students who indicated that they wanted to participate in the semi-structured interviews by writing their names on pieces of paper and selecting names from a container at random. Two students were randomly selected from each of the four intervention classes to participate in the semi-structured interviews. All of the teacher and child interviews were conducted in an empty classroom close to the Principals office. The interviews were recorded using an audio recorder obtained from Mary Immaculate College. Semi-structured interviews with children lasted on average four minutes. Semi-structured interviews with teachers lasted on average nine minutes.

2.10 Data analysis

SPSS Statistics Version 26 was used to analyse data from the self-report measures (IBM Corp, 2019). Thematic analysis was used to analyse the qualitative data from the teacher and child semi-structured interviews. This method was chosen as it enables the researcher to gather rich and detailed data and allows the voice of the child to be included in the study (Braun & Clarke, 2006). The following steps outlined by Braun and Clarke (2006) guided the process of thematic analysis in the current study. After listening to each child and teacher interview, the data was transcribed verbatim as recommended by Braun and Clarke (2006). This allowed the

researcher to become more familiar with the data. Codes were manually assigned to phrases, terms and sentences that were relevant to the research questions and literature. The researcher then collated data relevant to each code. Common points and concepts that were recognised in the coded data allowed the researcher to identify broader categories which were then checked for recurring themes. The categorised coded data yielded five initial themes. The researcher compared and refined themes in relation to the coded data and dataset. To enhance the reliability of the findings of the qualitative data, a research supervisor reviewed the categories and themes. Themes were then analysed and interpreted in view of the research questions and relevant literature (Braun & Clarke, 2006). The coded data yielded five themes which are outlined in detail in the results section.

2.11 Intervention Fidelity

To monitor the fidelity with which the programme was delivered by the four teachers in the intervention group, the researcher devised a fidelity check list for each of the ten lessons in the WWToR programme (see appendix C1 for an example of a fidelity check list). Each lesson of the programme follows a very structured format consisting of a review of concepts and tools learned in the previous lesson, a power point explaining key concepts and strategies taught in the lesson, the completion of an activity in the pupil workbook, an explanation of the homework by the teacher and the completion of an experiential exercise in some lessons. Each fidelity check list for individual lessons specified all components within each lesson with a tick box beside each one to indicate whether it had been completed by the teachers or not. The researcher requested that the four teachers in the intervention group complete a fidelity check list after implementing each lesson with their classes. Teachers were asked to specify whether they made any adaptations to the content or wording of the WWToR lessons on all fidelity check list forms. The researcher observed three lessons being taught in each of the intervention classes. While observing lessons the researcher completed a fidelity check list. To evaluate the fidelity with which programme lessons had been implemented, the researcher cross referenced her

completed fidelity check lists with the fidelity check lists that had been completed by the teachers.

2.12 Ethical approval and ethics

Ethical approval was obtained from the Mary Immaculate College Research Ethics Committee in July, 2019 (see appendix X for conformation of ethical approval). The researcher was guided by the Psychological Society of Ireland (PSI) Code of Ethics while considering, addressing and reflecting on ethical issues that were relevant to the current study.

Results

3.1 Descriptive statistics

Table 8

Mean raw scores for the CERQ-k subscales at Time 1 and Time 2

	Intervention			Control		
	Group (n = 55)		Range	Group (n = 45)		Range
	Mean	SD		Mean	SD	
CERQ-k subscales						
Acceptance T1	2.6	.96	Sometimes	2.4	.83	Sometimes
Acceptance T2	2.6	.96	Sometimes	2.4	.83	Sometimes
Positive refocus T1	3.1	1.3	Regularly	2.9	1.0	Sometimes
Positive refocus T2	3.2	1.1	Regularly	2.7	1.0	Sometimes
Refocus on planning T1	3.2	.89	Regularly	3.0	.92	Regularly
Refocus on planning T2	3.2	.89	Regularly	3.0	.92	Regularly
Put into perspective T1	3.2	.99	Regularly	3.2	.99	Regularly
Put into perspective T2	3.4	.91	Regularly	3.1	1.1	Regularly

Positive reappraisal T1	2.6	.79	Sometimes	2.0	.73	Sometimes
Positive reappraisal T2	2.7	.87	Sometimes	2.1	.53	Sometimes
Self-blame T1	2.4	.89	Sometimes	2.2	.67	Sometimes
Self-blame T2	2.4	.92	Sometimes	2.2	.67	Sometimes
Other blame T1	2.1	1.1	Sometimes	2.0	.83	Sometimes
Other blame T2	2.1	1.0	Sometimes	2.0	.83	Sometimes
Catastrophising T1	2.6	.94	Sometimes	2.1	.76	Sometimes
Catastrophising T2	2.6	.94	Sometimes	2.1	.76	Sometimes
Rumination T1	2.9	.94	Sometimes	2.4	.76	Sometimes
Rumination T2	2.9	.94	Sometimes	2.4	.76	Sometimes

Table 9

Mean standard scores for RCAS self-efficacy subscale scores at Time 1 and Time 2

	Intervention Group (n = 55)			Control Group (n = 45)		
	<i>Mean</i>	<i>SD</i>	<i>Range</i>	<i>Mean</i>	<i>SD</i>	<i>Range</i>
Self-Efficacy Subscale (RCAS)						
Self-efficacy T1	8.0	3.5	Average	8.3	3.0	Average
Self-efficacy T2	8.9	3.1	Average	9.0	2.5	Average

Levels of self-efficacy between study conditions were in the Average range and did not change between T1 and T2. On average, participants in the intervention and control groups regularly used refocus on planning and put into perspective cognitive coping strategies at T1 and T2. According to mean ratings, participants in the intervention group had a higher use of positive refocus reporting that they regularly used this cognitive coping strategy at T1 and T2 compared to their control counterparts who indicated that they sometimes used positive refocus at T1 and T2. Participants in both study conditions mean ratings for their use of acceptance,

self-blame, other-blame, rumination, catastrophising and positive reappraisal was rated as sometimes at T1 and T2.

3.2 Initial analysis: Student participant data

Kolmogorov Smirnov normality tests indicated normality for all test variables apart from self-efficacy at time two which was significantly non-normal for both the intervention $D(55) = .15, p < .05$ and control group $D(45) = 0.19, p < .05$. However, visual examinations of histograms and Q-Q plots, indicated that the data appeared to be roughly normal with no clear outliers. In addition, given that the sample size was large and the assumption for normality was met at the population level (Field, 2004), the main analysis proceeded with parametric tests.

Independent samples t-tests were conducted to examine whether the intervention and control groups had similar baseline levels of emotion regulation and self-efficacy. No significant difference was found in pre-intervention scores between the intervention and control group for self-efficacy $t(98) = -.727, p = .47$). On average participants in the intervention group experienced greater emotion regulation at time one ($M = 2.74, SD = .483$) than the control ($M = 2.48, SD = .410$). Intervention group participants also experienced higher levels of emotion regulation at time two ($M = 2.78, SD = .429$) compared to the control group ($M = 2.44, SD = .425$). The difference between the intervention and control group pre-intervention mean CERQ-k scores was significant $t(98) = 2.91, p = .005$.

3.3 Findings from inferential statistics

A two way repeated measures ANOVA was conducted to see if there was an interaction effect between time (pre and post intervention) and group (intervention and control) for mean self-efficacy scores. A time by group interaction for mean self-efficacy scores was found to be non-significant $F(1, 98) = .100, p = .752, \eta_p^2 = .001$). A non-significant effect was found for condition $F(1, 98) = .568, p = .453, \eta_p^2 = .006$) and time $F(1, 98) = 3.48, p = .065, \eta_p^2 = .034$ for mean self-efficacy scores.

In terms of participant's emotion regulation, the data were analysed using ANCOVA, which looked at the difference between mean CERQ-k scores, while taking into account mean time one self-efficacy as a covariate. The covariate, mean time one self-efficacy scores was significantly related to mean CERQ-k scores $F(1, 97) = 10.91, p < .001, \eta_p^2 = .101$. Mean time one self-efficacy scores accounted for just over three percent of the variance in mean CERQ-k scores. A significant effect of condition on mean CERQ-k scores was found after adjusting for the effect of mean time one self-efficacy scores $F(1, 97) = 18.17, p < .000, \eta_p^2 = .16$. This finding was reflected in the descriptive statistics which demonstrated that the intervention group had higher scores for emotion regulation at time one and time two. A non-significant interaction effect between time and group was found for mean CERQ-k scores $F(1, 97) = .61, p > .44, \eta_p^2 = .006$. A non-significant interaction effect was also found between time and mean CERQ-k scores $F(1, 97) = 1.10, p > .304, \eta_p^2 = .011$.

3.4 Outcome of Fidelity

Fidelity check lists that were completed by the four teachers in the intervention classes indicated that on average they implemented the WWToR programme with ninety per cent fidelity. Inter-rater agreement across researcher's and teachers ratings of fidelity check lists for three of the lessons in the WWToR programme was also 90 per cent. A review of fidelity check lists completed by teachers indicated that the non-reviewing of homework in a minority of lessons was the main reason for the decrease in teachers ratings.

Table 10

Inter-rater agreement for the fidelity integrity of intervention implementation

Teacher	Percentage of inter-rater agreement across three lessons
Teacher 1	90%
Teacher 2	85%
Teacher 3	90%
Teacher 4	90%

3.5 Interview findings

The aim of the semi-structured interviews was to gather further specific information about the possible perceived impacts of the programme children and teachers may have experienced or observed in relation to children's levels of emotion regulation and self-efficacy. The purpose of the qualitative information was to triangulate it with the quantitative data in order to enhance the reliability of the study's findings. The qualitative data that was provided by teachers and children were analysed separately using thematic analysis. Results from the thematic analysis yielded six themes including, enhanced management of emotions, children's use of the tools, positive attitude to the programme, challenges with language and concepts and importance of parental involvement.

3.6 Theme 1: Enhanced management of emotions

It quickly became clear early in the interviews that the programme had an impact on the children's reported emotional well-being. Four out of eight children reported that the WWTOR programme affected how they feel. Participant 6 stated that "I notice myself much calmer" while participant 3 reported "I learned how to stay calm and be more relaxed". Two children reported that the programme helped them to deal with more challenging emotions for example, participant 7 reported "I've used the jigsaw of perspective. I was doing a picture and my sister ruined it. She didn't ruin it a lot but she scribbled on it. I didn't let my anger out". While participant 8 reflected on how the WWTOR programme helps her deal with worry "You can always bounce back and see the full picture. You don't have to be worried always. You can learn from your mistake". The teachers observations of children's management of their emotions while teaching the WWTOR programme provided further support for the specific impacts children reported the WWTOR programme had on their emotions. For example, Teacher 4 commented that "I can see a definite improvement in the ability of them as a class to manage their emotions particularly for the children who tend to be angry". While Teacher 2 reported "They are able to express their feelings much better and identify what they are feeling whereas, at the beginning of the programme they were the usual happy, sad".

3.7 Theme 2: Children's use of the tools

The vast majority of children (6 out of 8) talked about how the WWTOR programme tools helped them to deal with personal and interpersonal challenges. Participant 1 commented on how the WWTOR healthy distraction tool helped her to cope with her worries "I learned that you are able to distract yourself from a problem instead of thinking about it cause I didn't know how to distract myself". Participant 2 talked about how the mindfulness colouring tool helped him to deal with a siblings annoying behaviour "Whenever my brother is really annoying me I use mindfulness colouring". The planning pen tool helped participant 6 resolve an argument he had with a friend "The planning pen was really good as well. I had an argument with my friend, the next day I used the planning pen and it worked and we are fine now" .

Teachers commented on the benefits that children gained from their use of different tools. Teacher 3 reported that "When their friend upset them on yard they used the jigsaw of perspective to try and see things from their friends point of view instead of thinking their whole yard time had been ruined". While Teacher 1 reflected on the benefits of the character strengths tool for one of her pupils

There is one child in my class who had a negative self-image at the beginning of the year. After we did the character strengths lesson, he identified himself as being kind. Since then he has shown kindness in lots of different ways and has completely taken this on board as part of his identity.

3.8 Theme 3: Positive attitude to the programme

Both children and teachers spoke with enthusiasm about the WWTOR programme with participant 3 describing it as "fun" and "interesting", while participant 7 commented that "some of it was easy". Children commented about why they would recommend the programme to children in other schools with Participant 4 stating that "It (the programme) helps you when you are in tough times". According to Participant 6, "It can help children be calm". Participant 5 alluded to the problem solving benefit

of the programme “So they (children) know what to do if they do something wrong. They know how to deal with it”. Children referred to the activities and tools they enjoyed with Participant 4 commenting that “I liked doing the colouring activities, drawing activities and learning about the different tools”. While Participant 3 reported that “I liked doing the word searches and the meditation script” .

Teachers spoke very highly of the programme and of the enjoyment they got from teaching it to their classes. Teacher 1 stated that “I have very much enjoyed teaching the programme. The children have learned specific strategies for dealing with things, negative feelings and ways of counteracting those negative feelings. I think everyone would benefit from it”. Teacher 4 reflected on the user friendly nature of the WWTOR programmes resources that helped to consolidate the children's learning. “I loved the power points, the structure of it. It was very easy to teach and it has really good visual aids. The workbook is great for the children, it cements all their learning. It was really enjoyable.”.

3.9 Theme 4: Challenges with language and concepts

While the vast majority of children did not report finding any aspect of the programme difficult, two out of eight children highlighted challenges they had with the language and or content of the WWTOR programme. Participant 7 commented that “It was hard to understand how to do the homework properly. There are some words that are real big words that I didn't understand. The only help I got was from my Mam about how to say the words and what they mean” . Participant 6 reported having some difficulty understanding language in the programme “I think some of the things that were in it I didn't understand but not much. Some of the questions in the activities I wasn't really sure about”. Two Teachers reported that children whose first language is not English had more difficulty with understanding the vocabulary in the programme. Teacher 4 stated that

A lot of the vocabulary the children didn't understand particularly children who's first language isn't English. There was a lot of pre-teaching of the vocabulary in the programme for them to get the full benefit of even the power points. I think it was very wordy for them sometimes.

While Teacher 3 commented that “Some of them need more reinforcement in terms of what has been taught. They’re finding it difficult to use the strategies so I think it would just need more time with certain students”. It is possible that the difficulties that were highlighted by the teachers and children may have hindered children’s ability to acquire and apply the skills. This factor may have contributed to the lack of intervention effect found in the quantitative results.

3.10 Theme 5: Importance of parental involvement

Although no specific question about parental involvement was included in semi-structured interviews, two of the teachers highlighted the perceived importance of parental involvement in terms of reinforcing the children’s ability to understand and apply the programmes tools to manage their emotions. Teacher 3 commented that

Parental involvement like you can’t beat it because obviously they need it at home as well and they are backing up what we are doing in school. Those children (who are receiving parental support) are just more familiar with it (the WWToR programme). They know the vocabulary of it, they know when to use it, how to use it, they know the effects of it whereas, for some of them it is one lesson a week to keep me happy.

Another teacher reported that “The parents that buy into it (the WWToR programme) their children are managing their emotions better than other children” - Teacher 4. While Teacher 3 stated that

A lot of them loved doing their homework with their parents actually which was great to see and they were shouting over each other to tell you who was their adult that they would talk to. They seemed to enjoy doing it with their parents definitely.

3.11 Theme 6 - Inadequate time to review homework

All four teachers acknowledged the difficulties they had with finding the time to include reviewing programme homework during WWToR lessons. Teacher 3 reported that her reviewing of homework was “randomly done”. Teacher 4 commented that

“There’s just so much homework and there’s so much correcting that it is something that I did at one point review a few weeks homework together. I think it’s difficult to review homework in addition to all the other things that you have to review”. Teacher 1 reported that she corrected WWTOR programme homework in the mornings. “I checked their homework in the morning when I check their maths and English and I just check that it’s done and that a parent signed it”. All four teachers reported that the recommended half an hour that is allocated to teaching each lesson of the WWTOR programme is inadequate for reviewing homework with their students.

