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Doctorate in Educational Psychology

Do kindness and gratitude interventions improve the well-being and relationships of children in school?

An exploratory study into the efficacy of one such intervention.

Thesis by

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Abstract

Do kindness and gratitude interventions improve the well-being and relationships of children in school? An exploratory study into the efficacy of one such intervention.

A literature review of kindness and gratitude interventions was conducted exploring whether they improve the well-being of adults and children. Very few empirical studies utilised child or adolescent participants, but those that did claimed to demonstrate a number of benefits for this type of intervention, including increased levels of well-being, student popularity and pro-social behaviour. The review identified a number of methodological weaknesses in available studies, which undermined the claims made for the effectiveness of kindness and gratitude interventions with children. The review also identified a number of measures to improve the research design employed in past studies e.g. use of a non-neutral control condition to reduce expectancy effects.

Based on the review, a small-scale, mixed-methods research study was designed, which aimed to explore the effectiveness of a kindness and gratitude intervention. Employing a repeated measures, waiting-list control design, the experimental study was conducted in two classrooms in the U.K, with 9 and 10 year olds. Each group participated in a six week kindness and gratitude intervention, for an hour each week. The intervention emphasised and encouraged the performance of kind and grateful activities outside the workshops.
No consistent pattern of improvements based on self-report data was found for the child participants in measures of subjective well-being, self-esteem, or popularity, although small increases in kindness and prosocial behaviour were found in one school only, post-intervention. In spite of this, much of the qualitative information provided by the teachers, parents and children involved suggested they valued the intervention and thought it was effective at improving relationships, self-regulation skills and increasing kindness. This study failed to substantiate the findings of past research, which claimed a link between intentional prosocial activities, popularity and improved levels of well-being in children. A number of recommendations have been made for future research in this area.

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Declaration

STATEMENT 1
This thesis is being submitted in partial fulfilment of the requirements for the degree of DEdPsy

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This work has not been submitted in substance for any other degree or award at this or any other university or place of learning, nor is it being submitted concurrently for any other degree or award (outside of any formal collaboration agreement between the University and a partner organisation)

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Contents

List of tables

List of figures

List of abbreviations

ADHD: Attention Deficit Hyperactivity Disorder

BPS: British Psychological Society

CYP: children and young people

EP: educational psychologist

$H_{0:}$ Null Hypothesis

$H_{1\text{-}6:}$ Alternative Hypotheses

LKM: loving kindness meditation

LS: life satisfaction

NA: negative affect

PA: positive affect

PPI: positive psychology intervention

RQ: research question

RCT: randomised controlled trial

SEL: social emotional learning

SEN: special educational needs

SHM: sustainable happiness model

SWB: subjective well-being

ToM: Theory of Mind

USA: United States of America

Statistical abbreviations

α: Cronbach's Alpha coefficient

d = sample effect size (Cohen)

df = degrees of freedom

F = F-ratio

M = mean

N = number (i.e. sample size)

η^2 = eta-squared (i.e. effect size)

Mdn = median

P = probability

PCA: principal components analysis

R = Pearson's correlation

SD: standard deviation

t = *t*-test value

T = Wilcoxon test value

U = Mann-Whitney test value

Questionnaire scale abbreviations

BMLSS: Brief Multidimensional Life Satisfaction Scale

BYISC: The Beck Youth Inventories: Self-concept Scale

MLSC: My Life in School Checklist

PANAS: The Positive and Negative Affect Scale

PBS: The Prosocial Behaviour Scale

SCHI: The School Children's Happiness Inventory

SKS: The School Kindness Scale

SWLS-C: The Satisfaction with Life Scale for Children.

Questionnaire subscale abbreviations used in SPSS

The Positive and Negative Affect Scale (PANAS):

1. PanFAC1
2. PanFac2
3. PanFac3
4. PanFac4

The Prosocial Behaviour Scale (PBS)

1. TfFac1
2. TfFac2

The School Kindness Scale (SKS)

1. KIQFac1
2. KIQFac2
3. KIQFac3

My Life in School Checklist (MLSC)

1. MLFac1
2. MLFac2
3. MLFac3
4. MLFac4
5. MLFac5

The School Children's Happiness Inventory (SCHI)

1. Shi-Tot1

The Beck Youth Inventories: Self-concept Scale (BYISC)

1. Sc-Tot1

The Satisfaction with Life Scale for Children (SWLS-C).

1. Swls-Tot1

Chapter 1

1. Introduction

This study will explore the effectiveness of kindness and gratitude interventions. There will be a review of the literature on interventions within the field of positive psychology, followed by a more focused literature review of research relating to kindness and gratitude interventions with children. This will be followed by an empirical paper, which sets out to explore the effectiveness of a particular kindness and gratitude intervention, devised by the author. Finally, the results will be discussed in relation to their implications for the work of educational psychologists (EPs).

1.1 Background

Over the last two decades, the development of positive psychology (Seligman & Csikszentmihalyi, 2000) has led to a wide interest in happiness, and how happiness can be cultivated. Positive psychology is defined as the science of positive subjective experience (Donaldson, Dollwet, & Rao, 2015) and has an emphasis on promoting personal and emotional growth through applying the practices of naturally happy people (Layous & Lyubomirsky, 2014a).

Happiness is associated with a number of benefits across the life span, including better quality friendships, reduced rates of divorce, improved health and employment prospects, as well as greater self-control and coping skills (Lyubomirsky, Sheldon, & Schkade, 2005). For these reasons, happiness is a construct of central importance in Western society, and thus worthy of scientific inquiry. Happier teenagers go on to earn substantially more income fifteen years later (Diener, Nickerson, Lucas, & Sandvik, 2002). Happy people tend to be more cooperative, pro-sociable and charitable (Williams & Shiaw, 1999). Furthermore, parents and teachers generally agree about the qualities they wish their children to possess: happiness, kindness, health and satisfaction (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009).

In research, the term happiness is often used interchangeably with that of subjective well-being (SWB; Suldo et al., 2015). Lyubomirsky and Layous (2013) define well-being as comprised of long-term positive affect and high positive affect and life satisfaction (LS), with low levels of negative affect. Positive Psychology Interventions (PPI) which require participants to plan and carry out intentional acts (e.g. complete a gratitude diary), have demonstrated increased levels of SWB in their participants (Seligman,

Steen, Park, & Peterson, 2005). Research with adults demonstrates that SWB can be improved by promoting kindness (e.g. Boehm, Lyubomirsky, & Sheldon, 2011) and cultivating gratitude (Emmons & McCullough, 2003), with some emerging evidence that these interventions are effective for children (Suldo, 2016).

There is growing interest in school-based programs that promote SWB, and students higher in this quality have richer relationships with staff and peers alike, and engage with school in a more positive manner (Suldo et al., 2015). The recent Government Green Paper on children and young people's mental health (Department of Health and Social Care, 2017) acknowledges that schools occupy a key role in promoting the resilience and well-being of their students. The government also acknowledges that the pressure on young people's mental health and well-being is increasing in a context of cuts to school services, a narrowing of focus in schools on academic learning, and the rising influence of social media in students' lives (House of Commons Education and Health Committees (2017)).

1.2. The purpose of the research

The purpose of the current research is to ascertain whether kindness and gratitude interventions are an effective method for improving the well-being and relationships of children in school. A general analysis of the positive psychology literature will be undertaken where key definitions and theories are outlined. This will include an overview of the concept of altruism and why generosity to others, though costly to the individual, might convey evolutionary advantages. The hypothesised relationship between happiness, kindness and gratitude will then be explored. In particular, evidence for a bi-directional relationship between these elements will be considered, which suggests practicing kindness and gratitude may improve well-being and vice versa. The construct of SWB, its measurement and nature, is also distinguished from the more general term of happiness. This is followed by a description of some of the interventions that have been hypothesised to cause improvements in SWB. Finally, some of the external factors affecting student well-being in schools are discussed. This will include a review of the benefits of positive peer and teacher relationships, and their impact on individual well-being within the climate of a school.

This is then followed by a systematised review of the literature (Grant & Booth, 2009). This type of review is similar to the more widely conducted systematic review, and utilises a number of its approaches. These include: employing a systematic approach to searching for research evidence, outlining and applying a consistent inclusion criteria

for the studies reviewed, and transparency in reporting to facilitate replication. Like the systematic review, a systematised review aims to summarise all of the evidence in a particular domain. Because of the small amount of child studies available for review, it was felt that use of a systemic review would exclude the findings from much relevant research with adults, and in this respect would be reductionist in scope. Grant and Booth (2009) indicate that the systematised review is comprehensive in scope, but lacks some of the rigour expected in a systematic review. Thus, the current review will discuss child studies within the wider context of the literature relating to adults, and whether this research supports the claims that kindness and gratitude interventions with children lead to improved SWB, and more positive peer-relationships.