3.12 Discussion

The main aims of this study were to investigate whether the WWTOR programme has an effect on children’s self-efficacy and emotion regulation while taking into account self-efficacy. A mixed methods approach was used to answer the research questions. Overall, findings from the quantitative data indicated that the intervention demonstrated no effect on children’s self-efficacy or emotion regulation at post-intervention. Evidence of children’s application of the programmes tools to regulate their emotions in challenging situations or personal experiences was found in the qualitative data. Results of the quantitative data are not consistent with findings from the majority of teacher led universal, resilience-based prevention programmes which have demonstrated changes in self-efficacy and or emotion regulation at post-intervention (Novak et al., 2017; Tunariu et al., 2017; Shoshani & Steinmetz, 2014; Anthony & McClean, 2015). In contrast, information from the qualitative data which indicated that the WWTOR programme impacted on children’s perceived emotion regulation is consistent with the findings of most studies in this area. However, due to the small number of children that were interviewed, the perceived benefits children reported regarding their emotion regulation following the implementation of the WWTOR programme cannot be generalised to children of a similar age in the general population.

The following paragraphs will address each of the research questions in light of both the qualitative and quantitative results. Factors that impacted the lack of intervention effect and the internal and external validity of the study will be discussed

and reflected on. Strengths and limitations of the study will be outlined as well as recommendations for future research in this area.

Results from the two way repeated measures ANOVA indicated that there was no significant difference in self-efficacy scores from T1 to T2 for the intervention and control groups. No significant difference was also found between groups in children's emotion regulation scores across data collection time points. Findings from the qualitative data are not consistent with results from the quantitative data. The vast majority of children (six out of eight) reported using at least one tool from the WWTOR programme which they reported positively impacted their emotion regulation. Participants in this study already had Average levels of self-efficacy and rated their use of adaptive cognitive coping strategies as sometimes to regularly in the CERQ-k prior to participating in the study which may have left little room for improvement in these protective factors. According to Gresham (2017), in numerous SEL studies, the majority of participants are already functioning fairly well in different aspects of SEL functioning. These studies tend to produce a ceiling effect that lowers the effect sizes that are found (Gresham, 2017).

Fenwick-Smith et al. (2018) reported that several studies in their systematic review of universal resilience based prevention programmes for primary school children had ceiling effects due to the participants in the studies having high baseline levels of social and emotional competence. However, a meta analysis of 213 universal school-based SEL programmes found that these specific kinds of interventions had moderate to small effect sizes across areas including SEL skills ($d = 0.57$), attitudes ($d = 0.23$), positive social behaviours ($d = 0.24$), conduct problems ($d = 0.22$), emotional distress ($d = 0.24$) and academic performance ($d = 0.27$) (Durlak et al., 2011). Important gains can be made from participating in school-based SEL programmes in behavioural, attitudinal and academic areas of functioning that are akin to other psychosocial and educational interventions (Durlak et al., 2011). Although intervention effects were not demonstrated in the quantitative data in the present study, positive impacts of the WWTOR programme on children's attitudinal and behavioural domains of functioning were captured in the positive attitude to programme and enhanced management of emotions themes in the qualitative data.

The findings from a minority of studies indicate that SEL interventions such as the PATHS programme produced no intervention effects on child outcomes at post-intervention and or follow-up (Malti, Ribeaud, & Eisner, 2011; Vashti, Axford, Blower, Taylor, Tudor Edwards, & Tobin et al., 2016). Vashti et al. (2016) conducted a randomised controlled trial which examined the effectiveness of the PATHS programme on 5,074 children's (4-6 years) mental health and emotional and behavioural outcomes such as emotion regulation and pro-social behaviour found no intervention effects on all child outcomes for children in the intervention group relative to children in the control group at post-intervention (Vashti et al., 2016). The design of this study had a number of strengths including the use of random allocation of schools to study conditions. It was fully powered and conducted independently without the assistance of programme developers (Vashti et al., 2016). Although research into the effectiveness of the WWTOR programme is in its infancy, the findings from the present study indicate that the programme is not effective in increasing children's emotion regulation and self-efficacy.

There are several factors in the current study that may have impacted the results of the study. These factors are outlined in the following paragraphs and need to be addressed in future studies in order to reliably establish whether the WWTOR programme is effective in producing post-intervention effects in children's self-efficacy and emotion regulation. Firstly, the sample size used in the present study ($n = 100$) was markedly below what was required ($n = 158$) to detect a small intervention effect according to the results of the G power analysis. This factor may have contributed to intervention effects not being detected in the statistical analysis.

Secondly, a factor that may have influenced how children and teachers in the intervention group responded in self-report measures and semi-structured interviews is the possible presence of a demand characteristic. This is particularly reflected in the intervention group having significantly higher emotion regulation scores relative to the control group at T1 and T2. Demand characteristics are elements of a research study that contribute to participants acting in a manner that he or she thinks is expected in that scenario (Gavin, 2008). Features of the research study process, the researchers behaviour or personal attributes may lead participants to guess the purpose of the study and to try to verify or disconfirm the researchers hypotheses

(Gavin, 2008). Prior to children completing pre and post intervention measures, the researcher provided children with a brief outline of the purpose of the study she was conducting.

Some of the teachers who were privy to the rationale for conducting the research study talked to their pupils about the research study before data collection was conducted with their classes. Although the researcher requested that children be honest when responding to items in the measures, having knowledge about the purpose of the study may have influenced how the children rated items. It is also possible that children's reports of improved emotion regulation may not just be due to the perceived use of applying the WWToR tools but may also have been influenced by information provided to them by the researcher and or their teacher about the purpose of the study. Teachers in the intervention classes knowledge about the purpose of the study may have contributed to their positive reports regarding the WWToR programme and it's perceived impacts on student's emotion regulation.

How participants are selected may also influence the presence and extent of demand characteristics in a study (Hendrick & Jones, 2013). As the time frame for recruiting participants was very short, teachers teaching intervention group classes were approached to participate in the study while completing a teacher training summer course in implementing the WWToR programme. Teachers in the control group classes volunteered to participate out of a relatively small number (27) of schools that were approached to participate in the research study by email. Participants who volunteer to participate in research studies tend to have a greater need for social approval (Hendrick & Jones, 2013). Their ability to decipher and verify the researcher's hypothesis is greater than individuals who do not volunteer to participate in research studies (Hendrick & Jones, 2013). It is possible that the teachers inadvertently cued their pupils as to the rationale for completing the measures which may have influenced how children rated items in the measures. This factor may also have contributed to the higher levels of emotion regulation at T1 and T2 as well as the positive views children and teachers had of the WWToR programme and it's perceived impact on emotion regulation in the intervention group.

The aim of the WWTOR programme is to enhance the intrinsic emotion regulation and self-efficacy of children. It is possible that the enthusiasm and support of the teachers for the programme and its strategies enhanced children's perceived extrinsic emotion regulation. Extrinsic emotion regulation refers to an individual's desire to manage another person's emotions (Gross, 2015). This is not consistent with data reported in the children's use of tools theme which demonstrated that the majority of children used specific WWTOR tools such as the jigsaw of perspective to manage their emotions while dealing with challenging personal and interpersonal situations.

Self-efficacy has been reported to be a reliable predictor of the incidence of coping behaviour, level of effort and persistence when dealing with adversity (Bandura & Locke, 2003). According to Bandura and Locke (2003), the belief a person has in their ability to achieve desired goals is essential to initiate and maintain coping behaviours. Results of the ANCOVA indicated that self-efficacy contributed a small amount (three per cent) of the variance in emotion regulation. Although this is minimal, children's self-efficacy beliefs are important as they impact their response to threat or failure (Bandura, 1997). Employing strategies to improve children's self-efficacy explained some of the relationship between acquiring and using positive psychology skills and increases in emotion regulation in the current study. This finding is consistent with a study that investigated the role of coping self-efficacy as a mediator between specific mindfulness skills and emotion regulation with 180 undergraduate students (Luberto, Cotton, McLeish, Mingione, & O' Bryan, 2014). Coping self-efficacy was found to explain 35 to 56 per cent of the variance in the relationship between three specific mindfulness skills and emotion regulation (Luberto et al., 2014). However, coping self-efficacy was not found to mediate the relationship between non-suicidal self-injury and emotion regulation in a study conducted by Midkiff, Lynsey, & Meadows (2018).

While the qualitative data provided an indication that participants experienced perceived improvements in their emotion regulation, the number of children who were interviewed ($n = 8$) limits the generalisability of this finding to children in the wider population. Overall, no intervention effects were found in the qualitative and quantitative data at post-intervention. More stringent experimental control to

minimise the possible effect of demand characteristics and that includes the use of random sampling will likely provide more reliable, unbiased quantitative and qualitative data in future studies examining the effectiveness of the WWTOR programme. Including these factors in future studies will enhance the generalisability of studies findings to children in the general population. Researchers conducting future research into the effectiveness of the WWTOR programme ought to conduct a G power analysis to calculate and recruit the sample size that is required to detect intervention effects. Increasing the number of children that participate in interviews in future mixed methods studies will increase the generalisability of findings to the general population. Self-efficacy was found to contribute to the variance in emotion regulation in the current study. Other similarly designed universal SEL prevention programmes that seek to develop children's emotion regulation ought to include strategies to enhance children's self-efficacy as this protective factor may contribute to their ability to regulate their emotions. Educational Psychologists recommend evidence-based interventions to schools and can share these findings with teachers interested in implementing the WWTOR programme with their pupils (Roffey, 2015).

3.13 Strengths of the study

The current study built on the findings of previous studies in this area by addressing some of the recommendations in these studies (Fenwick-Smith et al., 2018; Clarke et al., 2015; Powell et al., 2018). One of the recommendations addressed in the current study was the use of multiple methods and informants which provided a more in depth understanding of child outcomes (Fenwick-Smith et al., 2018). It also allowed for the cross referencing of the qualitative and quantitative results as well as the qualitative reports obtained from teachers and children. The current study sought to add to the literature base of studies in this area by including a qualitative component that captured children's views of the WWTOR programme. The qualitative data highlighted specific impacts for children that were not demonstrated in the quantitative data.

The positive attitude to programme theme indicated that this relatively new culturally sensitive, universal resilience based prevention programme was well

received and viewed positively by all teacher and child participants. Including a comparison group strengthened the design of the study and allowed for a comparison of outcomes. A relatively large sample size ($n = 100$) was used in the study and participants were matched across age and gender. All teachers in the intervention group participated in a 20 hour teacher training course in delivering the intervention. A method to monitor and evaluate the fidelity with which the programme was implemented was used. The fidelity with which the programme was implemented was high.

3.14 Limitations and directions for future research

Mishara and Ystgaard (2006) reported that discrepancies between adult and child ratings on standardised self-report measures indicated that children's self-reports may have been less reliable than adults in their study. Obtaining either teacher or parent self-report measures of children's self-efficacy and emotion regulation would have increased the reliability of the quantitative data provided by children in the current study. This is something that ought to be included in future studies to enable the triangulation of data. An analysis of Cronbach's alpha that was re-run with iterative deletion of single items identified five items that were problematic for participants. As children struggled with a small minority of items on the CERQ-k it would be beneficial for researchers to use an alternative questionnaire.

A factor that may have contributed to the increased baseline levels of self-efficacy and emotion regulation in the sample is experimenter effects. It is important that researchers conducting further research in this area carefully consider what information participants need to know about the study. Also, what guidelines should be issued to teachers regarding what information they can provide to their pupils about the study. This will reduce the effect of demand characteristics impacting on how participants engage in the research process.

The main method used to monitor and evaluate the fidelity with which the intervention was implemented were self-report fidelity check lists that were completed by the teachers. Self-report measures can be subject to inaccuracies and biases (Shoshani & Steinmetz, 2014). To ensure that unbiased information is provided

regarding the fidelity integrity of programme implementation in future studies, at least one independent evaluator should be recruited to monitor and evaluate the delivery of programme lessons. Due to time constraints, a follow-up assessment monitoring the effects of the intervention over time was not conducted. As resilience related protective factors develop over time, the inclusion of a follow up data collection should also be included in future study designs to monitor the effects of the intervention over time (Cowen et al., 1996). Future studies should include a similar qualitative component with a larger sample size to see if other samples experience the perceived benefits the sub-sample of children and teachers in the current sample reported.

Critical review

4.1 Strengths of the study

There was a strong rationale for conducting the research study. It was clear from reviewing the empirical literature that a limited amount of studies exist which examine the effectiveness of teacher led resilience-based prevention programmes, particularly with pre-adolescent children. The research study was the first empirical study to investigate the effectiveness of the culturally relevant universal WWTOR programme on children's emotion regulation and self-efficacy. Findings from relevant research studies informed the kind of paradigm that was most suited to address some of the methodological limitations that were found in previous studies in this area.

A key strength of the research study is that a pragmatic paradigm employing a mixed methods approach was used to evaluate the impacts of the WWTOR programme and answer the research questions. Employing a pragmatic paradigm addressed recommendations from previous studies that specified the need for multiple methods and informants to be used in future studies (Novak et al., 2017; Fenwick-Smith et al., 2018). Being able to draw on both qualitative and quantitative data allowed the researcher to form a broader understanding of the children's experiences of the WWTOR programme. It also allowed for triangulation of the data. Although the WWTOR programme was not found to be effective in demonstrating changes in child outcomes, important information was gained from the qualitative and quantitative data regarding perceived effects on children's emotion regulation and methodological limitations. Both kinds of data highlighted the likely impacts of demand characteristics and problems with the design of the WWTOR programme that may have adversely impacted the findings of the study. Important and specific insights from both the quantitative and qualitative data can guide the design of future studies examining the effectiveness of the WWTOR programme which will likely yield more reliable results.

Findings from previous studies examining universal resilience based prevention programmes highlighted the lack of qualitative data in previously conducted research studies in this area. The vast majority of studies used standardised measures to evaluate the effectiveness of school-based mental health promotion programmes

(Clarke, Sixsmith, & Barry, 2014). With the growing recognition that children ought to be allowed to give their perspective regarding issues that impact them (Ben-Arieh, 2005) and that research should be conducted with or for children and not on children (Darbyshire et al., 2005), the current study built on previous studies by obtaining the views of children and teachers about their experiences of the WWTOR programme. This approach captured important impacts of the WWTOR programme including teachers and children's positive views of the programme. It also modelled the benefits of obtaining qualitative data from children who directly experienced the programme for researchers that wish to conduct future research in this area.

Qualitative data obtained from teachers and children indicated that the WWTOR programme was mostly viewed positively by children and teachers. The difficulties with language and concepts theme highlighted issues with the vocabulary in the programme which some children found difficult to understand, particularly children whose first language is not English. Also, teachers did not have sufficient time during lessons to review homework activities with children. The benefits of supplementing quantitative information with qualitative data from children in the study are akin to the gains children demonstrated in a study conducted by Clarke et al. (2014). Qualitative data obtained using participatory methods in this study indicated children's perceived increased use of active coping strategies after participating in Zippy's Friends (Clarke et al., 2014). It also highlighted intervention effects that would not have been demonstrated through the sole use of standardised measures such as, children at post-intervention in the intervention group possessing a wider range of vocabulary regarding different feelings relative to the control group (Clarke et al., 2014).

The study demonstrated the significance of obtaining data from multiple sources. Cross referencing the qualitative data from teachers and children allowed for similarities and differences to be identified and analysed in the data. Qualitative data from some of the teachers specifying children's use of specific tools in different scenarios provided further support for children's reported application of WWTOR tools to manage their emotions. Teacher's reports provided further evidence of tools that children who were not interviewed used such as specific character strengths, which may have positively impacted one pupils self-esteem.

This is the first research study to evaluate the effectiveness of the culturally relevant, WWToR programme using a sample of children that are predominantly Irish. Culturally applicable interventions take account of the cultural practices and values of a community (Barrero & Castro, 2006). These interventions may be more likely to be viewed as socially valid within a cultural community, which may enhance the engagement of individuals in these interventions (Reese & Vera, 2007). Tharp (1991) proposed that implementing interventions that are more culturally relevant to a pupil increases the chances that the intervention will be effective.