1.3. The benefits for EPs

Interventions for groups of children and whole classes, delivered by educational psychologists (EPs), have demonstrated their positive impact on children's well-being including through effective school based programmes of mindfulness (Thomas & Atkinson, 2016), solution orientated approaches to peer relationships (Fernie & Cubeddu, 2016) and social psychology interventions (Yeager & Walton, 2011). The intervention to be studied in the current research incorporates features of PPI that have been shown to improve student well-being (e.g. Suldo, Savage and Mercer, 2014; Layous, Nelson, Oberle, Schonert-Reichl & Lyubomirsky, 2012). The current empirical study aims to ascertain whether this intervention, designed and implemented by an EP, demonstrates any impact. If the features that make this intervention and those like it effective can be understood, this type of brief intervention offers EPs a potential evidence based resource to improve pupil well-being, to add to those already available.

Recent guidance for schools on mental health and behaviour from the Department of Education (2015), highlights the important role schools have in promoting resilience. The particular knowledge that EPs have of school systems, and their understanding of the underpinnings of child well-being, suggests that EPs are in a unique and important position to contribute to the mental health and well-being of all pupils, through the support they provide to schools. This fact was acknowledged by the president of the British Psychological Society (BPS), Professor Peter Kinderman, who stated:

'Educational psychologists are best placed to assist the government in delivering its aspirations in this regard' (BPS ,2017, p.1).

He was responding to the Government Green Paper (Department of Health and Social Care, 2017) on transforming mental health provision for children, which emphasises

early intervention. However, EPs are not always seen as central to pupil mental health and well-being, and this guidance (Department for Education, 2015. P.23), which outlines interventions and practices that schools can adopt to improve the well-being of their students, only mentions EPs once. Therefore, any intervention which demonstrates a tangible impact on pupil well-being and student relationships offers EPs an important approach that they can use to support schools in this area.

Buchanan, Gueldner, Tran and Merrell (2009) report that teachers seem to endorse the importance of pro-social and altruistic behaviour in children's education, and believe they have a role to play in children's pro-social development. Their survey of 263 teachers found 99% acknowledged that social and emotional learning is important to children's academic and personal development. Similarly, Binfet and Passmore (2017) explored the perceptions of 257 teachers and found that most teachers believe they have a strong to moderate influence on shaping their student's levels of kindness. 'Pedagogical kindness' is a term used by Wentzel and Caldwell (1997), to describe an approach to teaching which provides both academic and social emotional support to students. Kindness and gratitude interventions, promoted by EPs, offer an additional method for supporting teachers and their students in a way they value, at the same time as promoting well-being and good mental health outcomes.

Chapter 2

2. The literature review

2.1. Definitions

Before reviewing the research findings in relation to children and adolescents, the review will set out current definitions of the areas relevant to the research on kindness and gratitude interventions.

2.1.1. Happiness

Happiness is defined by Lyubomirsky (2008, p.7) as 'the experience of joy as positive well-being with a sense that one's life is good, meaningful and worthwhile'. Diener (2010) sets out the three main elements, or correlates of happiness: positive relationships (e.g. marriage, friendships, family); engaging in meaningful activities (e.g. meaningful work), and having active leisure pursuits. Diener (2010) makes a distinction between the causes of happiness (for example living in a pleasant environment), and some of the consequences of happiness (for example, greater productivity), but in some cases, he suggests these have a reciprocal relationship. In other words, some of the things in life that we think cause happiness can sometimes be shown to be a consequence of happiness including health/longevity, enriched relationships and productivity at work (Diener, 2010).

Myers and Diener (1995) outline some basic features of human happiness. It is not associated with a particular age, and no one time of life is notably happier than another. Men and women have broadly the same levels of happiness. For example, one study found 80% of women and 80% of men across 16 countries reported feeling 'fairly satisfied' with their lives (Ingelhart, 1990). Myers and Diener (1995) also note that happiness does not vary greatly by race (e.g. African Americans were not substantially lower in happiness in various studies from the 1980's and 1990's) and only a modest (0.12) correlation exists between happiness and income. Happiness is also stable, and the happiest people in a sample of 5000 in 1973 were still so a decade later (Costa et al., 1987).

The Theory of Authentic Happiness (Seligman, 2004; Seligman et al., 2005) was developed as a way to operationalise, for research, the unwieldy term 'happiness' and is summarised in the acronym PERMA. In this theory, the essential elements of happiness are pleasure, engagement, relationships, meaning and accomplishment

(Seligman, 2011). Research has provided support for a multifactor model of well-being, with each of these elements in Seligman's model highly correlated (Kern, Waters, Adler, & White, 2015). Kern et al. (2015) tested the PERMA model as an organisational framework for measuring well-being, and found that only one of the PERMA dimensions (meaning) was not supported by their factor analysis, and that the different correlates of well-being (e.g. life satisfaction, gratitude, optimism, school connectedness, physical activity) mapped distinctively onto each of the PERMA dimensions as predicted by the model. However, a cross cultural comparison of the model with Malaysian participants (N = 322) found only three of the factors emerged from their questionnaire responses, and qualitative data sought at the same time seemed to suggest that other constructs such as religion and security were required to fully understand a model of well-being relevant to this sample (Khaw & Kern, 2014). This finding suggests that the PERMA model of happiness may not have universal application, and that in part the meaning of happiness is culturally constructed (Ford et al., 2015).

There are other models of well-being, each with a different focus and emphasis. Diener (1984) identified early in this field that well-being has both cognitive and affective elements, and Ryff and Keyes (1995) define psychological well-being across six domains: self-acceptance, positive relationships, autonomy, environmental mastery, purpose with life and personal growth. The domains in this model have similarities with those in the PERMA model although the latter lacks the element of 'autonomy'.

Rath, Harter and Harter (2010) encapsulate well-being as falling into five spheres of life (career, social, financial, physical and community). They include an element of physical well-being not overt in Seligman's model. Although researchers tend to agree that multi-dimensional models are needed to capture the complexity of happiness (sometimes described as flourishing, or as optimal psychological functioning), it is unlikely that a single model is able to capture human functioning and existence across all psychosocial domains (Butler & Kern, 2016).

How fixed are happiness levels, and how might they be improved? Whilst common sense suggests that changing aspects of a person's immediate environment might be one route to increase happiness (e.g. buying a bigger house, making new friends, choosing a different school for one's children), it is less obvious that happiness levels can also be altered by changing how an individual functions (e.g. by changing the activities they pursue and their style of thinking (Lyubomirsky & Layous, 2013)).

Lyubomirsky et al. (2005) developed the Sustainable Happiness Model (SHM) in response to their research into the stability and origins of individual happiness. They indicate that 50% of happiness is inherited or genetic in origin, through research comparing large numbers of mono and dizygotic twins. For example, in a study involving 4000 twins (mean age 14-16 years), moderate to strong correlations between levels of SWB in monozygotic twin pairs (.42) were found, compared with a correlation of .14 for dizygotic and non-twin siblings, with half the variance in SWB attributed to genetic factors (Bartels & Boomsma, 2009). The fact that the SWB of identical twins, reared together or apart is similar, offers compelling evidence for the largely genetic basis of SWB: although twins reared together may develop similar characteristics and interests due to shared environment, those reared apart should not. It is also widely accepted that we all have a genetically determined 'set point', or 'set range' of happiness (Ryan & Deci, 2001). This seems to vary between individuals, with some people born naturally happier than others (Lykken, 1999; as cited in Fujita & Diener, 2005).

Although throughout life the positive or negative experiences we accumulate may lead to fluctuations in happiness levels, the SHM (Lyubomirsky et al., 2005) predicts that levels of happiness return close to their starting point after a life event (Sheldon, Boehm, & Lyubomirsky, 2012). This was shown in a classic study, where the spiralling happiness levels of lottery winners returned to their original levels within two years (Brickman, Coates, & Janoff-Bulman, 1978).