Although the WWToR programme was not found to be effective, enthusiasm and support for the programme was strong from both teachers and children. One of the teachers implementing the WWToR programme described the programme as being “so relevant” to the majority of children due to the use of mainly Irish teachers and children in the WWToR programmes video recordings of some of the skills being taught to children. The use of Irish teachers and mostly Irish children in video recordings shown during some of the lessons may have helped the majority of children relate to the programme more. This may have contributed to the positive attitude towards the WWToR programme that all teachers and students had in this research study.

Another strength of the study was that a non-randomised experimental between subjects design was used to test the effectiveness of the WWToR programme. This type of research design enables researchers to estimate intervention effects (Feuer, Towne, & Shavelson, 2002, p. 18). Although there were factors that impacted the internal validity of the study, an experimental design allowed the researcher to draw some causal conclusions about the effectiveness of the WWToR programme in the empirical paper such as no intervention effects on emotion regulation and self-efficacy were found at T2.

Another key strength of the research study is the method of fidelity that was employed by the researcher. Ringwalt et al. (2009) reported that schools that implement school-based prevention programmes regularly implement them with a low level of fidelity. The researcher aimed to use a stronger more reliable approach to evaluating fidelity integrity than either no method or teacher self-report check lists

that were employed in previous relevant studies (Holen et al., 2012; Tunariu et al., 2017). Completing fidelity check lists while observing programme lessons and cross referencing these with teacher's fidelity check lists provided a more reliable method of monitoring and evaluating fidelity integrity. This method allowed the researcher to observe how each teacher delivered programme lessons. It also allowed the researcher to build rapport with the teachers which helped to put both parties at ease during the semi-structured interviews. Inter-rater agreement between the researcher and teachers was high for three lessons. Analysis of teachers fidelity check lists across programme lessons indicated that the WWTOR programme was implemented with a high level of fidelity.

Teacher training has been found to be a strong contributing factor to the effectiveness of programmes that have been reported to be implemented with a high level of fidelity (Dusenbury et al., 2003). Teachers in the intervention group participated in a 20 teacher training course which likely contributed to the high level of fidelity with which they delivered the WWTOR programme. The researcher obtained ethical approval from the Mary Immaculate Research Ethics Committee to conduct the study in July, 2019. It was expected that researchers would begin to collect data for the research study by September, 2019. Although the time frame for recruiting participants was very short and random sampling was not used, the researcher managed to recruit a relatively large sample size of one hundred fourth class students by September, 2019.

4.2 Limitations of the research study

The use of a pragmatic paradigm proved to be beneficial in this research study as it allowed for inferences to be made about the effectiveness of the WWTOR programme using findings from both the qualitative and quantitative data. It also highlighted challenges children and teachers encountered in the WWTOR programme. Given the lack of qualitative data and data examining the social validity of studies examining universal resilience based prevention programmes, it would also have been beneficial for the researcher to adopt a constructivist paradigm. The constructivist paradigm stipulates that researchers aim to comprehend the many social constructions

of meaning and knowledge (Mertens, 2010). Qualitative methods including interviews are used in this paradigm to obtain multiple perspectives from participants about the phenomenon that is being studied (Mertens, 2010). Conducting a research study using a qualitative method such as interviewing would have provided more insight as to whether the perceived intervention effects similar to the ones that were found in the current study could be found in a larger sample of children. A purely qualitative approach may also provide further evidence for the social validity of the WWTOR programme. However, in recent years there has been a number of paradigm shifts including comparing and contrasting the perspectives of experts and adults who advocate for children with the opinions and experiences of children (Camfield, Streuli, & Woodhead, 2010). The use of a pragmatic mixed methods approach should continue to be applied by researchers as it provides a more comprehensive understanding of peoples conduct and experiences (Morse, 2003).

A factor that adversely impacted how participants were recruited for the study was the short length of time the researcher had to recruit participants. Another factor that hindered this process was trying to recruit teachers during the summer months when they are off from school. As a result, it was not possible to contact a larger number of teachers who had received training in delivering the programme and who would be working with a class in September 2019 that had not been taught the third class Weaving Well-being programme. Due to the extremely low response rate to the researchers initial email to Principals outlining the study, it was not possible to use random sampling with a larger number of teachers that had and had not received training in implementing the WWTOR programme. When a non-random sampling approach is used to recruit participants there is a risk that human judgement will adversely impact the recruitment of participants which may result in an over representation of some individuals in the population (Bryman, 2016). The teachers that volunteered to participate in the study were enthusiastic about the WWTOR programme. This may have biased their reports about the programme in semi-structured interviews. Random sampling is a challenging condition to meet in research studies (Mertens, 2010). Selecting participants using random sampling in the research study would likely have reduced sampling error. However, it would not have

greatly decreased it as the amount of teachers that received training in the WWTOR programme is not very large.

While the majority of the self-efficacy and emotion regulation subscales demonstrated acceptable levels of internal reliability for the study sample, further analysis of the Cronbach's alpha for individual items indicated that participants appeared to struggle with five particular items in the CERQ-k. Children were encouraged to ask the researcher questions if they were having difficulty with any of the 36 items in the measures during data collection. From time to time during pre-intervention data collection, children asked questions about the meaning of various items on the CERQ-k. Children asked very few questions about the RCAS compared to the CERQ-k. Children may have had difficulty understanding the wording of a minority of CERQ-k items. This is a factor that may have negatively affected children's ratings of their emotion regulation. Other studies that have used the CERQ-k with a similar or same aged population of children have not reported participants in their samples experiencing difficulty with any aspect of the CERQ-k (Birjandi, Mash-hadi, & Tabibi, 2016; Garnefski, Rieffe, Jellesma, Meerum Terwogt, & Kraaij, 2007; Legerstee, Garnefski, Jellesma, Verhulst, & Utens, 2010).

Principals and teachers of all classes that participated in the research study received copies of the questionnaires well in advance of pre-intervention data collection commencing. However, researchers conducting future research in this area ought to seek information about literacy levels in participating classes and teachers opinions about the level of difficulty questionnaires may pose to children in their classes. This will help researchers to make informed choices about questionnaires that are appropriate for children's levels of literacy and which also provide information to address the research questions. Children are supposed to complete the CERQ-k in view of the thoughts they have about a negative life event they experienced (Legerstee et al., 2010). Children were given examples about what a negative life event can be by the researcher prior to them completing the self-report questionnaires. These examples included having an argument with a friend or parent or facing a big test in school. It's possible that the children did not experience or could not remember an adverse life event that elicited their coping thoughts about it. This may have negatively impacted their rating of items on the CERQ-k.

In order to form an in-depth understanding of child outcomes, data should be gathered from multiple informants using multiple methods (Drotar, 2000). Obtaining quantitative data via self-report questionnaires from another informant regarding children's emotion regulation and self-efficacy would have provided a more comprehensive insight into these child outcomes. Problems such as biased reporting can arise in teacher self-report measures particularly for teachers involved in the implementation of an intervention (Schonert-Reichl & Stewart Lawlor, 2010). Obtaining parent self-report quantitative data for child outcomes may have encouraged more parental participation in assisting some of the children with homework tasks and enabled the triangulation of quantitative data. This would have yielded a comparison to the findings of the child report quantitative data and enhanced the reliability of the quantitative data in the study. Conducting pre-intervention semi-structured interviews with children and teachers would have provided insight into the type of coping strategies children were using prior to taking part in the WWTorR programme. Qualitative information about this would have shed light on whether children were already using any of the strategies that are in the WWTorR programme and the degree to which if any, they used maladaptive coping strategies. Pre-intervention semi-structured interviews would have provided a useful benchmark to make further comparisons about children's perceived learning of WWTorR tools.

Findings from empirical studies suggest that if children build a reserve of coping mechanisms, it can offset the possible impacts of harmful stressors on the development of mental health difficulties (Pincus & Friedman, 2004; Valiente et al., 2009). While universal interventions to promote mental health aim to enhance different social and emotional competencies, it is also important to assess whether these interventions impact children's mental health over time (Harlacher & Mereell, 2010). It is therefore important that researchers examining the effectiveness of the WWTorR programme investigate whether it has any effect on mental health outcomes in children as well as protective factors. A weakness of the research study is that data regarding the mental health of children was not gathered. A review of resilience enhancing preventative programmes inferred that all children can gain from these

programmes, particularly children deemed to be at risk of developing psychological difficulties (Fenwick-Smith et al., 2018).

A limitation of the study is that a limited amount of information was gathered regarding characteristics of the sample. Qualitative information from Teacher 4 indicated that children's whose first language is not English had greater difficulty understanding the vocabulary in the WWTOR programme which may have hindered their ability to apply the tools. The majority of children who participated in the study are predominantly Irish. Gathering information regarding the children whose first language is not English would have allowed sub-group analysis to be conducted to see if an intervention effect is found when these children's scores are omitted from the analysis. A limited amount of studies exist that have explored whether the effects of resilience based prevention programmes differ in relation to gender. Lower rates of parent reported oppositional coping strategies and higher rates of active coping strategies were found in female participants relative to their female control counterparts at post-intervention in a study conducted by Holen et al. (2012). Male participants in the intervention group in this study were rated by their teachers as demonstrating lower impact of mental health difficulties at post-intervention compared to males in the control group (Holen et al., 2012). Future studies investigating the effectiveness of the WWTOR programme ought to conduct a sub group analyses that examines the impact of the programme on gender.

Due to the limited time frame to conduct the study it was only possible for the researcher to collect data before and immediately after the intervention was implemented. It was therefore not possible to include a follow-up data collection time point in the study. It was disappointing to not be able to monitor the effects of the intervention over time as this was a recommendation in several relevant empirical studies (Mishara & Ystgaard, 2006; Schonert-Reichl & Stewart Lawlor, 2010; Harlacher & Merrell, 2010; Novak et al., 2017). The skills in SEL programmes may be applied and demonstrated at a later time (Berry et al., 2016). This is why future research studies need to conduct follow-up data collection at multiple time points if possible to monitor and evaluate the effects of the programme over time.

4.3 Ethical issues

The research study was planned and carried out by the researcher in light of the relevant ethical principles in the PSI Code of Professional Ethics (2011). Prior to conducting semi-structured interviews with teachers and children, participants were informed that their participation is voluntary and that they can stop taking part in the interview at any time without consequence. The researcher informed children that she would like to have a conversation with them about their thoughts about the WWTorR programme.

After asking one of the children the first question in the interview schedule I noticed that she did not respond for a couple of minutes. I thought that she looked a little uncomfortable so I asked her would she like to go back to class. She told me that she wouldn't. After accompanying the child back to her classroom, I shared my observations with her teacher who then checked in with the child discreetly to make sure that she was okay.

According to sub-principle 3.1.4 of the PSI Code of Ethics (2011), when conducting research with children researchers should "protect the dignity and well-being of research participants at all times". Sub-principle 3.3.9 stipulates that when carrying out research researchers are expected to limit the effect of their research activities on participants personality or their psychological or physical well-being (PSI, 2011). Question and answer approaches used to elicit children's perspectives have been criticised for creating a power imbalance between children and adults (Lewis, 2002). Other participatory methods that are considered more child friendly ought to be considered in future studies such as the draw and write technique. This technique gives children and young people the chance to communicate their perspectives using their own words and not the words of the interviewer (Pridmore & Bendelow, 1995). Semi-structured interview questions could also have been put to children in a focus group. This method allows for flexibility and reflection which enables students to take part as meaning makers (Woodhead, 2009) and contribute their explicit views (Powell, Graham, Fitzgerald, Thomas, & White, 2018).

Researchers considering using one to one semi-structured interviews should take steps to ensure that children are not adversely impacted by the experience in any way.

This could include giving children the choice of having a familiar member of staff in the room while they take part in the interview. However, having a familiar member of staff in the room may limit the information children are willing to disclose. It may also compromise their right to confidentiality regarding the information they do disclose. Researchers ought to consider ways of protecting participants privacy when determining how to conduct interviews with children.

A couple of children who did not either provide child assent or have parental consent to participate in the study requested to complete post-intervention measures. Sub-principle 1.3.9 specifies that informed consent should be obtained from individuals for research activities that involve invasive measures, intrusion into the lives of participants, risk to the participants or any attempt to alter the behaviour of participants (PSI, 2011). The researcher explained in child friendly language that permission had not been obtained from them and or their parents and for this reason she was not able to let them participate in the research.

On one occasion after children finished completing self-report measures, one of the intervention teachers assisted the researcher with collecting some of the measures. As the teacher handed them to the researcher, she commented that some of the children's ratings were "interesting". Individuals conducting research are expected to act in accordance with sub-principle 1.2.6, which states that records should be stored, handled, transferred and disposed in a manner that that takes into account confidentiality and security (PSI, 2011). To prevent teachers from looking at children's ratings in measures again, the researcher informed teachers that she was happy to collect the measures. The researcher also explicitly stated to all teachers that children's ratings on the measures are private. This point was reiterated to all children prior to them completing measures during pre and post intervention data collection.

4.4 Implications of the research for understanding and knowledge of the topic in psychology

Findings from the study indicated that the culturally relevant WWTOR programme yielded no intervention effects on children's emotion regulation and self-efficacy. This is consistent with findings from a minority of studies in this area

that found no post-intervention effects on protective factors that were measured (Berry et al., 2016; Humphrey, Lendrum & Wigglesworth, 2010). Factors that may have impacted the findings of the study included the presence of demand characteristics and sampling error. Researchers conducting future studies into the effectiveness of teacher led resilience enhancing prevention programmes should take steps to reduce the chances of these factors negatively impacting the results of their studies.

One method of managing demand characteristics is the use of deception (Hendrick & Jones, 2013). This is where information about the hypotheses that the researcher is testing is not revealed to participants (Hendrick & Jones, 2013). According to Hendrick and Jones (2013), deception should be kept to a minimum and should not compromise participants rights to informed consent. As demand characteristics can skew the results of studies, it might be necessary in future studies to only provide essential information about the research study to participants, teachers and principals. This may reduce the risk of participants guessing and trying to confirm or disconfirm studies hypotheses which could impact the findings of future research studies. Prior to including deception in future studies, researchers ought to seek advice from their research supervisors and if necessary an ethics committee to ensure that participants will not be adversely impacted by the withholding of information (Gavin, 2008).

Another factor that may have impacted the findings of the study is sampling error. This factor should be controlled for in future studies with the use of random selection from the population of teachers who have received training in the programme under investigation. The majority of studies which demonstrated the effectiveness of teacher led resilience based prevention programmes, provided teachers with varying levels of support or supervision while they implemented the programmes (Novak et al., 2017; Mishara & Ystgaard; Holen et al., 2012). Fenwick-Smith et al. (2018) reported that a component of studies that were found to be effective in their review was that teachers implemented the programmes while receiving support and training. While teachers that implemented the WWTorR programme participated in a twenty hour training course to deliver the programme, they did not receive support or feedback while they delivered the programme.

There are seven different coping mechanisms in the WWToR programme that teachers are expected to teach over a ten week period. Even though teachers implemented the programme with a high level of fidelity, conversations with teachers prior to them beginning to deliver the programme indicated that some of them found the prospect of teaching the programme somewhat daunting. Most of the teachers reported that there was a lot of content to be taught to children and that the programme should be taught over a longer period of time to help children consolidate their understanding and use of the tools.

Given the findings from previous studies, it is possible that providing teachers with support and or supervision while they implement programmes may enhance their teaching of programme tools. This in turn may increase the learning that children take from the programme which may increase the likelihood that intervention effects on child outcomes will be found in future studies. Universal SEL programmes often entail the implementation of curricula that outline specific learning objectives and take an ordered step by step approach using active methods of learning (CASEL, 2005). A difficulty that was acknowledged by teachers in semi-structured interviews was that some of the WWToR programme lessons had a lot of content and that it was challenging for them to teach all of the content within a lesson. In the challenges with language and concepts theme, Teacher 3 reported that some of the children were finding it difficult to apply the skills and that they need more reinforcement and time to implement the skills. Factors that can adversely impact the implementation of manualised programmes by teachers include them viewing them as being too lengthy (Waller & Turner, 2016). Teachers may not deliver all of the programme or only deliver some of the lessons (Waller & Turner, 2016). These factors could affect the fidelity with which universal SEL programmes are implemented by teachers.

An alternative to delivering manualised programmes is implementing modular interventions where the content of modules does not rely on another module (Lawson, McKenzie, Becker, Selby, & Hoover, 2019). This allows for the choosing, ordering and timing of content that is most suited to the recipients and context (Lawson et al., 2019). Delivering modularised interventions where teachers can implement specific modules over an unspecified period of time would remove the pressure that teachers feel when attempting to deliver manualised programmes that consist of weekly

lessons. As social and emotional skills develop and manifest over time, this approach would also provide children with the opportunity to learn and apply social and emotional skills over a longer period of time. This would encourage more longitudinal studies to be conducted in this area which would provide data regarding the effects of modularised interventions over time.

4.5 Implications of the research for professional practice in educational psychology

This is the first research study that has been conducted that examined the effectiveness of the WWToR programme on children's emotion regulation and self-efficacy. Although no intervention effects on child outcomes were found, findings from the study are encouraging. The WWToR programme has been delivered in over one thousand schools in Ireland. Schools in Australia have also bought the WWToR programme materials with the intention of delivering it to students in this country. As the WWToR programme is being rolled out in many schools, there is a need for the research study to be replicated in light of its recommendations and mixed methods approach to obtain a comprehensive picture of the programmes impacts. The WWToR programme was regularly recommended to principals and teachers by psychologists in NEPS. Until the evidence base for this programme is established, EPs ought to recommend SEL programmes that have an empirical evidence base to schools to increase the likelihood that children will benefit and acquire coping mechanisms.

Reports from EPs working in NEPS and the qualitative data from teachers and children in the research study indicates that the WWToR programme has been positively received in Irish schools. Employing a mixed methods approach has become popular in recent years as it provides a wider more detailed range of information about a phenomena that is being investigated (Gavin, 2008; Bryman, 2016). EPs and trainee EPs often work with school personnel and are in an ideal position to lead and conduct further research into the effectiveness of the WWToR programme (Roffey, 2015). In recent years, researchers have become increasingly aware of children's right to express their views about matters that impact them

(Ben-Arieh, 2005). There has also been a growing recognition that quantitative measures do not encapsulate the dynamic and intricate nature of children's lives and their experience of phenomena like well-being (Hamilton & Redmond, 2010).

According to Harding and Atkinson (2009), EPs are in an ideal position to obtain children's views in an objective manner. Employing participatory measures to capture children's views allows for an enhanced appraisal of their lived experiences in contrast to self-report measures or observations (Fenwick-Smith et al., 2018). To obtain a more complete understanding of the effectiveness of universal resilience based prevention programmes like the WWTOR programme, EPs and researchers ought to obtain primary qualitative and quantitative data from children and proxies. EPs can monitor and assess whether interventions are being implemented with fidelity (Harlacher & Merrell, 2010). Although the method of monitoring and evaluating the WWTOR programme in the research study relied on self-report which can be subject to bias, use of the researcher to observe and complete fidelity check lists during programme lessons made the method for evaluating fidelity more robust. A more reliable way of evaluating fidelity is to use independent evaluators (Fenwick-Smith et al., 2018). However, due to budget constraints it is not always possible for EPs and researchers to pay independent evaluators to do this. EPs conducting future studies ought to consider the method for evaluating fidelity of programme implementation used in this study as not only is it cost-effective, it allowed the researcher see the engagement and learning of students during programme lessons.

4.6 Implications of the research for future research

Statistics obtained from the creators of the WWTOR programme indicated that over one thousand teachers have been trained in delivering the programme. Sixty five per cent of primary schools in Ireland have implemented the programme. Although no intervention effects were found on child outcomes at post-intervention, teachers and children perceived positive impacts of the programme on children's ability to manage

their emotions. Qualitative data from the study indicated that the WWTOR programme was well-received by parents and children who enjoyed teaching and learning about the programme. Future research can benefit from the findings of the study by addressing its limitations including taking steps to reduce the impact of demand characteristics and using random sampling to select participants. Employing a mixed methods approach will allow researchers to enhance data they obtain from measures with qualitative data that will add depth and greater detail to studies (Sharp, 2012).

Researchers who collect quantitative data while conducting research into the effectiveness of the WWTOR programme should give careful consideration to their choice of measure(s) that they intend to use with children. Teacher 1 commented that she thought the measure was too long for the children. An analysis of scale if item deleted indicated children had difficulty with five of the items in the measure. According to Demetriou, Ozer and Essau (2015), self-report measures should be brief and not be visually overloaded with information. Longer measures with many items may induce responder fatigue and lead to participants not completing all items on the measure (Bryman, 2016). Researchers should consider using a shorter questionnaire than the CERQ-k in future studies that contains appropriately worded items suitable to the developmental age of respondents. This will enhance participants ability to comprehend and complete the measure. It will also reduce the need for the researcher to be present for the full duration of data collection in future studies as this can influence socially desirable responding in participants (Bryman, 2016).

Although evidence exists from reviews and studies which supports the effectiveness of universal SEL prevention programmes, it is improbable that all children will acquire gains from these kinds of interventions (Weare & Nind, 2011; Sklad, Diekstra, Gravesteyn, de Ritter, & Ben, 2010). Novak et al. (2017) reported that it is usually children with emerging symptoms that make the greatest gains from universal prevention programmes. Findings regarding sub group analyses in numerous studies are inconsistent with different groups benefiting from various universal resilience-based SEL preventive programmes. For example, Fenwick-Smith et al. (2018) inferred that all children can make gains from participating in universal

resilience-based SEL programmes, particularly children that have a higher chance of developing mental health difficulties. Whereas, Novak et al. (2017) found that children described as being lower risk for developing psychological difficulties demonstrated intervention effects on almost all child outcomes. No intervention effects were found across all child outcomes for children that were thought to be at an increased risk for developing psychological difficulties in this study (Novak et al., 2017).

Other studies such as Holen et al. (2012), reported gender specific intervention effects in their study with parent reported increases in active and support seeking coping mechanisms found in females but not males. It is possible that specific groups or genders may benefit from participating in the WWToR programme. Researchers ought to include subgroup analyses in future studies examining the effectiveness of the programme. Training to implement the WWToR programme is currently not mandatory. Future research could conduct a study to compare the effectiveness of the WWToR programme with teachers who have and have not received training in the programme and supervision during the delivery of the programme. This would clarify whether teacher training and supervision are essential factors needed to enhance the effectiveness of the WWToR programme.

4.7 Contribution of the research study to knowledge of the subject

Evaluating the effectiveness of the WWToR programme was important as findings from the review article indicated that there is a severe lack of studies examining the effectiveness of teacher-led universal resilience-based prevention programmes with pre-adolescent children. The research was conducted with this age group not just to address a gap in the literature but also because children's abilities to contemplate on their experiences, demonstrate empathy and plan greatly increase during this period (Schonert-Reichl & Lawlor, 2010) Interventions implemented by significant adults can capitalise on this transitional period and facilitate children's learning and strengthening of protective factors (Graber and Brooks-Gunn, 1996).

As psychologists have been recommending the WWToR programme and teachers have been widely implementing it in Ireland and Australia, there was a strong need

for a research study to examine the effectiveness of the programme with pre-adolescent children. Although the WWTOR programme was devised using evidence-based positive psychology and cognitive-behavioural therapy strategies (Forman & Rock, 2016), there is currently no empirical study that demonstrates the WWTOR programmes effectiveness. Another key finding in the review article was that measures were mostly used to gather data in studies and that children's experiences and views of programmes were not included in the vast majority of studies.

A unique aspect of the research study was employing a mixed methods approach. This allowed me to take a children's rights based approach that allowed children to report the specific perceived benefits and challenges they experienced from participating in the WWTOR programme. Although self-report measures can yield a large quantity of information (Sharp, 2012), fixed response items narrows the details that can be obtained using this method (Demetriou et al., 2015). Employing semi-structured interviews with children and teachers provided further details about the perceived effects of the WWTOR programme and enabled me to address a significant gap in the limited literature base. While the WWTOR programme yielded no intervention effects on child outcomes, the qualitative data demonstrated teacher and child perceived positive impacts on emotion regulation. Self-efficacy contributed to a small amount of the variance in emotion regulation. The research study highlighted factors that can arise that may have adversely impacted the research findings including demand characteristics and sampling bias. It also provided specific recommendations to address these limitations and strengthen the research designs in future studies examining the effectiveness of the WWTOR programme.

Findings of the research study reinforced the fact that universal SEL prevention programmes are not effective for all children (Novak et al., 2017; Berry et al., 2016). Children with increased levels of protective factors and lower levels of risk factors may not significantly gain from these kinds of programmes (Novak et al., 2017). The lack of intervention effect in the research study may have been attributed to participants in the sample having higher levels of emotion regulation and self-efficacy. The research study highlighted the need for sub-group analyses in future studies to see

whether intervention effects are found with certain groups of students. Sub-group analyses can decipher whether specific personal attributes in those taking part in studies are associated with various programme gains (Durlak et al., 2011).

Revisions to certain aspects of the WWTorR programme may be necessary to enhance its effectiveness. Suggested revisions based on the findings of the study include increasing the length of programme lessons to allow teachers to review homework. Also, to allow for longer periods between lessons to enable children to apply programme tools over a longer period of time. This would benefit children particularly those whose first language is not English to fully comprehend the language and tools in the programme.

4.8 Impact Statement

The main aim of the research study was to examine the effectiveness of the culturally sensitive WWTorR programme on children's self-efficacy and emotion regulation. The research study sought to build on the findings of previous research studies that examined the effectiveness of teacher-led universal resilience-based prevention programmes by employing a mixed methods approach that captured the views and experiences of children and teachers. Including multiple methods and informants provided additional richer detail about the participants experiences and perceived impacts of the programme. Although intervention effects were not found in the quantitative data, perceived positive effects of the WWTorR programme were demonstrated in children's attitude and emotion regulation. Self-efficacy was found to contribute to a minimal amount of the variance in emotion regulation.

A number of factors may have adversely impacted the findings of the study including demand characteristics and sampling error. EPs employ and promote evidence based practice and interventions (Kelly & Perkins, 2012). While findings from the research study are encouraging, the evidence base for the WWTorR programme is not yet established. EPs regularly work with educational professionals and can notify them of the findings of the research study. This will enable school principals and teachers to make an informed choice about their selection of universal

resilience-based prevention programmes they may consider implementing to students. Part of EPs role is to promote the mental health and well-being of children and adolescents (Rydzkowski, Canale, & Reynolds, 2016). Teachers also have a key role in developing children's resilience (Fenwick-Smith et al., 2018). Until future research studies determine if the WWTOR programme is effective in demonstrating changes in child outcomes, EPs should recommend universal prevention programmes to educational professionals that have an established evidence base.

The findings in the research study provide a rationale and foundation for EPs and researchers to conduct and design a more robust study to further examine the effectiveness of the WWTOR programme. Recommendations specified in this study including minimising the potential impact of demand characteristics and using random sampling to select schools should be addressed in future studies. To further add to the very limited qualitative information about teacher led universal resilience-based prevention programmes, Researchers can learn from and strengthen aspects of the mixed methods approach that was used in the research study by conducting pre-intervention interviews with children and teachers. These could be cross referenced with post-intervention interview data to obtain a qualitative comparison of children's coping mechanisms and emotion regulation. Future research should also cross reference children's ratings of outcome measures with those of a proxy to provide further insight into the quantitative data.

The lack of intervention effects on self-efficacy and emotion regulation indicates that children did not significantly benefit from the WWTOR programme. Enhancing protective factors increases children's resilience which can help to prevent and or reduce the impact of mental health difficulties (Fenwick-Smith et al., 2018). Further research studies are required that address the limitations of the research study in order to establish whether the WWTOR programme is effective in enhancing protective factors in pre-adolescent children.

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Appendix A: Weight of Evidence Ratings

Weight of Evidence A

Tables 1-4 detail the criteria needed to be met for scoring of the measures, comparison group, fidelity and follow up variables.

This rationale has been derived from the 'II Key Features for Coding Studies and Rating Level of Evidence/ Support; section of the Kratochwill (2003) coding protocol.

Table 1 Measurement (A.1 – A.4 of Kratochwill 2003 Coding Protocol)

Weighting Description High (3)

High (3) Reliability of .85 or higher (taking into account the population of the sample)

Multiple methods used

Multiple sources used

Validity statistic must be reported

All primary outcomes measures must meet the above criteria

Medium (2) Reliability of measures used must be .7 or higher

Multiple methods OR multiple sources used.

Validity is not necessary to be included

75% of primary outcomes measures must meet the above criteria

Low (1) Reliability of measures of at least .5

Validity is not necessary to be included

50% of primary outcomes measures must meet the above criteria

(0) Reliable measure not used and it is the only method/source of measurement

Table 2 Comparison Group (B1-B5 of Kratochwill 2003 Coding Protocol)

Weighting Description

High (3) Active comparison group e.g. alternative intervention or attention placebo

Equivalence of groups

Equivalent mortality and low attrition (including for follow ups where

Applicable).

Medium (2) 'No intervention' comparison group e.g. waitlist or no intervention
Equivalence of groups OR equivalent mortality and low attrition for
each group

If no equivalent mortality, analysis must confirm there are no significant
significant differences between groups.

Low (1) Comparison group included in the study

1 of the following must be present:

Equivalence of groups OR equivalent mortality and low attrition for each
group.

If no equivalent mortality, analysis must confirm there are no significant
differences between groups.

No evidence (0) No effort given to ensure the equivalence of groups

Table 3 Fidelity (F1-F3 of Kratochwill 2003 Coding Protocol)

Weighting Description

High (3) Acceptable adherence demonstrated through use of a manual AND two of
the following: supervision, coding sessions or recording (video or audio)
the session. 'Manual' can be demonstrated either by use of training or
written materials given which give exact details of the procedure and
sequence for intervention implementation. Procedures for adaptation
given.

Medium (2) Acceptable adherence demonstrated through use of a manual AND one
of the following: supervision, coding sessions or recording (video or
audio) the session. 'Manual' can be demonstrated either by use of
training or written materials given which give broad overview of
principles/intervention phases

Low (1) Acceptable adherence demonstrated through use of a manual or one of the
following: supervision, coding sessions or recording (video or audio) the
session

No evidence (0) Nothing done to ensure fidelity or adherence is not acceptable

Table 4 Follow up assessment conducted (sub-section I of Kratochwill 2003 Coding Protocol)

Weighting Description

High (3) Follow-up assessments carried out over multiple intervals, with all original participants and using similar measures to the original measurement

Medium (2) At least one follow-up assessments carried out, with the majority of the original sample, and using the similar measures to the original measurement

Low (1) At least one follow up using some original participants

No evidence (0) No follow up

Table 5 Statistical Analysis (sub-section C of Kratochwill 2003 Coding Protocol)

Weighting Description

High (3) A sufficiently large N to detect a small effect size.

Medium (2) A sufficiently large N to detect a medium effect size

Low (1) A sufficiently large N to detect a large effect size.