There is no current research exploring whether the set point is applicable to children, and given the greater levels of variation in childhood (Flavell, 1992), it may not apply. Also, the estimates of heritability in twin studies vary somewhat, a finding which suggests that the heritability of happiness may not be as high after all. For example, McGue and Christensen (1997) found heritability for 'affect' as low as .27 in a sample of 406 elderly Danish twins. This finding suggests the possibility that the set point for happiness may weaken over the life course. One might expect this, given the increasing impact of poor health and fitness levels on the well-being of many in later life. In one study (Diener, Lucas, & Scollon, 2006), 24% of participants changed their set point significantly in LS over the 17-year period of the research, and body mass index, blood pressure, and personality traits were all more stable measures than LS. Lucas, Clark, Georgellis and Diener (2003) explored whether unemployment alters the set point for life satisfaction by examining 24,000 individuals in Germany in a 15-year longitudinal study. They found that although levels of LS returned close to original

levels, they never returned exactly to former levels after a period of unemployment. These authors concluded that although LS is moderately stable over time, life events can, and do, have a strong influence on long-term levels of subjective well-being. In contrast to this, Weiss, Bates, and Luciano (2008) found that the genetic effects of personality may affect the rate at which well-being returns to the set point after a disturbance, and the degree to which well-being levels remain permanently altered. What this research seems to demonstrate is that the genetic basis of the set point for happiness for most people has been well established, but there are factors which can cause it to vary over time and in some conditions.

Lyubomirsky et al. (2005) seem to suggest that only 10% of the variability in happiness is due to life circumstances (e.g. ones gender, income, educational level, health profile, possessions or place that one lives). Surprisingly, they suggest that as much as 40% of the variance in individual happiness is due to intentional activity (the amount one exercises, how grateful or optimistic one is, and the goals we set ourselves). Some twin studies seem to support this, but published research with children is lacking. Bartels and Boomsma (2009) studied adolescent twin pairs and their siblings aged 13 – 28 years (with 5,024 participants from 2,157 families). They found high heritability rates for SWB (between 36% and 50%, and consistent with previous studies such as Lykken and Tellegen (1996)). They also found that the influence of environmental factors unique to the individual are important. These factors (e.g. income, education, marital status etc.) each had a small effect on happiness and accounted for a further 16% to 30% of the variance, with the largest part (as much as 20%) being unexplained in their study.

Meta-analysis of fifty-one interventions using PPIs with 4,266 participants suggests that intentional/volitional activity can increase individual well-being, with what the authors describe as, a ‘medium’ sized effect (r = .29; Sin & Lyubomirsky, 2009). This meta-analysis shows that happiness can be increased through intentional activity (e.g. the hobbies we pursue), or through altering one’s thinking (e.g. by practicing forgiveness), or by adopting a new behaviour (e.g. writing a letter of gratitude). The effect is increased when the goals or activities suit the person. This impact on well-being is thought to be mediated by the positive experiences that an individual accumulates in the pursuit of such goals (Lyubomirsky et al., 2005). It should be noted that although the evidence for this model is largely based on research with adult samples, there is evidence that the variables associated with happiness in adults may also be present in younger groups, for example in 9 to 12-year olds (Holder & Coleman, 2009). The meta-

analysis conducted by Sin and Lyubomirsky (2009) demonstrated better gains in well-being for those participants who were depressed, who undertook longer interventions, and the effects increased with age, with elderly people showing the most benefits. However, a large percentage of the sample was self-selecting (chose to undertake the interventions on-line) and this factor greatly limits the generalisability of the effects noted. This is a criticism of much research in positive psychology, as those who want or expect to 'get better' often do, independent of what kind of treatment they undergo. Mongrain and Anselmo-Matthews (2012) claim that a positive control condition can boost happiness as effectively as a PPI by activating 'positive self-relevant information' within participants.

The issue of matching the control condition to the treatment condition can also distort effect sizes. Boot, Simons, Stothart and Stutts (2013) describe how using a 'no-contact' control condition can lead to larger effects for the treatment group when compared to an inactive control group. This is because those in a no-contact control group enter a study with a much lower expectation of change than those in the treatment group, who may experience a placebo or expectancy effect. However, Boot et al. (2013) suggest this is resolved by designing treatment and control conditions with matched expectations. Following their review of internet interventions designed to improve well-being, Lyubomirsky and Layous (2013) concluded that engaging in any regular activity requiring self-discipline tends to promote well-being. Therefore, research on happiness needs to demonstrate that the effects are beyond those caused by expectancy, self-selection and a desire for self-improvement.

In summary, the SHM outlines the various elements that determine our happiness levels. Although the genetic basis may not be as large as 50%, happiness is generally accepted to be an enduring trait (McCrae & Costa, 1990). Although the model claims that as much as 40% is subject to conscious manipulation through intentional activity, the evidence for this is less clear cut, with a number of experimental effects showing improvements in happiness that could be caused by confounds due to experimental design. These include planning control groups which lead to a placebo effect for the treatment group only, and using self-selecting samples, both of which may inflate effect sizes for interventions which seek to increase happiness.

2.1.2. Subjective well-being

SWB is a multidimensional construct that has both cognitive and affective aspects (Diener, 1984). The cognitive aspects include the appraisals or judgements that we

make about how satisfied we are with our daily experiences (often termed life satisfaction). The affective or emotional elements include how frequently we experience a range of positive affect (PA) and negative affect (NA). These three factors: LS, PA and NA together form subjective well-being. In research on happiness and the validity of interventions in positive psychology, SWB has become the dominant construct used to measure the impact of intervention, both in research with adults and children (Suldo, 2016).

Whilst mental health difficulties are usually conceptualised by symptoms of distress (or psychopathology) and positive mental health is conceptualised as a lack of these symptoms, the dual-factor model of mental health (Greenspoon & Saklofske, 2001) argues for the inclusion of SWB in definitions of mental health along with the usual measures of psychopathology. In one replication study (Antaramian, Huebner, Hills, & Valois, 2010), 764 middle school children completed self-report scales of well-being and psychopathology and were grouped as being high or low for psychopathology and high or low for SWB. Predictably, most of the sample were 'well adjusted' (65%) and demonstrated high levels of SWB as well as low levels of psychopathology. This group understandably demonstrated the highest levels of academic functioning and engagement. As predicted, the 'troubled group' in this research had worse physical health, lower self-concept and poorer relationships and academic outcomes. Individuals in this group were high on psychopathology and low on SWB and had the worst outcomes. Importantly, the authors identified a 'vulnerable' group who were low on psychopathology but also low on SWB, and whose outcomes were as poor as the most troubled group (those low on SWB and high on psychopathology). The study seems to illustrate that measures of SWB can provide useful information about mental health and an individual's ability to adjust over time, which can be missed when only looking at indicators of mental distress/psychopathology (Antaramian et al., 2010). It also highlights the validity of using self-report data for screening purposes, to better target interventions with larger groups such as in schools (Greenspoon & Saklofske, 2001). What this model demonstrates is that measures of SWB can be just as important as measures of distress in understanding individual mental health.

A large systematic review of 1336 articles in the field of positive psychology by Donaldson, Dollwet, and Rao (2015) found that SWB was the most investigated construct (covered in 24% of the articles reviewed). However, they also found a lack of consistency in the definition of SWB used by researchers. The term was used interchangeably with the related terms of well-being, life satisfaction and happiness. Their review also found over 31 different scales were used to assess well-being.

Potentially this may indicate a lack of empirical rigour in the field, a failure to adequately operationalise the constructs being researched, and a resulting lack of construct validity. This is particularly important if studies are to offer a thorough exploration of PPIs and the variables that impact on their efficacy: do these interventions lead to the increases in well-being they claim, and are studies actually measuring the same constructs in a reliable manner? It is hard to assess these questions unless key constructs are defined and measures limited to a small number that have validity.

Gratitude is one of the key predictors of well-being, and Donaldson et al. (2015) found its impact when reviewed fluctuated between quite small effects (r = 0.14) to having a large impact (r = 0.49). This variation may be due to methodological weaknesses in studies, and a lack of rigour in how concepts are defined and measured. Donaldson et al. (2015) concluded that the criticisms sometimes made about rigour in relation to positive psychology were not supported by their meta-analysis, and that the evidence base for PPIs was growing, with researchers committed to using rigorous scientific methods.