No evidence (0) None of the above criteria are met

Ratings for WoE A criteria

	Merrell & Harlacher (2010)	Holen et al. (2012)	Novak et al. (2017)	Mishara & Ystgaard (2006)	Tunariu et al. (2017)
Measurement	<p>Reliability of measures above .70 in study sample.</p> <p>Multiple sources used (teacher and child self-report)</p> <p>Medium (2)</p>	<p>Reliability of measures above .5 in study sample.</p> <p>Multiple methods and sources used (child interviews, teacher self-report).</p> <p>Low (1)</p>	<p>Reliability of measures above .85</p> <p>Teacher self-report only.</p> <p>Low (1)</p>	<p>Reliability of measures above .7 in study sample.</p> <p>Child interviews & child and teacher self-report measures.</p> <p>Teacher observations.</p> <p>Medium (2)</p>	<p>Measures above .7</p> <p>Child-report measures</p> <p>Low (1)</p>
Comparison group	<p>Wait-list control group.</p> <p>Teachers randomised to study conditions.</p> <p>Classes randomly assigned.</p> <p>Levels of attrition not reported.</p>	<p>No intervention control group.</p> <p>Schools randomised to study conditions.</p> <p>Levels of attrition not reported.</p>	<p>No intervention.</p> <p>Schools randomised to study conditions.</p> <p>Equivalent mortality and low attrition for study groups.</p>	<p>Wait-list.</p> <p>Experimental/control classes not randomised.</p> <p>Levels of attrition not reported</p>	<p>Waitlist</p> <p>Not randomised</p> <p>Equivalent mortality and attrition rates not reported</p>

	Merrell & Harlacher (2010)	Holen et al. (2012)	Novak et al. (2017)	Mishara & Ystgaard (2006)	Tunariu et al. (2017)
	Medium (2)	Medium (2)	Medium (2)	Low (1)	No evidence (0)
Fidelity	Use of a manual. (one hour training). 31% of sessions were coded.	Use of a manual (two day training)	Use of a manual (two day training) Supervision provided.	Use of a manual (two day training) Supervision provided	No evidence of monitoring fidelity.
	Medium (2)	Low (1)	Medium (2)	Medium (2)	No evidence (0)
Follow-up conducted	Follow-up conducted with sample using same measures used at pre and post-intervention.	No follow-up assessment conducted.	No follow-up assessment conducted.	No follow-up assessment conducted.	No follow-up assessment conducted.
	Medium (2)	No evidence (0)	No evidence (0)	No evidence (0)	No evidence (0)
Effect size	Sufficient N for Medium (and large)	Sufficient N - small effect sizes reported.	Sufficient N - small effect sizes reported.	Sufficient N - small effect sizes reported.	No effect size reported due to

	Harlacher & Merrell. (2010)	Holen et al., 2012	Novak et al., 2017	Mishara & Ystgaard, (2006)	Tunariu et al. (2017)
effect sizes reported.	Medium (2)	High (3)	High (3)	High (3)	limited sample size.
Overall weighting	Medium (2)	Low (1.4)	Medium (1.6)	Medium (1.6)	No evidence (0) Low (1)

WoE A rating system

High - 2.5 or higher

Medium - 1.5 - 2.4

Low - 1.4 or less

Appendix B: Weight of Evidence Ratings

Weight of evidence B: Methodological relevance to the review question

Appropriateness of measures Rating Description (Adapted from Kratochwill 2003 Coding Protocol)

High rating (3) Pre, post and follow up measures are taken for both groups.

Medium rating (2) Pre and post measures are taken for both groups, with post measures being taken immediately after the intervention has finished.

Low rating (1) Pre and post measures are taken. Post measure may not be taken immediately after the intervention has finished.

Table 2 Sources of measurement Rating Description

High rating (3) Measurement is taken from three or more sources e.g. parents, teachers and students

Medium rating (2) Measurement is taken from two sources e.g. students and teachers

Low rating (1) Measurement is taken from one source e.g. student only

Table 3 Comparison group Rating Description

High rating (3) Both active control and waitlist/no intervention control group used

Medium rating (2) Active control group used

Low rating (1) No intervention control group used

Weightings for WoE B criteria

	Merrell & Harlacher (2010)	Holen et al. (2012)	Novak et al. (2017)	Mishara & Ystgaard (2006)	Tunariu et al. (2017)
Appropriateness of measures	Pre, post & follow-up measures obtained High (3)	Pre and post measures obtained. Low (1)	Pre and post measures obtained. Low (1)	Pre and post immediately after intervention. Medium (2)	Pre and post immediately taken after intervention Medium (2)
Sources of measurement	Child and teacher self-report only Medium (2)	Parent, child, teacher. High (3)	Teacher report only Low (1)	Students teachers, independent interviewers High (3)	Child report only Low (1)
Comparison group	Wait-list control used Low (1)	No intervention Low (1)	No intervention Low (1)	Wait-list control used Low (1)	Wait-list control used Low (1)
Overall weighting	Medium (2)	Medium (1.67)	Low (1)	Medium (2)	Low (1.3)

WoE B rating system

High - 2.5 or higher

Medium - 1.5 - 2.4

Low - 1.4 or less

Appendix C: Weight of Evidence Ratings

Weight of Evidence C - Topic relevance to the review question

WoE C ratings Weighting Description (First three criteria adapted from Kratochwill 2003 Coding Protocol, last three criteria devised by the researcher)

Programme implemented as intended.	Yes (1)/No(0)
Training given for at least one full day prior to implementation	Yes (1)/No(0)
Ongoing support throughout implementation of the programme.	Yes (1)/No(0)
Participants sampled from more than one school	Yes (1)/No(0)
More than one aspect of resilience measured	Yes (1)/No(0)
Number of sessions completed by children reported	Yes(1)/No(0)

Weightings for WoE C criteria

	Merrell & Harlacher (2010)	Holen et al. (2012)	Novak et al. (2017)	Mishara & Ystgaard (2006)	Tunariu et al. (2017)
Programme implemented as intended	Inter-rater reliability of 85%.	85% of lessons reported to be taught by teachers (self-report questionnaire)	External Coach completed checklists - programme taught with 90-95% fidelity	Session reports & teacher interviews	Information about fidelity not provided
	Yes (1)	Yes (1)	Yes (1)	Yes (1)	No (1)
Training for at least one day in delivering programme	One hour of training received.	Two days of training received.	Four days training provided.	Two days training provided	Length of training not specified
	No (0)	Yes (1)	Yes (1)	Yes (1)	No (1)
Support for interventionists	No supervision or support	47% received support	Monthly support provided by external Coach.	Regular support provided to teachers by local coordinators	No support strategy for teachers detailed
	No (0)	Yes (1)	Yes (1)	Yes (1)	No (1)
Participants sampled from more than one	Participants sampled	Participants sampled from different	Participants sampled from different	Participants sampled from different	Participating students obtained from same

school	from same school. No (0)	schools. Yes (1)	schools. Yes (1)	schools. Yes (1)	school. No (1)
More than one aspect of resilience measured	Coping and social functioning Yes (1)	Coping No (0)	Pro-social and emotion regulation Yes (1)	Coping strategies and social skills Yes (1)	Environmental mastery, positive relationships, intolerance of uncertainty. Yes (1)
Number of session completed by children	Level of children's attendance at sessions not provided No (0)	Level of children's attendance at sessions not provided No (0)	Level of children's attendance at sessions not provided No (0)	Attendance recorded. Low participation in Lithuania Yes (1)	Level of children's attendance at sessions not provided No (0)
Overall weighting	Low (1)	Medium (2)	High (3)	High (3)	Low (1)

Study demonstrates five criteria or more - High = 3

Study demonstrates four or more criteria - Medium = 2

Study demonstrates three or less criteria - Low = 1

Appendix D: Weight of Evidence Ratings

WoE D: Overall Weighting for each study

Merrell & Harlacher (2010)	Holen et al. (2012)	Novak et al. (2017)	Mishara & Ystgaard (2006)	Tunariu et al. (2017)
Medium (1.67)	Medium (1.69)	Medium (1.8)	Medium (2.3)	Low (1.1)

Appendix E: Excluded Articles

Excluded articles with rationale and full references

Excluded Study	Rationale for exclusion
<p>Frey, S. K., Bobbitt Nolen, S., Van Schoiack Edstrom, L., & Hirschstein, K. M. (2005). Effects of a school-based social-emotional competence program: Linking children's goals, attributions, and behaviour. <i>Applied Developmental Psychology</i>, 26, 171-200.</p>	<p>Programme was not implemented by a teacher.</p>
<p>Suldo, M. S., Savage, A. J., & Mercer, H. S. (2014). Increasing Middle School Students' Life Satisfaction: Efficacy of a Positive Psychology Group Intervention. <i>Journal of Happiness Studies</i>, 15, 19-42. doi:10.1007/s10902-013-9414-2</p>	<p>The study does not measure resilience related protective factors.</p>
<p>Boniwell, I., Osin, N. E., & Martinez, C. (2016) Teaching happiness at school: Non-randomised controlled mixed-methods feasibility study on the effectiveness of Personal Well-Being Lessons. <i>The Journal of Positive Psychology</i>, 11(1), 85-98. DOI: 10.1080/17439760.2015.1025422</p>	<p>The study does not measure resilience related protective factors.</p>
<p>Ruttledge, R., Devitt, E., Gabrielle, G., Mullany, M., Charles, E., Frehill, J., & Moriarty, M. (2016). A randomised controlled trial of the <i>FRIENDS for Life</i> emotional resilience programme delivered by teachers in Irish primary schools. <i>Educational and Child Psychology</i>, 33(2), 69-89.</p>	<p>The primary aim of the programme is to prevent and assist children to cope with anxiety (not to build resilience related protective factors).</p>
<p>J.Kraag, G., Van Breukelen, P. J. G., Kok, G., & Hosman, C. (2009). 'Learn Young, Learn Fair', a stress management program for fifth and sixth graders: longitudinal results from an experimental study. <i>The Journal of Child Psychology & Psychiatry</i>, 50(9), 1185-1195.</p>	<p>The programme does not aim to increase resilience related protective factors in participants.</p>
<p>Roth, A. R., Suldo, M. S., Ferron, M. J. (2017). Improving Middle School Students' Subjective Well-Being: Efficacy of a Multicomponent Positive Psychology Intervention Targeting Small Groups of Youth. <i>School Psychology Review</i>, 46(1), 21-41</p>	<p>This study did not measure resilience related protective factors.</p>
<p>Dowling, K., Simpkin, J. A., & Barry, M. M. (2019). A Cluster Randomized Controlled Trial of the MindOut Social and Emotional Learning Program for Disadvantaged Post-Primary School Students. <i>C</i>, 16(2), 203-214. doi:10.1177/1359104511404749</p>	<p>Subjects in this study were not between 5-12 years of age</p>
<p>Yamamoto, T., Matsumoto, Y., & Bernard, E. M. (2017). Effects of the cognitive-behavioural You Can Do It! Education program</p>	<p>The programme was not delivered by a teacher.</p>

<p>on the resilience of Japanese elementary school students: A preliminary investigation. <i>International Journal of Educational Research</i>, 86, 50-58.</p>	
<p>Berry, V., Axford, N., Blower, S., Taylor, S. R., Edwards Tudor, R., Tobin, K., Jones, C., & Bywater, T. (2016). The Effectiveness and Micro-costing Analysis of a Universal, School-Based, Social-Emotional Learning Programme in the UK: A Cluster-Randomised Controlled Trial. <i>School Mental Health</i>, 8, 238-256.</p>	<p>The sample included children aged four which is outside the age range specified in the inclusion criteria.</p>
<p>Caldarella, P., Christensen, L., Kramer, J. T., & Kronmiller, K. (2009). Promoting Social and Emotional Learning in Second Grade Students: A Study of the <i>Strong Start</i> Curriculum. <i>Journal of Childhood Education</i>, 37, 51-56.</p>	<p>The programme was not delivered by a teacher.</p>
<p>Shoshani, A., & Steinmetz, S. (2014). Positive Psychology at School: A School-Based Intervention to Promote Adolescents' Mental Health and Well-Being. <i>Journal of Happiness Studies</i>, 15, 1289-1311.</p>	<p>Subjects in this study were not between 5-12 years of age</p>

Appendix F: Outline of tools in the WWTorR programme

Programme - Lesson Plans			
Positive Emotions (3rd Class)	Tools of Resilience (4th Class)	Positive Relationships (5th Class)	Empowering Beliefs (6th Class)
<p>Lesson 1: What is Well-Being?</p> <p>Lesson 2: Positive Emotions</p> <p>Lesson 3: Positive Emotion Potion</p> <p>Lesson 4: Attitude of Gratitude</p> <p>Lesson 5: Feel-Good-Flow</p> <p>Lesson 6: Random Acts of Kindness</p> <p>Lesson 7: Rainbow Moments</p> <p>Lesson 8: Healthy Body, Happy Mind</p> <p>Lesson 9: Positive Emotion Potion - Mix and Enjoy</p> <p>Lesson 10: Review</p>	<p>Lesson 1: Why do we need Resilience?</p> <p>Lesson 2: Jigsaw of Perspective</p> <p>Lesson 3: Lucky Dip of Distraction</p> <p>Lesson 4: Planning Pen (Problem Focused Planning)</p> <p>Lesson 5: Helpful Thinking Helmet (Cognitive Reframing)</p> <p>Lesson 6: Key of Character Strength</p> <p>Lessons 7 - 9: Mindfulness Switch - Parts 1-3</p> <p>Lesson 10: N.A.B.B. (Name, Accept, Breathe, Body)</p>	<p>Lesson 1: The Importance of Positive Relationships</p> <p>Lesson 2: Respect</p> <p>Lesson 3: Empathy</p> <p>Lesson 4: Look for Win-Wins</p> <p>Lesson 5: Active Listening</p> <p>Lesson 6: Try to forgive</p> <p>Lesson 7: Interest in Others</p> <p>Lesson 8: No More Swap Judgements!</p> <p>Lesson 9: Give, Give, Give!</p> <p>Lesson 10: Taking All the Steps</p>	<p>Lesson 1: What are Beliefs?</p> <p>Lesson 2: Belief 1: I can change myself!</p> <p>Lesson 3: Belief 2: I can do it as my own choice!</p> <p>Lesson 4: Belief 3: I can resist temptation!</p> <p>Lesson 5: Belief 4: I can do it!</p> <p>Lesson 6: Belief 5: I can focus!</p> <p>Lesson 7: Belief 6: I can learn!</p> <p>Lesson 8: Belief 7: I can make a difference!</p> <p>Lesson 9: Belief 8: My beliefs are powerful!</p> <p>Lesson 10: Changing up my Beliefs - Empowering Beliefs in action!</p>
<p>Concepts Covered: Expressing Gratitude - Flow Experiences - Random Acts of Kindness - Rainbow Moments - Healthy Body, Happy Mind</p>	<p>Concepts Covered: Perspective - Healthy Distraction - Problem Focused Planning - Cognitive Reframing - Using Character Strengths - Mindfulness</p>	<p>Concepts Covered: Respect - Empathy - Looking for Win-Wins - Active Listening - Forgiveness</p>	<p>Concepts Covered: Challenging Limiting Beliefs (Lessons 1 - 10) - Self-Talk - Growth Mindsets - Self-Acceptance - Making a Difference</p>

What is Positive Psychology?

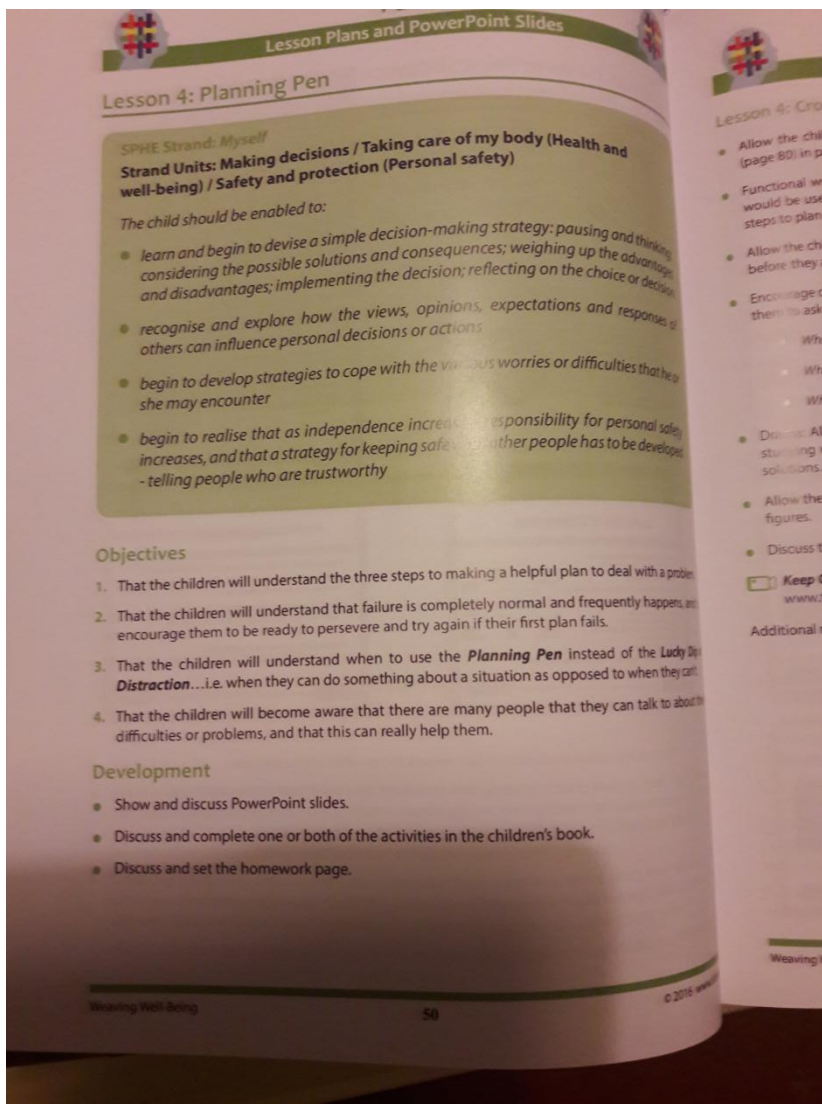
Positive Psychology is a relatively new branch of psychology. It was first introduced by Martin Seligman, a professor at the University of Pennsylvania. He is known as the father of Positive Psychology. He has done a lot of research on it and has written many books on it. He has also developed a model of well-being called the PERMA model. This model consists of five elements: Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment. These elements help us to understand what makes life meaningful and how we can live a more fulfilling life. Positive Psychology is a science of well-being, personal strengths, and positive emotions. It helps us to understand how we can live a more meaningful and fulfilling life. It is a science of well-being, personal strengths, and positive emotions. It helps us to understand how we can live a more meaningful and fulfilling life.

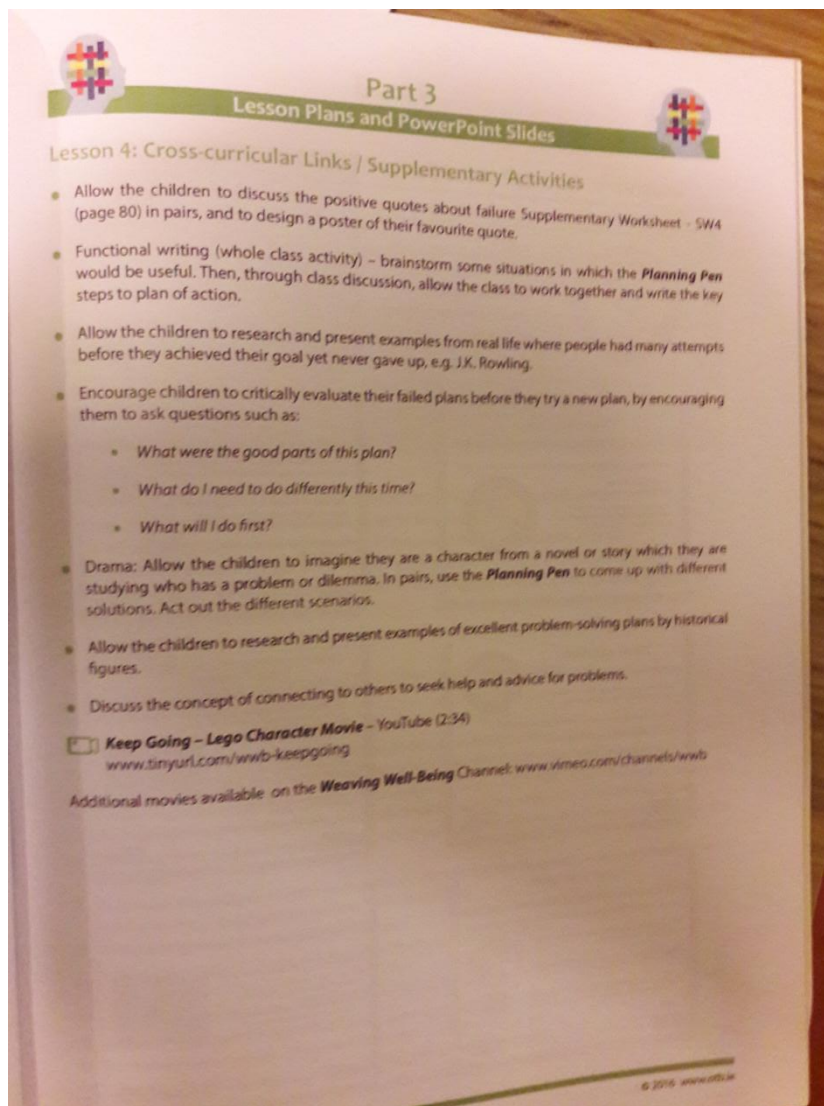
Weaving Well-Being in the Classroom

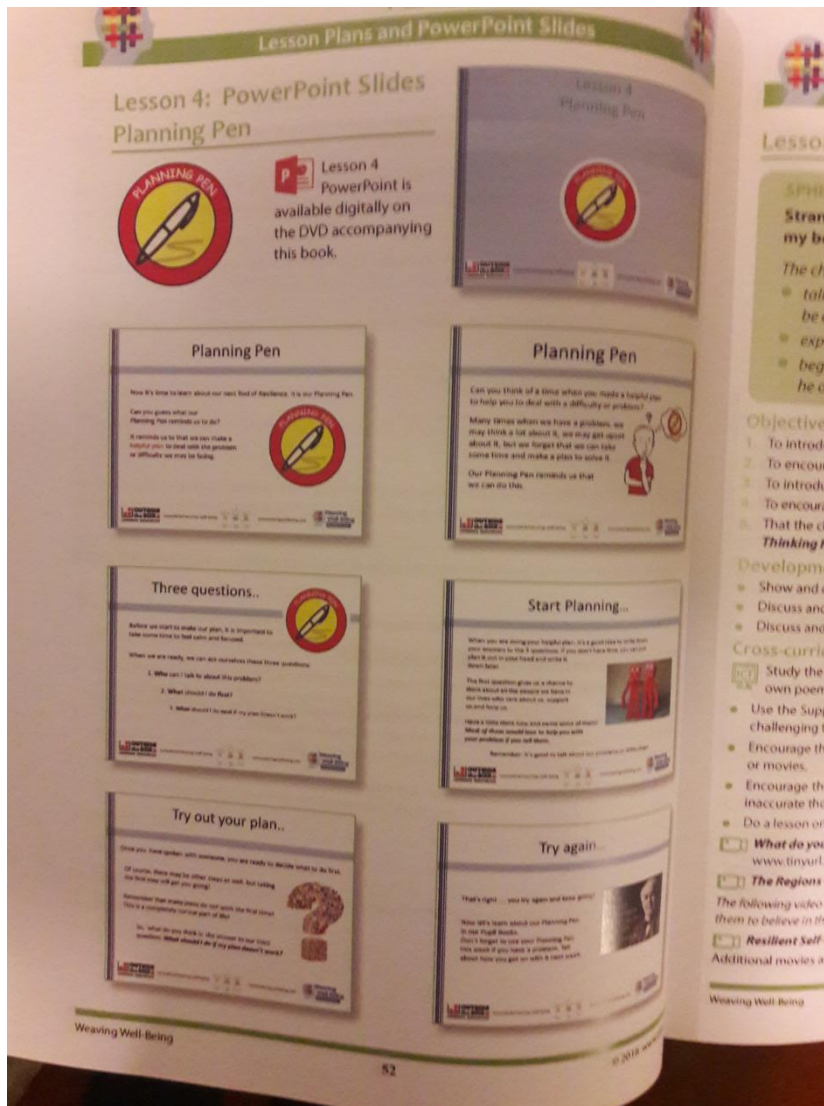
The lessons and activities in the WWTorR programme can empower them to build their health throughout their lives.

The Fourth Class programme is a problem-focused plan (N.A.B.B.) which children can use to build their health throughout their lives.

Appendix G: Sample of a WWTorR programme lesson







Appendix H: Letter to Principal (Control Group)



Information leaflet for Principals (control group)

Background Information. A study titled “An investigation into the Weaving Well-being Tools of Resilience programme on primary school children’s emotion-regulation and self-efficacy” is being conducted by Fiona O’ Brien, Trainee Educational Psychologist from Mary Immaculate College, in Limerick. This research study was approved by the Mary Immaculate College Research Ethics Committee

Background: The Weaving Well-being Tools of Resilience programme is a ten week programme for fourth class students. It aims to equip children with the knowledge and skills they need to develop their well-being and protect their mental health. The Weaving Well-being Tools of Resilience programme teaches children skills to problem-solve challenging situations, helps them manage their feelings and builds their self-belief about their ability to complete tasks and achieve desired goals. Emotion regulation is a person’s ability to identify and manage different feelings they have. Self-efficacy refers to a person’s self-belief in their ability to complete tasks and achieve desired goals.

What is the purpose of the study?

- To determine whether the Weaving Well-being Tools of Resilience programme is effective, children’s levels of self-efficacy and emotion regulation who are participating in the programme will be compared to children who are not participating in the programme. The study aims to evaluate if the Weaving Well-being Tools of Resilience programme is effective in teaching children emotion-regulation skills and whether it increases their self-efficacy.

What is being asked of you?

- You are being asked to read the Teacher/parent/guardian/child information leaflets carefully so that you understand what is required of each party who may wish to participate. If you are happy to pass on the Teacher information leaflet to

Teachers, I would appreciate it if you would discuss with them what is required of them if they wish to participate in the study.

- If you choose to participate in the study, parents will then be asked to provide parental consent for their child to participate. Children of parents who have provided parental consent will be asked to provide child assent (children's written agreement to participate in the study). Children who give child assent (children's written agreement to participate in the study) and whose parents provide parental consent, will complete the same two questionnaires once in September and once ten weeks later in November.
- It will take children approximately thirty minutes in total to complete both sets of questionnaires. The Lead Researcher will be present to read each questionnaire item aloud to ensure children understand them. The Lead Researcher will answer queries children may have about the questionnaires. Teachers are being asked to be present while children complete questionnaires in case any child requires their assistance during this time. The Lead Researcher is fully Garda vetted.
- The school/teachers/parents/guardians/children participation is voluntary. All parties are free to withdraw at any time without consequence. All information provided by all parties will be kept confidentially and anonymously (all participants will be assigned a number to identify them. The name of participants and schools will not be used in the study or given to any third parties).

The Lead Researcher will store all consent forms, outcome measures and data in a securely locked filing cabinet only she has access to. Data will be stored on a password protected laptop and backed up on an encrypted USB key which will be stored safely with the laptop in the securely locked cabinet.

The Lead Researcher can be contacted at obrienfionat@gmail.com. Her supervisors can be contacted at trevor.obrien@mic.ul.ie or laura.ambrose@mic.ul.ie.

Please note, should you have any concerns in relation to this research study you can contact Mary Immaculate College Research Ethics Committee Administrator, Research and Graduate School, Mary Immaculate College, South Circular Road, Limerick. Phone: 061-204980.

Appendix I: Consent Form for Principals (control group)



Principal consent form control group

An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

1. I confirm that I have read and understand the school, Teacher, parent/guardian and child information leaflets and consent forms for the outlined study. I received an explanation of the study and understand what is involved for schools, Teachers, parents/guardians and children who choose to participate.

2. I have had time to consider whether to take part in this study. My questions have been answered satisfactorily through the information leaflet. I am aware that I can contact the Lead Researcher at the stated email address above if I require further information or if I have any concerns as a result of engaging in this research study.

3. I understand that the schools participation is voluntary and that the school can withdraw at any time. If the school decides to withdraw from the study all Teacher, parent/guardian and child data will be destroyed. The school will inform any Teacher, parent/guardian and child if the school withdraws from the study.

4. I understand that strict confidentiality will be maintained regarding all information Teachers, parents/guardians and children provide while participating in the study. All information provided by participants will be anonymised.

5. I understand the study and I am happy for the school to take part. I am happy for class Teachers who have provided consent to participate to send parent and child information leaflets and parent consent and child assent forms home for parents and children to consider.

Name of school Principal Date Signature

Researcher Date Signature

Thank you for your time.

Appendix J: Information Leaflet for Teachers (control group)

Appendix J: Information leaflet for teachers (control group)



INFORMATION LEAFLET FOR TEACHERS (control group)

This is an information leaflet for teachers to inform you of a research study that is being conducted by Fiona O' Brien who is a Trainee Educational Psychologist completing the Doctorate in Educational and Child Psychology program in Mary Immaculate College, Limerick. The study has been approved by the Mary Immaculate College Research Ethics Committee.

Study Title: “An investigation into the Weaving Well-being Tools of Resilience programme on primary school children’s emotion-regulation and self-efficacy”.

Background: The Weaving Well-being Tools of Resilience programme is a ten week programme for fourth class students. It aims to equip children with the knowledge and skills they need to develop their well-being and protect their mental health. The Weaving Well-being Tools of Resilience programme teaches children skills to problem-solve challenging situations, helps them manage their feelings and builds their self-belief about their ability to complete tasks and achieve desired goals. Emotion regulation is a person’s ability to identify and manage different feelings they have. Self-efficacy refers to a person’s self-belief in their ability to complete tasks and achieve desired goals. This research study was approved by the Mary Immaculate College Research Ethics Committee.

What is the purpose of the study?

- To determine whether the Weaving Well-being Tools of Resilience programme is effective, children’s levels of self-efficacy and emotion regulation who are participating in the programme will be compared to children who are not participating in the programme. The study aims to evaluate if the Weaving Well-being Tools of Resilience programme is effective in teaching children emotion-regulation skills and whether it increases their self-efficacy.

What is required of you if you decide to participate?

- You are being asked to be present while children who have parental consent and who have given assent (written agreement from children that they are willing to

- participate in the research) fill out two questionnaires about emotion regulation and self-efficacy in class in September and November. Questionnaires will take fifteen minutes to complete.
- The Lead Researcher who is Garda vetted will be present during data collection and requests you to be present in case any child requires your assistance. The Lead Researcher will read out questionnaire items to ensure children understand each item.
- Your participation is voluntary. You are free to withdraw at any time without consequence. All information provided by participants (children, teachers and the school) will be kept confidentially and anonymously (instead of using participants/schools names all participating parties will be given a number so that they cannot be identified).

If you require further information the Lead Researcher can be contacted at obrienfionat@gmail.com. Her supervisors can be contacted at trevor.obrien@mic.ul.ie or laura.ambrose@mic.ul.ie.

Please note, should you have any concerns in relation to this research study you can contact Mary Immaculate College Research Ethics Committee Administrator, Research and Graduate School, Mary Immaculate College, South Circular Road, Limerick. Phone: 061-204980.

Appendix L: Information Leaflet for Parents/Guardians (control group)



INFORMATION LEAFLET FOR PARENTS/GUARDIANS

(CONTROL GROUP)

The research study outlined below is being conducted by Fiona O' Brien who is a Trainee Educational Psychologist completing the Doctorate in Educational and Child Psychology program in Mary Immaculate College, Limerick. The study has been approved by the Mary Immaculate College Research Ethics Committee.