There exist a range of theories which have sought to explain the purpose of negative emotions. For example, from the perspective of evolutionary psychology, they have been understood as triggers to specific action tendencies, which optimise survival when an organism is under threat (Cosmides & Tooby, 2000). The function of positive emotions has been written about less. Unlike negative emotions, positive emotions are thought to produce novel and broad-ranging thoughts and actions that are usually not critical to one's immediate safety, well-being, or survival (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009). Emotions are thought to arise when an individual attends to a situation and appraises it as being immediately relevant to currently active goals (e.g. the goal of gathering food energy (Frijda & Mesquita, 1994)). One theory which seeks to explain the adaptive nature of positive emotion, and how it increases SWB, and leads to wider benefits, is Fredrickson's 'Broaden and Build' theory (2001). This theory suggests that positive emotions experienced in the present cause an 'upward spiral', that has a lasting positive effect on the individual, and increases their well-being in the future.

According to the theory, negative thoughts and feelings associated with low SWB lead to the avoidance of new experiences, and avoidance of activities which strengthen social connections. Conversely, positive emotions in the short-term lead to positive experiences being sought out and embraced, further increasing SWB, and generating long-term and cumulative benefits. Over time, being kind, or thinking gratefully, allows

individuals to build personal, psychological and physical resources. The savouring of positive experience broadens the person's thought-action repertoire, and adds to their tangible personal resources, as well as building personal skills. Positive affect prepares the individual to be more engaged, and more attentive to the positive cues in their environment. The theory itself underscores the importance of positive emotions in the improvement of mental health. In this way, SWB is both a goal and a resource. Not only can it protect against mental health difficulties as outlined above (Antaramian et al., 2010), improvements in SWB are correlated with a wide range of benefits (Lyubomirsky & Layous, 2013), described further in the rest of this review.

The model itself has received some promising support. For example, Strauss and Allen (2006; as cited in Kerr, O'Donovan, & Pepping, 2015) found that those with high levels of PA, and low in NA, demonstrated an attentional bias for processing positive information, which they suggest demonstrates the manner in which positive emotions can broaden cognitive processes in accordance with Fredrickson's model. Inducing positive affect in experimental participants makes them more likely to process information globally rather than locally (i.e. seeing the big picture over noticing less relevant details (Fredrickson & Branigan, 2005)). Fredrickson (2004) claims that improvements in PA lead to more effective problem solving and more flexible decision making in a way that provides an evolutionary advantage. Fredrickson claims that a positive orientation literally 'broadens' ones attention, and what one notices. Clearly, if this is true, cultivating a positive orientation in pupils might offer benefits to support traditional methods of pedagogy and lead to improved learning.

In contrast, wider threats to human development and well-being have sparked an interest in resilience, particularly in children. This is defined as the capacity of an individual to adapt successfully to disturbances that threaten their life outcomes or development (Masten, 2014). This ability to adapt to and overcome adversity offers an alternative conceptualisation for how individual well-being can be achieved, to that of positive emotion espoused by Fredrickson.

Veenhoven (2016) suggests that we draw upon two sources of information when appraising our well-being, or how much we like life. The first, like Fredrickson's view of positive emotion, is based on affect: how positive we feel about some stimulus, and as in other animals, this amounts to the feeling based element of happiness. Veenhoven (2016) suggests this affective element exists to promote gratification of our basic needs. Unlike other animals, he posits that we also rely on cognitive appraisals of well-being, and that we compare how our life is with how we want it to be. Thus, our wants

are partly caused by common, and perhaps cultural standards of what makes a good life. He calls this cognitive element ‘contentedness.’ Like Fredrickson, Veenhoven’s conception of happiness has a subjective element, but unlike her, he includes an external and comparative element, which is incompatible with theories that suggest an internally regulated ‘set point’. In Veenhoven’s model, happiness is partly dependent on external factors (judgements informed by social comparison). These inevitably fluctuate in response to changes in our own circumstances or those of other people, and thus contradict the notion of an internally regulated ‘set point’ level of happiness.

2.1.3. Altruism

Altruism is defined as behaviour which benefits another organism, whilst being detrimental (i.e. costly) in some way to the organism performing the behaviour (Trivers, 1971). According to attachment theory (Bowlby, 1998), early relationships with supportive carers characterised by trust, responsiveness, and attentive care, promote positive social and emotional development, and allow children to feel a sense of security, explore novel situations and meet new people comfortably. The development of wider mutual interpersonal bonds provides early opportunities to foster and develop the sense of empathy upon which altruism depends. A number of theories have been proposed to explain an evolutionary basis for prosocial or altruistic behaviour, and these are summarised by Curry et al. (2018).

One theory they discuss is kin-altruism, which is thought to occur because the cost to the altruistic individual is outweighed by the benefits to that person’s relatives (i.e. other carriers of the same genes), in terms of natural selection and replication into future generations. This mechanism, which promotes caring and support within families, seems to be extended to members of the same community and even to individuals who share the same interests (Alvard, 2001). The finding that fans of the same football team, though strangers, are more likely to share each other’s pain in a simulated electric shock procedure than members of an ‘outgroup’ has been used as support for the evolutionary basis of altruism. Those who shared pain in this study were also more likely to evoke activity in the insula region of the brain before making their decision to help a fellow fan, an area of the brain which is associated with empathy (Hein, Silani, Preuschoff, Batson, & Singer, 2010). This research may demonstrate that willingness to engage in costly altruistic behaviour depends on prior activation of the insula, and therefore finds support for the existence of neural mechanisms underlying prosocial behaviour. However, whilst preference for one’s own group may confer an evolutionary advantage, it also serves many proximal functions such as in-group maintenance,

establishment of group boundaries and group identity (Tajfel & Turner, 2004), rather than having a sole purpose of survival (Brewer, 1999).

Altruism is thought to have developed during evolution, because we needed to cooperate to survive e.g. to hunt and forage successfully (Tomasello et al., 2012). These authors suggest that these small human groups relied on collaboration and emotional interdependence for their survival, and over generations this resulted in a genetically determined interest in each other's well-being. Tomasello et al. (2012) go further, to suggest that natural selection favoured those with this capacity for prosocial behaviour. This may explain why relative strangers in large cities are capable of kindness in spite of its cost, or the small chance that the kindness will ever be reciprocated. This concern for the well-being of others also extends to those individuals we are likely to meet frequently (i.e. friends), with some evidence that natural selection favours reciprocal altruism, because a kind act may be returned in the future, and thus confer a cumulative survival advantage (Axelrod & Dion, 1988; or for further detail, the Iterated Prisoners Dilemma (Trivers, 1971)). The theory that altruism has a survival advantage, may explain why trust, gratitude and forgiveness are important factors in friendships: these qualities preserve the long-term nature, and thus advantages, of such relationships. Whilst attachment theory (Bowlby, 1998) emphasises the role of early social bonds for survival, kin-altruism outlines how cooperative behaviour throughout the life-span has survival benefits. If kindness can increase status, as in shows of ostentatious giving, this may also confer a reproductive, and thus evolutionary, advantage (i.e. competitive altruism (Hardy & Van Vugt, 2006)). In short, these theories suggest that kindness, gratitude and altruism make sense even in circumstances where survival is competitive. This assertion is not inconsistent with a belief that anti-social or violent behaviour can also be adaptive in some situations, and with different outcomes (for example, if there is no other choice, or because aggression may confer a short-term gain). Whereas prosocial behaviour may serve to strengthen social resources important to survival, aggression may serve to protect the individual from threat and attack, with anti-social and violent behaviour seen as a distortion or 'high-end' variance of aggression, which is innate and adaptive in moderate doses (Ferguson & Beaver, 2009). In other words, aggression may also be adaptive, but this does not undermine the assertion that prosocial behaviour has survival advantages. In summary, altruism may have an evolutionary basis, although there are many proximal benefits of altruism which offer an alternative explanation for why costly behaviours continue to be performed.

2.1.4. Kindness

Whilst prosocial behaviour involves acting voluntarily and intentionally to enhance the welfare of others, this is considered to be altruistic if motivated by a genuine concern to benefit another person without expectation of benefit to oneself (Feigin, Owens, & Goodyear-Smith, 2014).

Although the related term of kindness has an everyday and well understood meaning, varied definitions have been adopted by researchers. These have focussed on kindness as a motivation to benefit others (Baldwin & Baldwin, 1970), as actions that benefit others (Kerr et al., 2015), and behaviour that is motivated by compassion (Long, 1997), as helping behaviour performed without a concern for personal gain (Campos & Algoe, 2009), and as a character strength (Peterson & Seligman, 2004). Binfet and Gaertner (2015) used children's drawings to explore their conceptualisation of the term, and defined it as 'an act of emotional or physical support that helps build or maintain relationships with others' (pp.36-37). The following simple definition of kindness will be used in the current review: 'An activity that promotes positive relationships' (Layous et al., 2012, p. 1). This definition reflects the more general aspect of kindness as a social activity that may, or may not, be altruistic in motivation.

2.1.5. Gratitude

Gratitude is the emotional response to receiving a personal and positive outcome from someone else that was not merited or earned (Suldo, 2016). However, gratitude is also a wider dispositional trait that involves a general 'life orientation' towards the positive in life (Wood, Froh, & Geraghty, 2010). One can be grateful for generally being alive, for the material benefits of one's life and environment and relationships, as well as for a gift. Wood et al. (2010) claim this wider definition of gratitude, as a dispositional trait, is strongly related to well-being because it engenders positive schemata that allow the individual to recognise, develop, and utilise the opportunities for incoming positive information around them. Gratitude is thought to be linked to well-being, because it is believed to facilitate the savouring and remembering of positive experience, and this allows these experiences to have a greater positive impact on the individual's mood (McCullough, Kilpatrick, Emmons, & Larson, 2001). Furthermore, these authors suggest that gratitude, like guilt, has a social and moral function that heightens the individual's sensitivity to having been helped, and subsequently motivates them towards future cooperation and prosocial behaviour to their benefactor. In addition, because having a grateful orientation predisposes the individual to positive appraisals

of their experience, gratitude has been hypothesised as incompatible with negative affect (NA; Owens & Patterson, 2013).

2.1.6. Positive Psychology Interventions (PPI)

Lomas, Hefferon, and Ivtzan (2014) define PPIs as theoretically grounded and empirically proven activities aimed at improving ones well-being. Effective interventions have included prompting participants to count their blessings (Emmons & McCullough, 2003), write gratitude letters (Boehm et al., 2011), visualise their ideal self in the future (Layous, Nelson, & Lyubomirsky, 2013), perform acts of kindness (Lyubomirsky et al., 2005), identify one's character strengths (Seligman et al., 2005) and visualise achieving one's life goals (King, 2001). A recent review of research within the positive psychology field, found that well-being was the most researched concept (339 out of 1336 of articles reviewed). Other PPIs were designed to enhance character strengths (70 articles), hope (63), gratitude (41), resilience (39) and growth (34), with the remaining 42% of articles having non empirical content (Donaldson et al., 2015). Of the 771 empirical studies reviewed, 78% used quantitative methods of data collection and 77% were cross-sectional in design. Only 10.5 % used mixed methods, and only 16% engaged children or adolescents. 161 of the empirical studies were intervention studies (21%). A third of these employed a quasi-experimental design, with two thirds using a within-subjects design, with only 29 studies employing a comparison group. This review of research, covering the period between 1999 and 2013, indicates how few studies employed experimental methods to research PPIs with children.

Sin and Lyubomirsky's research (2009) identified a number of important moderating variables that influence these effects on well-being, including whether the participant self-selected to join the intervention (and thus had higher levels of motivation to make the intervention work than found in the general population), and how the intervention was implemented (individual therapy had the highest impact on well-being compared to for example group therapy). Lambert and Barley (2001) have highlighted the finding that the specific therapeutic content and techniques of an approach (e.g. psychotherapy) is only one of four aspects that lead to positive or improved outcomes, and that the therapeutic relationship and expectancy effects (two possible moderating variables found to have impact in PPIs) may explain or contribute to improvements noted following participation in a PPI.

One of the most appealing factors about these interventions is that they achieve benefits in a relatively short period of time. Of the fifty-one studies reviewed by Sin and

Lyubomirsky (2009), none of the interventions lasted more than 12 weeks, and many were less than this in duration, and in many cases less than an hour a week was devoted to them. If these findings can be empirically verified, and generalised to children, PPIs in school settings have the potential to deliver tangible and relatively lasting benefits for children from minimal time commitments.

2.2. External factors affecting student well-being

2.2.1. School climate

Defined as the quality and character of school life, the school climate is an important determinant of individual student well-being (Kaplan, Dominguez, & Walsh, 2016). In optimal circumstances, a positive school climate is associated with good emotional and mental health outcomes, including low levels of bullying, and increased levels of student motivation (Kaplan et al., 2016). Other positive outcomes have been claimed including: healthy relationships, reductions in poor conduct and increases in student academic, emotional and behavioural success at school, and students also report feeling safer (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). Conversely, low ratings of school climate are associated with a range of unfavourable outcomes including relational aggression and poor classroom behaviour (Kuperminc, Leadbeater, Emmons, & Blatt, 1997).

There is some indication that PPIs can improve the whole school or class climate (Woodbridge, Rouspil, Thornton, Shectman, & Goldweber, 2014). In this follow-up study of a kindness intervention across six schools in Denver, U.S.A, a sample of 76 students and 30 teachers completed surveys to evaluate the impact of a school based programme of PPIs one year later. The Random Acts of Kindness (RAK) curriculum was implemented across all age groups (Kindergarten to Year 12) over the course of one year. The study suggested that implementation was varied, and on average only 34 minutes were spent a month delivering the programme. Nevertheless, using a classroom and school climate survey, teachers rated their classroom climate as significantly more positive. They identified greater classroom cohesion, higher levels of student respect, and felt staff modelled more kindness in their own behaviour. The study is limited by size and a lack of detail in the results that were reported e.g. means, standard deviations and effect sizes for the data. A lack of a comparison group who did not participate in the intervention makes it difficult to attribute the effects solely to the intervention in question, and expectancy effects cannot be ruled out as contributing to its impact. Finally, since information was only gathered from teacher reports of the

impact, the study lacked in external measures verifying the impact of the intervention on actual student behaviour.

Nevertheless, what this and other studies seem to demonstrate is that the school climate is an important context, like that of the family, where well-being can be fostered and developed. Not only this, it suggests that programmes which directly impact on relationships in school have the potential to provide lasting benefits and protection, particularly against those 'snares' which trap adolescents into an unhealthy developmental trajectory which may limit later-life outcomes (Ladd & Burgess, 1999).

2.2.2. Teacher-student relationships

The learning and social context in any classroom is largely shaped by the teacher (Eccles & Roeser, 2011) and healthy positive teacher-student relationships are essential to children's academic and social emotional progress (Denham, 1998). Marzano, Marzano and Pickering (2003) found that teachers who had 'high quality' relationships with their students had 31% fewer behaviour incidents in their classes than those who did not. This research adds to the evidence of the importance of targeting positive relationships, and interpersonal factors when designing interventions to improve well-being.

Bowlby's attachment theory (1998), describes how supportive family relationships foster an internal working model of the world, and the people in it as reliable and benign, and this template confers a sense of emotional security essential for independent social functioning, when children start school at the age of five. These attachments are maintained and transferred to teachers when they are warm and supportive (Bretherton & Munholland, 1999). The lasting impact of teacher-student relationships is consistent with a transactional model of human development (Bronfenbrenner, 1977) where the dynamic interaction between the changing individual and their changing context determines the form that development takes. In the early stages, secure relationships with a teacher confer advantages that set the way for positive classroom participation, that in turn nourishes and strengthens future teacher relationships, which then lead to mastery of new academic skills and so on (Birch & Ladd, 1997). Therefore, the development of positive relationships, achievement, behaviour and motivation should be seen as a reciprocal and dynamic process dependent on early, and continuing positive school experience. Interventions focussed on social and emotional competencies early on, have the potential to provide these cumulative benefits.

A questionnaire study of over 3000 middle and high school students in Estonia concluded that the teacher's attitudes to their students, as perceived by students, had the greatest impact on student coping skills, optimistic acceptance of life, psychological and physiological well-being and academic success (Ruus et al,. 2007). Virtanen et al. (2009) studied the perceptions of 24,000 school students in relation to their teachers and school climate factors, and found that a non-threatening school climate, characterised by trust and opportunities for participation, significantly predicted positive student mental health. Wentzel (2005) highlights the potential that teachers have to motivate prosocial behaviour in students because of their social power, and the inherent desire of students to seek social approval and acceptance. This seems to indicate that teachers are well placed to implement PPIs and other measures to induce prosocial qualities in their students.

Hughes, Cavell and Willson (2001) demonstrated that positive teacher-student relationships in kindergarten predicted students' popularity with other children as measured by sociometric nominations: if children perceived that another child had a supportive relationship with their teacher, they were more likely to rate that student as likeable. This suggests that improving teacher-student relationships may enable the teacher to offer better support to students with troubling behaviour, and through this promote peer acceptance, itself a powerful influence on the well-being of children (Holder & Coleman, 2009).