Study title: An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

The Weaving Well-being Tools of Resilience programme is a ten week programme for fourth class students. It aims to equip children with the knowledge and skills they need to develop their well-being and protect their mental health. The Weaving Well-being Tools of Resilience programme teaches children skills to problem-solve challenging situations, helps them manage their feelings and builds their self-belief about their ability to complete tasks and achieve desired goals. Emotion regulation is a person's ability to identify and manage different feelings they have. Self-efficacy refers to a person's self-belief in their ability to complete tasks and achieve desired goals.

What is the purpose of the study?

- To determine whether the Weaving Well-being Tools of Resilience programme is effective, children's levels of self-efficacy and emotion regulation who are participating in the programme will be compared to those of children who are not participating in the programme. This study aims to determine if the Weaving Well-being Tools of Resilience programme is effective in teaching children emotion-regulation skills and whether it increases their self-efficacy.

- **If you and your child choose to participate your child will be asked to:**



- You will be asked to sign a consent form. If you sign the consent form your child will then be asked to sign an assent form (written agreement from your child confirming whether he/she is willing to participate in the research).
- Your child will complete the same questionnaires about their emotion-regulation and self-efficacy in class in September and November of this year. Each set of questionnaires will take fifteen minutes to complete.
- The Lead Researcher who is Garda vetted will be present with the child's teacher to provide assistance to children while they complete the questionnaires.
- All information your child provides to the researcher will be kept confidential and anonymised (instead of using your child's name all children will be given a number so that your child cannot be identified). You and your child's participation in the study is voluntary and you can both withdraw at any time without consequence.
- **How can I get further assistance/information, if required?** The Lead Researcher can be contacted at obrienfionat@gmail.com. Her supervisors can be contacted at trevor.obrien@mic.ul.ie or laura.ambrose@mic.ul.ie.

**Please note, should you have any concerns in relation to this research study you can contact Mary Immaculate College Research Ethics Committee Administrator, Research and Graduate School, Mary Immaculate College, South Circular Road, Limerick.
Phone: 061-204980.**

Appendix M: Consent Form for Parents/Guardians (control group)



CONSENT FORM FOR PARENTS/GUARDIANS (CONTROL)

An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

I confirm that I have read and understand the information leaflet for the above study. I understand what my child's involvement will be by participating in the study.

I have had time to consider whether to take part in this study. My questions have been answered satisfactorily through the information leaflet. I am aware that I can access further information about the research by emailing the Lead Researcher using the email address provided in the information leaflet.

I understand that my child's participation is voluntary and that my child and or I can withdraw at any time from the study. If my child and or I decide to withdraw from this study my child's data will be destroyed.

I understand that strict confidentiality will be maintained regarding all information my child provides. All information provided by my child will be anonymised.

I understand the study and I am happy for my child to take part.

Name of parent/guardian Date Signature

Researcher Date Signature

Thank you for your time.

Appendix N: Information Leaflet for Children (control group)



Child Information Leaflet (control)

An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

My name is Fiona O' Brien and I am a student in college. I am doing a research project to understand if the Weaving Well-being Tools of Resilience programme helps children learn skills to deal with difficult feelings (like feeling worried or scared) and to do things they might find hard, like doing a big test in school.

What are you being asked to do if you decide to take part in the research project?

- You will be asked to answer questions about the things you do to deal with your feelings and the ways in which you try to figure out how to do things you find hard. You are being asked to answer questions before and after you take part in the Weaving Well-being Tools of Resilience programme.
- I would like to talk to a small number of children about what they liked and did not like about the Weaving Well-being Tools of Resilience programme. If you do not want to talk to me and answer these questions that is okay.
- Everything you tell me or write will be kept private. I will be there to answer any questions you might have about the questions you are answering. You do not have to take part in the research project. If you do decide to take part in the research you can stop taking part at any time. Nobody will be mad at you if you change your mind and choose not to take part anymore.

Once you have answered the questions and returned them to me, feel free to talk to your parents about your answers.

If you have questions about the research project your teacher will tell me your questions and I will answer them.

Appendix O: Consent Form for Children (control group)



An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

Child Assent Form

1. I have read the information leaflet on the research study about the Weaving Well-being Tools of Resilience programme.
2. I understand the information in the leaflet.
3. I understand what I am being asked to do.
4. I know I can ask my teacher to ask the researcher for more information about this research study if I do not understand.
5. I know that I do not have to take part in this research study if I do not want to.
6. I would like to take part in this research project.

PLEASE TICK ONE OF THE BOXES BELOW AND SIGN YOUR NAME ONCE

I would like to be a part of this project

 CHILD'S SIGNATURE _____

I would not like to be a part of this project

 CHILD'S SIGNATURE _____

Appendix P: Information Leaflet for Principal (Intervention group)



Information leaflet for school Principal (Intervention group)

Background Information. A study titled “An investigation into the Weaving Well-being Tools of Resilience programme on primary school children’s emotion-regulation and self-efficacy” is being conducted by Fiona O’ Brien, Trainee Educational Psychologist from Mary Immaculate College, in Limerick. The Weaving Well-being programme aims to equip children with the knowledge and skills needed to develop their well-being and protect their mental health. The Weaving Well-being Tools of Resilience (WWTOR) programme is a ten week programme for fourth class students. The programme teaches children skills to problem-solve challenging situations, helps them manage their feelings and builds their self-belief about their ability to complete tasks and achieve desired goals. Emotion regulation is a person’s ability to recognise and manage different feelings they have. Self-efficacy refers to a person’s self-belief in their ability to complete tasks and achieve desired goals.

This research study was approved by the Mary Immaculate College Research Ethics Committee.

What is the purpose of the study?

- To determine if the Weaving Well-being Tools of Resilience programme is effective in teaching children emotion-regulation skills and whether it increases their self-efficacy.

What is being asked of you?

- You are being asked to read the Teacher/parent/guardian/child information leaflets carefully so that you understand what is required of each party who may wish to participate. If you are happy to pass on the Teacher information leaflet to Teachers, I would appreciate it if you would discuss with them what is required of them if they wish to participate in the study.
- If you choose to participate in the study, parents/guardians will then be asked to provide parental/guardian consent for their child to participate. Children of

- parents/guardians who have provided consent will be asked to provide child assent (children's written agreement to participate in the study). Children (who have parental consent to participate and provided child assent) will complete the same two questionnaires before they participate in the WWTOR programme and after the programme finishes.
- It will take children approximately thirty minutes in total to complete both sets of questionnaires. The Lead Researcher will be present to read each questionnaire item aloud to ensure children understand them. The Lead Researcher will answer queries children may have about the questionnaires. Teachers are being asked to be present while children complete questionnaires in case any child requires their assistance during this time. The Lead Researcher is fully Garda vetted.
- The Lead Researcher will conduct 10-15 minute semi-structured interviews with four children to ascertain their views and potential learning they may have gained from the programme. Interviews are semi-structured so that the Lead Researcher can ask children questions about their answers if needs be. Please see appendices for teacher and child semi-structured interview questions.
- The Lead Researcher will conduct 10-15 minute semi-structured interviews with teachers to obtain their views about delivering the programme and the perceived benefits of the programme for children.
- The school/teachers/parents/guardians/children participation is voluntary. All parties are free to withdraw at any time without consequence. All information provided by all parties will be kept confidentially and anonymously (all participants will be assigned a number to identify them. The name of participants and schools will not be used in the study or given to any third parties).

The Lead Researcher will store all consent forms, outcome measures and data in a securely locked filing cabinet only she has access to. Data will be stored on a password encrypted laptop which will be stored safely when not in use in a securely locked cabinet only the Lead Researcher can access.

The Lead Researcher can be contacted at obrienfionat@gmail.com. Her supervisors can be contacted at trevor.obrien@mic.ul.ie or laura.ambrose@mic.ul.ie.

Please note, should you have any concerns in relation to this research study you can contact Mary Immaculate College Research Ethics Committee Administrator, Research and Graduate School, Mary Immaculate College, South Circular Road, Limerick. Phone: 061-204980.

Appendix Q: Consent Form for Principal (Intervention group)



An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

I confirm that I have read and understand the school, Teacher, parent/guardian and child information leaflets and consent forms for the outlined study. I received an explanation of the study and understand what is involved for schools, Teachers, parents/guardians and children who choose to participate.

I have had time to consider whether to take part in this study. My questions have been answered satisfactorily through the information leaflet. I am aware that I can contact the Lead Researcher at the stated email address above if I require further information or if I have any concerns as a result of engaging in this research study.

I understand that the schools participation is voluntary and that the school can withdraw at any time. If the school decides to withdraw from the study all Teacher, parent/guardian and child data will be destroyed. The school will inform any Teacher, parent/guardian and child if the school withdraws from the study.

I understand that strict confidentiality will be maintained regarding all information Teachers, parents/guardians and children provide while participating in the study. All data provided by participants will be anonymised.

I understand the study and I am happy for the school to take part. I am happy for class Teachers who have provided consent to participate to send parent/guardian and child information leaflets and parent/guardian consent and child assent forms home for parents/guardians and children to consider.

Please circle Yes or No to indicate whether you would like to receive feedback about this study. Yes No

Name of school Principal

Date

Signature

Researcher

Date

Signature

Thank you for your time.

Appendix R: Information Leaflet for Teacher (Intervention group)



INFORMATION LEAFLET FOR TEACHERS (INTERVENTION)

This is an information leaflet for teachers to inform you of a research study that is being conducted by Fiona O' Brien who is a Trainee Educational Psychologist completing the Doctorate in Educational and Child Psychology program in Mary Immaculate College, Limerick. You are being asked to participate in this research study, as you will be delivering the Weaving-well-being Tools of Resilience programme in the near future. The study has been approved by the Mary Immaculate College Research Ethics Committee.

Study Title: “An investigation into the Weaving Well-being Tools of Resilience programme on primary school children’s emotion-regulation and self-efficacy”.

The Weaving Well-being Tools of Resilience programme is a ten week programme for fourth class students. It aims to equip children with the knowledge and skills they need to develop their well-being and protect their mental health. The Weaving Well-being Tools of Resilience programme teaches children skills to problem-solve challenging situations, helps them manage their feelings and builds their self-belief about their ability to complete tasks and achieve desired goals. Emotion regulation is a person’s ability to identify and manage different feelings they have. Self-efficacy refers to a person’s self-belief in their ability to complete tasks and achieve desired goals.

What is the purpose of the study?

- To determine if the Weaving Well-being Tools of Resilience programme is effective in teaching children emotion-regulation skills and whether it increases their self-efficacy.

What is required of you if you decide to participate?

- Child participants will be asked to fill out two questionnaires about emotion regulation and self-efficacy before and after they participate in the WWTOR programme. This will take 10-15 minutes for each set of questionnaires. The

- Lead Researcher who is Garda vetted will be present during data collection and requests you to be present in case any child requires your assistance.
- The Lead Researcher will conduct four semi-structured interviews with children. Interviews will be conducted in a room that will be selected by the school Principal.
- The researcher will conduct a 10-15 minute interview with you to obtain your views about delivering the programme and any perceived benefits you think the children may have gained from the programme.
- Your participation is voluntary. You are free to withdraw at any time without consequence. All information provided by you will be kept confidentially and anonymously (instead of participants names all participants will be assigned a number by the researcher so that no participant will be identified in the research study).

If you require further information the Lead Researcher can be contacted at obrienfionat@gmail.com Her supervisors can be contacted at trevor.obrien@mic.ul.ie or laura.ambrose@mic.ul.ie.

Please note, should you have any concerns in relation to this research study you can contact Mary Immaculate College Research Ethics Committee Administrator, Research and Graduate School, Mary Immaculate College, South Circular Road, Limerick. Phone: 061-204980.

Appendix S: Consent Form for Teacher (Intervention group)



Teacher Consent Form (Intervention)

An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

I confirm that I have read and understand the information leaflet for the above study and received an explanation of the nature and purpose of the study and what my involvement will be.

I have had time to consider whether to take part in this study. My questions have been answered satisfactorily through the information leaflet. I am aware that I can contact the Lead Researcher at the stated email address above if I require further information or if I have any concerns as a result of engaging in this research study.

I understand that my participation is voluntary and that I am free to withdraw at any time. If I decide to withdraw from this study my data will be destroyed.

I understand that strict confidentiality will be maintained regarding all information I provide. All information I provide will be anonymised.

I understand the study and I am happy to take part.

Name of Teacher

Date

Signature

Researcher

Date

Signature

Thank you for your time.

Appendix T: Information Leaflet for Parents/Guardians (Inter)



INFORMATION LEAFLET FOR PARENTS/GUARDIANS (intervention)

The research study outlined below is being conducted by Fiona O' Brien who is a Trainee Educational Psychologist completing the Doctorate in Educational and Child Psychology program in Mary Immaculate College, Limerick.

Study title: An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

Background: The Weaving Well-being Tools of Resilience programme is a ten week programme for fourth class students. It aims to equip children with the knowledge and skills they need to develop their well-being and protect their mental health. The Weaving Well-being Tools of Resilience programme teaches children skills to problem-solve challenging situations, helps them manage their feelings and builds their self-belief about their ability to complete tasks and achieve desired goals. Emotion regulation is a person's ability to identify and manage different feelings they have. Self-efficacy refers to a person's self-belief in their ability to complete tasks and achieve desired goals. This research study was approved by the Mary Immaculate College Research Ethics Committee.

What is the purpose of the study?

- To determine if the Weaving Well-being Tools of Resilience programme is effective in teaching children emotion-regulation skills and whether it increases their self-efficacy.

If you and your child choose to participate your child will be asked to:

- You will be asked to sign a consent form. If you choose to sign the consent form your child will then be asked to sign an assent form (written agreement from your child confirming whether he/she is willing to participate in the research).
- Your child will complete questionnaires about their emotion-regulation and self-efficacy before he/she participates in the WWTOR programme and ten weeks
-

- later, after the programme ends. Questionnaires will take fifteen minutes to complete.
- Your child will be asked to participate in a 10-15 minute semi- structured interview in school with me about their experiences of the programme. Please see the list of interview questions enclosed. Interviews are semi-structured so that the Lead Researcher can ask children questions about their answers if needs be.
- An interview will be conducted with your child's teacher to establish their views about teaching the programme and the benefits in their view children may have gained from the programme.
- The Lead Researcher who is Garda vetted will be present with the class teacher to provide assistance to children while they complete the questionnaires.
- All information your child provides to the researcher will be kept confidential and anonymised (instead of using your child's name all children will be given a number so that your child cannot be identified). You and your child's participation in the study is voluntary and you can both withdraw at any time without consequence. This research study was approved by the Mary Immaculate College Research Ethics Committee.

How can I get further assistance/information, if required? The Lead Researcher can be contacted at obrienfionat@gmail.com. Her supervisors can be contacted at trevor.obrien@mic.ul.ie or laura.ambrose@mic.ul.ie.

Please note, should you have any concerns in relation to this research study you can contact Mary Immaculate College Research Ethics Committee Administrator, Research and Graduate School, Mary Immaculate College, South Circular Road, Limerick.

Phone: 061-204980.

Appendix U: Consent Form for Parents/Guardians for Teacher (Inter)



CONSENT FORM FOR PARENTS/GUARDIANS

An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

I confirm that I have read and understand the information leaflet for the above study. I understand what my child's involvement will be by participating in the study.

I have had time to consider whether to take part in this study. My questions have been answered satisfactorily through the information leaflet. I am aware that I can access further information about the research by emailing the Lead Researcher using the email address provided in the information leaflet.

I understand that my child's participation is voluntary and that my child and or I can withdraw at any time from the study. If my child or I decide to withdraw from the study my child's data will be destroyed.

I understand that strict confidentiality will be maintained regarding all information my child provides. All information provided by my child will be anonymised. (Instead of your child's name a number will be used to identify any information provided by your child).

I understand the study and I am happy for my child to take part.

Name of parent/guardian Date Signature

Researcher Date Signature

Thank you for your time.

Appendix V: Information Leaflet for Children (Intervention)



Child Information Leaflet (intervention)

An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

My name is Fiona O' Brien and I am a student in college. I am doing a research project to understand if the Weaving Well-being Tools of Resilience programme helps children learn skills to deal with difficult feelings (like feeling worried or scared) and to do things they might find hard, like doing a big test in school.