Birch and Ladd (1997) illustrated some of the approaches employed by teachers with positive relationships: they naturally coached students to solve conflicts, encourage cooperation and modelled respectful and prosocial behaviour. The extent to which they do this in school determines the quality of the teacher-student relationship. However, Jennings and Greenberg (2009) indicate that the social and emotional competencies of teachers vary widely, and that those with the highest competence in this area are best placed to implement effective social and emotional curriculums, achieve supportive relationships with their classes, and design lessons that build on student strengths. This variability in the personal skills of teachers argues for interventions and training for staff in schools to foster positive student relationships and foster social competence.

Suldo et al. (2015) use the related term school connectedness, to capture the benefits of these school based relationships. They describe this construct as a belief that the adults in a school care about their learning and about them as individuals. School connected ness is associated with higher levels of SWB. In one study, students with the highest levels of SWB felt their teachers provided high levels of emotional and

instrumental support (Suldo et al., 2014), a finding that supports the connection between student well-being and school connectedness. This construct is considered to be a protective factor against substance abuse, violence and early sexual initiation (Resnick et al., 1997). School connectedness is seen at highest levels in students who have positive relationships with teachers, with other students, and in those who attend a school where levels of connectedness are on average higher. In addition, teacher support has been shown to protect children with the highest levels of externalizing behaviour and aggression from becoming disaffected (Gest, Welsh, & Domitrovich, 2005).

2.2.3. Peer relationships

Peer relations provide another important context for the development of social competence and lifelong well-being (Cheng & Furnham, 2002). Social relationships are significant correlates and predictors of children's happiness (Holder & Coleman, 2009). Consistent with this is the finding that CYP report experiencing the highest levels of happiness when in the company of friends, and the lowest when alone (Csikszentmihalyi & Hunter, 2003). Happiness may be a cause, as well as an outcome of social relationships. This may be particularly true in children, with research suggesting that greater expression of happiness is a marker to other children that an individual is amenable to social contact, and thus external expressions of happiness (e.g. smiles, socially welcoming behaviour) may promote further relationships (Frijda & Mesquita, 1994). Together, these findings support the importance of attempting to facilitate and foster friendships and happiness in schools, as they are linked with positive developmental outcomes.

Sociometric status is an accepted method for studying peer acceptance in children (Gest, Graham-Bermann, & Hartup, 2001). Peer nomination scores taken in elementary school are known to be stable and correlate well with other reports of pupil behaviour and relations (Wasik, 1987). Coie, Dodge, and Coppotelli (1982) formulated five widely used categories of social acceptance in children, based on peer nominations. These were: popular, rejected, neglected, controversial, and average. They defined popular children as those who receive a high number of positive nominations and few negative ones, and rejected children as having the opposite pattern of nominations. Birch and Ladd (1997) described how the relationships children form with their peers in the classroom function as either a source of stress or support, and so have the potential to shape the course of a child's early school experience. Peer rejection on the other hand

predicts school avoidance, conduct problems and academic failure (Parker & Asher, 1987).

Popularity and peer status become increasingly important to children as they mature, particularly between the ages of 10 and 14 years of age (LaFontana & Cillessen, 2002). These authors used interviews and sociometric surveys to explore children's perceptions of popularity. Unsurprisingly, popular children were seen as prosocial, and unpopular children were perceived as isolated and anti-social. This research demonstrates the utility of interventions that aim to increase prosocial behaviour in order to improve the popularity of vulnerable children. Just as positive peer relations promote happiness, negative ones reduce happiness, with researchers suggesting that personal relationships, because of their substantial contribution to SWB, are 'not merely correlated with happiness but play an essential causal role,' (Holder & Coleman, 2009, p.333). Thus, peer rejection in childhood can have long-term and very negative outcomes for children (Kupersmidt, Coie, & Dodge, 1990) and may be a pathway to anti-social behaviour at adolescence. The Social and Emotional Health Survey (Furlong, You, Renshaw, Smith, & O'Malley, 2014) includes peer support as one of its twelve positive psychological building blocks (along with self-efficacy, and emotional regulation) and so acknowledges the status of friendships as a key indicator of positive mental health.

Like peer rejection, having antipathetic relationships in childhood (i.e. having a mutual enemy) is common and can be associated with maladjustment (Card, 2010). An antipathetic relationship is defined as a relationship where there is mutual dislike or antipathy between two children. As one might expect, there is strong evidence that those children prone to making enemies are low in measures of prosocial behaviour (Card, Isaacs, & Hodges, 2007). However, there is little research exploring whether encouraging prosocial behaviour in children reduces levels of rejection or antipathetic relationships. Nevertheless, SEL programmes are thought to have more impact on troubled children than those with average or high levels of well-being (DeAngelis, 2010).

The research cited above suggests that encouraging prosocial behaviour may impact on levels of peer acceptance and in so doing has the potential to raise the levels of SWB in all children, but particularly those with lower levels of popularity. Holder and Coleman (2009) found that positive peer experiences in 9 to 12-year olds accounted for 15% of the variance in these children's SWB, and therefore promoting activities which increase popularity between students has the potential of also increasing the number of

children who are able to benefit from the wide range of positive outcomes associated with prosocial behaviour and higher levels of SWB. Kindness and gratitude interventions offer the potential to improve the peer relations, and thus well-being, of all children within a group, whilst targeting those at greatest risk of long-term poor outcomes.

2.3. Introduction to the systematised literature review

The research reviewed in the next section reflects a growing interest in the use of kindness and gratitude interventions to boost the well-being of children. It identifies some of the elements that might be used to devise an evidence based, short-term, whole class, positive psychology intervention. It also highlights some of the inherent weaknesses in both the programmes described and the research that has been used to evaluate them. This review then leads into a study which sets out to evaluate the effectiveness of a programme devised by the researcher, based on the principles reviewed.

2.4. Review of kindness and gratitude interventions with children

2.4.1. Key terms and databases used

A search of the following two electronic databases was conducted: PsycINFO and Web of Science, with the most recent search conducted on 24th May 2018.

The first stage used search terminology from a review of the empirical kindness research conducted by Curry et al. (2018). The search terms from this review were replicated to ensure the current review captured the full range of articles relevant, using a tried and tested approach, as well ensuring that subsequent studies published since this review was conducted in 2015 were included. This search was then combined with a search using the following string to target articles with child/adolescent participants: (child OR children OR student OR class OR School). A second search of studies involving children and gratitude was conducted. Finally, the abstracts and titles of the articles found were screened by the author for relevance (see criteria below).

Stage 1:

A) Use of the following search string to extract articles related to kindness studies and children:

(kindness OR altruis* OR prosocial OR Co-operat* OR cooperat*) AND (wellbeing OR well-being OR happiness OR life satisfaction) AND (experiment* OR control OR condition OR random OR empirical OR trial) NOT mindfulness OR meditation OR loving-kindness AND (child OR children OR student OR class Or School).

B) Use of the following search string to extract articles related to gratitude studies and children:

(gratitude OR grateful OR thankful OR thank*) AND (wellbeing OR well-being OR happiness OR life satisfaction) AND (experiment* OR control OR condition OR random OR empirical OR trial) NOT mindfulness OR meditation OR loving-kindness AND (child OR children OR student OR class Or School).

Stage 2:

The exclusion criteria are detailed in Figure 1 below. These were adopted in line with the approach taken by Donaldson et al. (2015) to ensure the articles reviewed reached accepted levels of methodological and empirical rigour. Since the aim of the current review is to explore the efficacy of interventions and infer causality, those studies without a control group (e.g. if they were qualitative or correlational) were excluded. This practice follows accepted methods for evaluating and testing treatments and interventions empirically in psychology (see for example Chambless and Ollendick (2001) for a fuller discussion). The abstracts and titles of 336 articles were screened by the author to extract those relevant to the current review.

Criteria for exclusion after looking at title or abstract or full text:

- Article was not peer reviewed;
- Article did not use an experimental design with a control group for comparison;
- Article did not include a kindness or gratitude intervention;
- Article did not test the hypothesis that kindness/gratitude increase well-being;
- Article was a dissertation;
- The intervention was of more than 12 weeks in duration (i.e. not short-term);
- Article was a duplicate of one already extracted.

Figure 1: Systematised literature review: criteria for excluding studies

Because the purpose of the systematised review was to identify the features of an effective intervention to improve well-being in CYP, articles were only included if they described a specific intervention that focussed on the following areas of positive psychology: kindness, helping, prosocial behaviour, giving and gratitude (thus research involving other interventions e.g. developing character strengths was excluded). Only studies that set out to test the hypothesis that kindness/gratitude increases well-being were included.

It was important to distinguish between positive psychology interventions (as defined by Seligman et al., 2005) and social emotional learning programmes that also claim to improve well-being though over a much longer period. In line with Seligman et al. (2005) articles were only included if the intervention lasted twelve weeks or less. To be selected, the study had to be published in English, within a peer reviewed journal.

Figure 2 outlines the results of the literature review at each stage.

Web of Science	**PsychINFO:**
Kindness related search: 1171 articles	Kindness related search: 1303 articles
Kindness + child related search: 231 articles	Kindness + child related search: 5 articles
After screening abstract and title: 5 articles	After screening abstract and title: 1 article
Gratitude related search: 1152 articles	Gratitude related search 2152 articles
Gratitude + child related search: 86 articles	Gratitude + child related search: 14 articles
After screening abstract and title: 6 articles related to children.	After screening abstract and title: 0 articles
Total for review from search: 11 articles	Total for review from search: 1 article

Figure 2: Results of the literature search

In total, twelve articles relating to CYP were found. A further six articles were identified from the references of these twelve, which also met the inclusion criteria, together

providing a total of seventeen articles to be reviewed (comprising eighteen studies because one article described two studies).

A number of studies with adult participants will also be discussed in the review that follows, in order to provide a broader context to the themes and questions being explored. Those studies involving adults have been considered as relevant if they provided a design, methodology or experimental procedure on which the studies with CYP were based, or because they provide a fuller commentary on the findings of a study involving CYP.

Following full reading of the articles by the researcher, six articles were rejected for the following reasons:

- One article lacked a control group
- Three articles did not measure or seek to affect well-being or happiness
- One article was cross-sectional
- One article referred to research from a doctoral thesis (and was not published in a peer reviewed journal).

Eleven articles remained for detailed review describing twelve studies with child participants where either kindness or gratitude or both featured as an intervention or an experimental variable, and where the study tested the hypothesis that kindness or gratitude causes increased well-being.

The following types of intervention were featured in the articles extracted:

- Two articles related to studies with more than one intervention (i.e. both kindness and gratitude, or one of these and another PPI)
- Four studies related to sharing/giving behaviour;
- One study related to a kindness intervention;
- Five related to gratitude interventions.

2.4.2. Data extracted from identified studies

The following characteristics and categories of information and were collected about each study:

a) Participants: descriptive data including age and gender

b) Nature of the Intervention: gratitude, kindness, multi-target and description of the independent variable

c) Experimental design: including nature of control group

d) Measures used (e.g. well-being, teacher ratings);

e) Results of the study including an effect size if quoted.

f) Notes/comments regarding the findings

This information is located in Appendix A.

2.5. Summary of data from targeted studies

2.5.1 Participants

The twelve studies reviewed included a total of 2,039 child or youth participants. The ages varied from 20 months to 19 years. The types of research in some cases dictated age and are grouped as follows:

- Four studies related to sharing/giving behaviour in young children by asking them to share treats, with happiness measured by observer ratings of the participants' faces.

  240 participants, mean age: 29.5 months; range 20 months - 60.8 months.

- Three studies related to a kindness intervention or multi-target intervention (i.e. where kindness was being studied alongside another PPI):

  Participants were asked to complete a number of kind acts (usually three to five) in a given week, for a variety of unspecified recipients including friends, family and strangers.

  1282 participants; mean age: 11.47 years; range: 5 -17 years.

- Five studies related to gratitude interventions:

  Participants are asked to either:

  a) Count the things each day they are grateful for ('counting blessings');

  b) Write a gratitude letter to someone who has been kind to them, and deliver it by hand in person.

  540 participants; mean age: 10.86 years; range 8 years -19 years (twenty-one participants were in Grade twelve i.e. over the age of sixteen and accounting for

only 3.8% of this sample. It was not possible to evaluate the study without including this adult section of their sample in the data).

The majority of participants were from North America, Canada and UK, although one study took place in China and another in a small rural village in Vanuatu (South Pacific).

Two of the interventions reviewed lasted for 10 weeks, one lasted only one week, and the others lasted between 4 and 6 weeks.

All studies, apart from those relying on observer ratings of happiness, used a combination of some of the following: self-report measures of subjective well-being, happiness, life satisfaction or positive and negative affect (these included The Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999), The Steen Happiness Index (SHI; Seligman et al., 2005), The Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), and The Positive Affect and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988).

2.5.2 Recruitment

In one study in a remote location, all the children aged between 20 and 22 months were selected to take part and gathered by 'word of mouth' (Aknin, Broesch, Hamlin, & Van de Vondervoort, 2015). In one study, participants were recruited with the incentive of course credit towards their under-graduate psychology degree. In one study, adverts were placed in the community across various locations and the remaining studies consisted of convenience samples (where whole class groups were assigned to one or other of the experimental groups, if the school had agreed to participate, after being approached by the research team.

2.5.3 Research design

Two of the smaller 'giving' studies (e.g. Wu, Zhang, Guo, & Gros-Louis, 2017) used randomised groups with one study (Paulus & Moore, 2017) that did not mention how participants were allocated. In the remaining studies, all involving more than twenty-five participants, ten employed a quasi-experimental design where students were allocated to intervention or condition on the basis of which class they belonged to. Three of these studies ensured both research assistants and teachers were blind to the hypotheses and the conditions each were assigned to (e.g. Froh, Kashdan, Ozimkowski, & Miller, 2009); Froh et al., 2014). Two studies had participants act as their own control, taking baseline measures before intervention and then again after intervention (i.e. employing

a within-in subjects design (see Appendix A for details). One of these studies randomly assigned groups to either waiting list control or intervention (Froh et al., 2009).

2.6. Summary of findings from targeted studies

What follows is a detailed review of twelve studies involving CYP and kindness or gratitude interventions. Reference will be made to the wider literature with adult participants to allow comparison and discussion of the effects noted. Please refer to Appendix A for a table summarising each of the studies reviewed in detail.

2.6.1 Giving and sharing studies

Four studies were reviewed that belong to what is sometimes called the 'prosocial spending' paradigm that involved children (described below). These studies are based on the hypothesis that positive emotion (i.e. happiness) is a proximal mechanism that reinforces and rewards prosocial behaviour (Paulus & Moore, 2017). The evolutionary focus of these studies required participants as young as 20 months of age in order to test evidence for the relationship between generosity and happiness early in human development. The studies within this paradigm are based on the premise that happiness might serve as an internal reward system for acting in ways that promotes survival and reproduction i.e. through kindness (Buss, 2000), and they seek to demonstrate that kindness can result in happiness for the giver.

Aknin, Dunn and Norton (2012a) call this physiologically reinforcing sensation a 'warm glow' and suggest it is one reason an individual may engage in altruistic behaviour, in spite of the costs to them. Their study found that not only were toddlers rated as happier when giving their treats away to a puppet than when receiving them, but their happiness increased when they were giving their own, rather than the experimenter's treats. The authors interpreted this as evidence for the hypothesis that costly giving causes, or results in, the greatest pleasure (i.e. the 'warmest glow'), even in young children.

However, the design of the study had a number of weaknesses. Firstly, children's happy behaviour (i.e. smiling/laughing) was used to measure happiness by coding and counting their particular facial expressions. This is an external 'proxy' for the emotion that they claim to study (i.e. an internal 'warm glow' that rewards giving). The two may not be equivalent. For example, whilst laughter may indicate happiness, humans also laugh in a variety of situations (e.g. when they are surprised, nervous, or if something is funny), each with a different purpose or cause. Thus, it is not clear whether laughter can be said to be a measure of how reinforcing a particular stimulus is. Secondly,

although thirty toddlers were recruited, ten had to be withdrawn from the study because of 'temperament', this is a high rate of 'selection' which may introduce a bias in the type of participants selected, which in turn may reduce the representativeness of the sample of children used, and the generalisability of the findings. Thirdly, the design rests on the assumption that the children believed the puppets to be real and capable of eating. This belief was necessary to simulate altruism, which relied on the children believing they had given something away permanently to benefit another individual. This was achieved by asking the children to place 'treats' in the puppets' bowls if they wished to give them away in preference to keeping them for themselves. Once given, the experimenters made loud eating noises so that the food seemed to be eaten by the puppet (it was actually forced out of sight into a false bottom in the bowl). However, we do not know whether the children actually believed that the puppets ate the food, and without knowing this we cannot assume their actions were done to benefit the puppets, and that the procedure actually tested altruistic giving. They may have put the treats in the bowl simply because they enjoyed watching the puppet seem to eat the treats. If this were the case their actions would not be altruistic, but done for the entertainment value.