What are you being asked to do if you decide to take part in the research project?

- You will be asked to answer questions about the things you do to deal with your feelings and the ways in which you try to figure out how to do things you find hard. You are being asked to answer questions before and after you take part in the Weaving Well-being Tools of Resilience programme.
- I would like to talk to a small number of children about what they liked and did not like about the Weaving Well-being Tools of Resilience programme. If you do not want to talk to me and answer these questions that is okay.
- Everything you tell me or write will be kept private. I will be there to answer any questions you might have about the questions you are answering. You do not have to take part in the research project. If you do decide to take part in the research you can stop taking part at any time. Nobody will be mad at you if you change your mind and choose not to take part anymore.

Once you have answered the questions and returned them to me, feel free to talk to your parents about your answers.

If you have questions about the research project your teacher will tell me your questions and I will answer them.

Appendix W: Assent form for Children (Intervention)



An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's emotion-regulation and self-efficacy.

Child Assent Form

I have read the information leaflet on the research study about the Weaving Well-being Tools of Resilience programme.

I understand the information in the leaflet.

I understand what I am being asked to do.

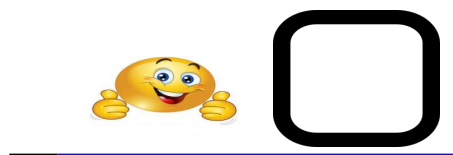
I know I can ask my teacher to ask the researcher for more information about this research study if I do not understand.

I know that I do not have to take part in this research study if I do not want to.

I would like to take part in this research project.

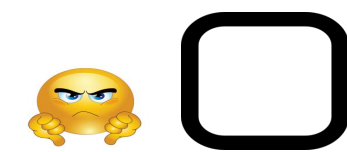
PLEASE TICK ONE OF THE BOXES BELOW AND SIGN YOUR NAME ONCE

I would like to be a part of this project



CHILD'S SIGNATURE _____

I would not like to be a part of this project



CHILD'S SIGNATURE _____

Appendix X: Cognitive Emotion Regulation Questionnaire - kids

CERQ-kids
© Gamefaki & Kraaij, 2005

How do you cope with events?

Sometimes nice things happen in your life and sometimes unpleasant things might happen.
When something unpleasant happens, you can think about it for a long time.
When something unpleasant happens to you, what do you usually think?

	(almost) never	some - times	regu- larly	often	(almos t) always
1. I think that I am to blame	1	2	3	4	5
2. I think that I have to accept it	1	2	3	4	5
3. Again and again, I think of how I feel about it	1	2	3	4	5
4. I think of nicer things	1	2	3	4	5
5. I think about what would be the best for me to do	1	2	3	4	5
6. I think that I can learn from it	1	2	3	4	5
7. I think that worse things can happen	1	2	3	4	5
8. I often think that it's much worse than what happens to others	1	2	3	4	5
9. I think that others are to blame	1	2	3	4	5
10. I think that I have been stupid	1	2	3	4	5
11. It just happened; there is nothing I can do about it	1	2	3	4	5
12. I often think of what I am thinking and feeling about it	1	2	3	4	5
13. I think of nicer things that have nothing to do with it	1	2	3	4	5
14. I think of how I can cope with it	1	2	3	4	5
15. I think that it makes me feel 'older and wiser'	1	2	3	4	5
16. I think that worse things happen to others	1	2	3	4	5
17. Again and again, I think about how terrible it all is	1	2	3	4	5
18. I think that others have been stupid	1	2	3	4	5
19. I think that it's my own fault	1	2	3	4	5
20. I think that I can't change it	1	2	3	4	5

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	(almost never)	(some times)	(often)	(always)	(never)
	1	2	3	4	5
21. All the time, I think that I want to understand why I feel that way					
22. I think of something nice and not about what happened	1	2	3	4	5
23. I think of how I can change it	1	2	3	4	5
24. I think that there are good sides to it as well	1	2	3	4	5
25. I think that it's not as bad as other things that could happen	1	2	3	4	5
26. All the time, I think that this is the worst thing that can happen to you	1	2	3	4	5
27. I think that it's the fault of others	1	2	3	4	5
28. I think that it's all caused by me	1	2	3	4	5
29. I think that I can't do anything about it	1	2	3	4	5
30. I often think of how I feel about what happened	1	2	3	4	5
31. I think of nice things that have happened to me	1	2	3	4	5
32. I think of what I can do best	1	2	3	4	5
33. I think that it's not all bad	1	2	3	4	5
34. I think that there are worse things in the world	1	2	3	4	5
35. I often think about how horrible the situation was	1	2	3	4	5
36. I think that it's all caused by others	1	2	3	4	5

Thank you for filling out the questionnaire!

Appendix Z: Semi-structured Questions for Teachers

In your opinion, did the programme have significant or important impacts for your students? If so, can you give examples of how the programme appeared to impact students?

Have you enjoyed teaching the programme?

From your experience of teaching the programme this year, do you have suggestions for ways in which the implementation of the Weaving Well-being programme could be improved next year?

Based on your experience and the responses of your students, would you recommend the Weaving Well-being programme to other teachers and schools?

Are there any strategies in the programme you will continue to use with the class?

The majority of the semi-structured interview questions were taken from the following study:

National Behaviour Support Service (NBSS). (2013). 'FRIENDS for Life': a School-based Positive Mental Health Programme Research Project Overview and Findings. National Behaviour Support Service.

Appendix A1: Semi-structured Interview Questions for Children

Semi-structured interview questions for child participants

Did you enjoy doing the Weaving Well-being Tools of Resilience programme?

What did you enjoy about the Weaving Well-being Tools of Resilience programme?

Do you use any of the tools of resilience you learned about in class?

Are there any tools of resilience that are hard to do?

Do you think it would be a good idea for children in other schools to do the Tools of Resilience programme?

Appendix B1: Fidelity Check list

Fidelity check list for Lesson 4 (Planning Pen)

Please indicate by ticking the relevant box whether or not you taught the following parts of lesson 4.

Showed and discussed what the planning pen is with your students using the six power point slides

Yes No

Explained and discussed the pages about the planning pen in the children's pupil book for lesson four with the children

Yes No

Children completed the pages for lesson 4 in the children's pupil book

Yes No

Explained and discussed the homework activity (list five people child can talk to when experiencing problems or worries) with your students Yes No

Reviewed and discussed the homework activity with your students Yes No

Please provide details about any suggested supplementary activities you may have completed with your students to reinforce what was taught in lesson 4.

Did you incorporate what was taught in lesson 4 into any other area(s) of the curriculum?

Yes No

If you did please provide an example(s) below of how you did this

Appendix C1: Confirmation of Ethical Approval



Mary Immaculate College Research Ethics Committee

MIREC-4: MIREC Chair Decision Form

APPLICATION NO.

A19-038

PROJECT TITLE

An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's self-efficacy and emotion regulation.

2. APPLICANT

Name:	Fiona O'Brien, Dr Trevor O'Brien, Dr Laura Ambrose
Department / Centre / Other:	EPISE
Position:	Postgraduate Researcher (Doctorate in Educational & Child Psychology)

3. DECISION OF MIREC CHAIR


	Ethical clearance through MIREC is required.
	Ethical clearance through MIREC is not required and therefore the researcher need take no further action in this regard.
	Ethical clearance is required and granted. Referral to MIREC is not necessary.

	Ethical clearance is required but the full MIREC process is not. Ethical clearance is therefore granted if required for external funding applications and the researcher need take no further action in this regard.
	Insufficient information provided by applicant / Amendments required.

4. REASON(S) FOR DECISION

A19-038 - Fiona O' Brien (Trevor O' Brien and Laura Ambrose) - *An investigation into the Weaving Well-being Tools of Resilience programme on primary school children's self-efficacy and emotion regulation.*

I have reviewed this application and I believe it satisfies MIREC requirements. It is, therefore, approved.

Name (Print):	Dr Áine Lawlor
Signature:	
Date:	16 th July 2019

5. DECLARATION (MIREC CHAIR)

Appendix D1: Sample of Child Interview

Interviewer: Did you like doing the Weaving Well-being Tools of Resilience programme?

Child: Yes I did I felt the difference dramatically. My Mam said that she even noticed it in my behaviour she saw a difference.

Interviewer: Oh and did she tell you what she noticed in your behaviour?

Child: Yeah she said that I was much more calm at times in stuff it definitely helped.

Interviewer: and what did you like about the WWTOR programme?

Child: I liked it all really.

Interviewer: you liked all of it yeah fantastic. Did you use any of the tools?

Child: Yes I used the lucky dip of distraction and perspective a lot.

Interviewer: and what did they help you with?

Child: They helped me with thinking that worse things could happen jigsaw of perspective and that it wasn't all that bad and there was good things in it as well.

Interviewer: Was there anything about the programme that you didn't like?

Child: I think some of the things that were in it I didn't understand but not much.

Interviewer: Okay, can you give me some examples of what they might have been?

Child: Some of the questions were asking what to do and I wasn't really sure.

Interviewer: Okay and what about the different ideas they were talking about like the different tools did you understand about those?

Child: Yeah I understand that part.

Interviewer: and was it questions in relation to homework or activities.

Child: Yeah activities.

Interviewer: Okay, do you think that it would be a good idea for children to do the programme in other schools?

Child: Oh definitely, definitely, definitely.

Interviewer: Why do you think it would be a good idea for children to do the programme in other schools?

Child: I notice myself much calmer.

Interviewer: So it can help children be calm.

Child: Yeah.

Interviewer: Is there anything else it can help with?

Child: It just really helped. The planning pen was really good as well. I had an argument with my friend, the next day I used the planning pen and it worked and we are fine now.

Interviewer: Did you have an argument?

Child: Yeah.

Interviewer: Is there anything else you want to say about the programme?

Child: No.

Appendix E1: Sample of Teacher Interview

Interviewer: C, in your opinion did the programme have significant or important impacts for your students and if so, can give examples of how the programme appeared to impact students?

Teacher C: So I definitely did think that it did had an impact on them some students obviously more so than others and I think that some of them were more open to trying out the strategies and the tools than others. I definitely found that in fourth class especially there can be problems on yard where they can be kind of impulsive so that there were a few of them that when there was a problem on yard they would come in and be like well I did the lucky dip of distraction so I kind of went off instead of getting upset about things or whenever their friend had upset them they said I used the jigsaw of perspective and I tried to see it from their point of view and I tried to think that the whole, my whole yard wasn't ruined. I definitely found that yard seemed to be the biggest help for them yeah but they definitely did they mentioned several times that they used it and it did have an impact on them.

Interviewer: Did you notice that they used any strategies in particular aside from those two strategies or were they more kind of the main ones?

Teacher C: They seemed to be the ones that they used the most. I did say to them about the planning pen I think they some of them still think that that has to be written down they haven't really got the whole they can do that in their head just yet. Maybe the ones that need to do it more often haven't grasped that yet so I for my lot it was definitely the jigsaw of perspective and lucky dip of distraction. There could also be the element that I was out for a week and a half so the later lessons we had to do over a shorter period of time whereas, those two tools have been the ones that they have been using for longest so they are probably just more familiar with them as well. So I need to keep using the other ones to make sure they get them as well.

Interviewer: You noticed that some kids used to use the tools more than others and others needed more reminding. Do you feel that maybe there was more interest for some kids what do you think was causing that do you think?

Teacher C: I would say it is interest in the subject itself and I also think that a lot of the parents that had commented on the programme to me at the parent teacher meeting they were all so positive of it and they were saying that they thought it was great that we are doing something in school that was about mental health and mindfulness and things like that. I would also say that they are coming from home and they are the ones that are putting more effort in at home so parental involvement like you can't beat it because like obviously they need it at home as well and they are backing up what we are doing in school so those children are just more familiar with it they know the vocabulary they know when to use it they know how to use it they know the effects of it whereas, some of them it is one lesson a week to keep me happy do you know that kind of way.

Interviewer: Did any of the kids mentioned they did this with their parent or that with their parent did you notice that there were certain kids saying that or was there a mix.

Teacher C: Some of them did. A lot of them loved doing their homework with their parents actually which was great to see and they were shouting over each other to tell you who was their adults that they would talk to. They seemed to enjoy doing it with their parents definitely I think they enjoyed the talking with their parents we are doing another thing too it's called the reading stars it's meant to be ten minutes of nice reading it's not really homework based and alot of them off their own bat were going thats when I do my WWB so they kind of don't see it as being necessarily homework either which I thought was nice.

Interviewer: Have you enjoyed teaching the programme?

Teacher C: I love teaching the programme. Some classes had tried out the programme last year in the school. Now I had only moved down from sixth class so this was my first year teaching it as well. I love teaching it. One of my friends who taught the programme last year she had a kind of a challenging class who definitely needed the programme she found that she needed it herself as well and that she really enjoyed it. I kind of was more open to it then after talking to her and I love teaching it. They loved it it was the one thing that I would say is that it wasn't half an hour it tended to be the forty five minutes up to an hour but I didn't mind giving it that time because

they were all so relaxed they were all so chilled they came up and they sat on the floor. It almost didn't feel like you were teaching as such it was almost like you were

having a conversation with them and they were really open and honest. You find yourself in your own life too being like okay I'm focusing completely on this one piece and you need to see the whole thing so I probably can benefit from it as well but I definitely love teaching the programme and the work was so they enjoyed it, it was nice.

Interviewer: Great.

Teacher C: From your experience of teaching the programme this year do you have any suggestions for ways in which the implementation or the delivery of the WWB programme could be improved next year?

Teacher C: The only negative I would have it could be my class they like talking and I was putting more into to it too but I definitely would say that it's not really the half hour slot and that's not for all lessons some lessons are shorter than others but definitely not all of the lessons there's a few of them in particular maybe the character strengths that you would need maybe two half hour lessons might not fully cover them all because there's quite a lot of vocabulary there. I also found that if I pre-taught some of the vocabulary so like before I even started we covered like resilience as a word of the day. They were quite aware of what resilience was before I started being like this is a programme about building resilience and then some of the other vocabulary that you just keep using so they were really interested in the word zest. I think it was because it started with a z and they were using it all the time so we done it as a word of the day. I'd say mindful of the time and pre-teaching vocabulary is good as well.

Interviewer: Very good. Did you manage to get the homework reviewed in lessons?

Teacher C: not always in lessons and I would say that's because of the time frame. I was not doing it at the start of lessons which is probably how you are supposed to do it. I might have got one or two of the but just the time frame wasn't allowing for it. So I was tending to do it randomly maybe at the religion lesson when everyone is sitting down being like tell me about that. And because it is quite an honest thing to be able to say I had an ANT this week they're are maybe a bit reluctant to share that

necessarily at the start but the more the week goes on they would be like Okay, now I'm ready to share it. I kind of it did it more sporadically.

Interviewer: Brilliant. Based on your experience and the responses of your students would you recommend the WWB programme to other teachers and schools?

Teacher C: I definitely would. I like teaching it they loved it. I think it has had a good impact on them. On top of that too, it's really straight forward you like everything is there for you the CD you plug it in and its got your resources there that you need to print off. Sometimes with SPHE I would find myself I mightn't be quite like one of your core subjects where you know exactly what you are doing. It can be a bit more broad. I thought that it was very structured and I liked that for the ten weeks that you had a really structured set.

Interviewer: Brilliant. Are there any strategies in the programme that you will continue to use with the class?

Teacher C: Yes, definitely. At the minute in time the most recent lesson we did was the different parts of the brain and the amygdala and the frontal cortex so that's all about the NABB. We only covered that yesterday but I definitely think that's going to be really good with my class. They could all understand how their amygdala goes into overdrive and they don't think about anything else when they've got their strong emotions and they found it really fascinating that they could control it. So, they can be quite impulsive they're still really young so that's definitely one that I think that I really want to use with them giving them the ninety seconds to cool down.

Interviewer: fantastic, brilliant. Is there anything else you want to add?

Teacher C: No, just that I'm really happy with it.