The authors of this study cite the research of Hamlin, Wynn, Bloom and Mahajan, (2011) as providing evidence that toddlers of this age believe puppets to be real. However, Hamlin et al. (2011) used participants aged between 5 and 8 months of age, a much younger age group who may respond differently to puppets than toddlers of 20 months and above. It is feasible that children laughed at the spectacle because it seemed novel, unusual and unlikely, or that they simply liked seeing the puppet eat treats, this would confound the finding that giving creates happiness. Fourthly, the procedure had various stages, distinguished only by whether the treats were given to the toddler (to be their own) or mysteriously 'found' by the experimenter (and thus determined not to be their own but which they are allowed to 'give' to the puppet). The authors claim this allows them to distinguish between costly giving and giving with no cost. It is not clear whether the children were able to distinguish which treats were and were not their own. Fifthly, the children were asked whether they wanted to give treats to the puppet, this could be considered to be an instruction, and undermine the premise that the actions are performed altruistically (i.e. with the results confounded by a social desirability bias to follow the instruction to please the researcher). Finally, although the children were young, the study has no way of ruling out that the effects were not related to some form of early socialisation (e.g. where certain behaviours have been valued and reinforced by the child's family rather than being a spontaneous expression of

innate behaviour). Without this evidence the premise that the results are evidence of an evolutionary mechanism is much weakened. The children may feel a ‘warm glow’ because they are conforming to expected forms of behaviour that parents and family have socialised them to respond to early in their lives. Indeed, altruism in young children is known to be influenced by parenting. For example, children who were found to share more in nursery, were found to have parents who talked more about emotions with them when observed by the researchers reading to their children (Hoffman, 1975).

A replication of Aknin et al. (2012 b) was conducted in an isolated rural village on the small island of Tanna, Vanautu in the South Pacific (Aknin et al., 2015). Again twenty children were selected although due to the small numbers living on the island, the age of participants was between 2.4 and 4.8 years, and thus even the youngest child in this replication was at least 6 months older than the average age in the original study, with some considerably older. Again the children displayed more happiness when giving their own treats to a puppet than those ‘found’ by the researcher, or than when given candy to keep. Whilst it is encouraging to see the same result here as in Aknin et al. (2012 b), the small sample size restricts the generalisability of these findings, if this small sample is not representative of the population of children as a whole. A major disadvantage of the study, which claims to demonstrate that the ‘warm glow’ phenomena is universal across diverse cultures and societies, is the fact that puppets are not known in this pre-industrial culture. The novelty of the spectacle for the children (a monkey animatedly eating treats) is the sort of thing children and their parents all over the world might be intrigued by or laugh at, and it is hard to distinguish in each case whether the laughter indicates happiness or amusement or has some other meaning. It does not seem straightforward to interpret their laughter as evidence for a ‘warm glow’ effect. The design of this study rested on participants believing the puppets to be alive, the older age group in this replication calls this assumption into question.

Paulus and Moore (2017) used the pro-social spending paradigm to explore whether children know that giving leads to happiness. They wanted to find out whether children expected that giving something away would result in pleasant feelings. The authors hypothesised that children would expect to feel happier if they knew this, and that this conscious awareness would mediate altruistic behaviour even in young children. Sixty-four children between 3 years and 6 years of age in Germany were randomly assigned to three conditions and then tested individually in a room to ascertain how happy ‘giving’ made them. Prior to this stage, they were asked to imagine or forecast how happy they would feel giving stickers away to a person featured in a photograph. The

researchers found that these pre-schoolers did expect that sharing would make them happier, and that this was correlated with the actual amount they gave. In other words, the authors claim the children who gave more did so because they expected this would lead to greater happiness. However, the procedure depended on asking children to imagine how they would feel if they gave something away compared to if they did not give something away. This hypothetical situation relies on underlying cognitive capacities known to be determined by age, including their Theory of Mind (ToM; Wimmer & Perner, 1983). However, the study found no relationship between age and the children's emotional understanding of their feelings after giving/not giving. With some children as young as 3 years placed in this verbally and imaginatively demanding situation this would not be expected. The children were asked to do the following: 'Pretend you would have given this balloon to Maria (girl in photograph), how would you feel?'. Their analysis, that expecting a kind act leads to happiness, is based on correlation rather than evidence for causation, with some other variable possibly mediating the relationship.

Finally, Wu et al. (2017) explored whether children (aged 3 to 5 years) attending kindergarten in China became happier when giving away stickers in two conditions: one where they were free to share or not, and in another where they were instructed to share. They claim to have replicated the effect that giving creates happiness in young children, but only when the children chose to share rather than felt obligated to. In this study, although children gave more where the recipient had 'earned' their stickers, the children appeared happiest when giving to those who had done nothing i.e. when giving altruistically. The authors argue that where children chose to share freely, they did so because of the positive mood experienced following such altruistic sharing. This finding seems to mirror that observed in Aknin et al. (2012 b) who demonstrated that children were happier giving their own treats away to puppets than receiving them, and keeping them for themselves. Wu et al. (2017) claim their results elaborate on the effect even further. They suggest the study demonstrates that children also give in some situations because they feel pressure to conform to the expectations of the adult, but when this happens there is no accompanying 'warm glow'. This would be consistent with earlier hypotheses that altruism is required for the reinforcing 'warm-glow' to be experienced. However, the authors cannot rule out the impact of social pressure in either condition in this study, because the children would have known that the stickers they shared (by placing them in an envelope) might be checked by the researcher later in the experiment. This may confound the differences between the two conditions, due to demand characteristics in the design, with both conditions amounting to obligated

sharing, one because the children were asked to share the other due to a social desirability bias.

In summary, the four studies reviewed in the prosocial spending paradigm attempt to demonstrate that altruism in young children is driven by increases in positive affect after giving. Whilst similar effects were noted across different cultures and countries, each study reviewed, demonstrated a number of methodological weaknesses including small sample sizes, and experimental situations that lacked ecological validity. This paradigm fails to isolate important age-related variables that may moderate the effects noted which include language complexity, Theory of Mind, symbolic pretence and ultimately all fail to rule out the impact of social factors rather than biological predisposition as causing the effects. However, the authors of these studies claim to demonstrate in one form or another that altruism is accompanied by an emotionally reinforcing 'warm-glow' and that this is found even in very young children. This raises the possibility that the mechanism might be considered as an innate evolutionary adaptation required for survival in early human social groupings.

2.6.2 Gratitude studies

Five studies were reviewed involving children. Three of these used gratitude diaries (otherwise known as 'counting blessings'). Owens and Patterson (2013) adapted this paradigm for use with children aged 5 to 11 years and asked them instead to draw a picture of something they were thankful for 'that day.' No changes were found in the gratitude condition on measures of LS, PA or NA, and there were no advantages of performing this intervention over the control activity (completing a 'neutral' drawing activity). The authors speculate that a more general prompt (e.g. *think of things you are grateful for in your life*) might have induced a feeling of gratitude prior to drawing. It seems feasible that a more general prompt would be likely to focus participants on those things they value more in their lives e.g. family and friends, rather than a prompt enquiring about things they are grateful for on a particular day. Consistent with this, the authors found that children mostly drew pictures of sporting activities and not family members. These authors found no significant increases in any outcome variable measured, and because they did not ask participants to complete a pre and post intervention measure of gratitude, it is not known whether the intervention actually improved gratitude levels. Without this, it is not known whether the drawing paradigm or some other factor failed to cause an improvement in well-being found in the study being replicated (Froh, Sefick & Emmons, 2008). This study also failed to find any age-related differences in any of the measures taken. Given the cognitive complexity of gratitude,

with some authors claiming that gratitude only emerges between the ages of 7 to 10 (see Froh et al., 2008), it seems unlikely that younger children would respond to the intervention in the same way as older children. One explanation is that the prompts used failed to induce gratitude in any participants regardless of age, and therefore could not have led to improvements in SWB or the other measures taken. The authors felt this was not the case, and noted that children in the study as young as 5 and 6 years drew pictures of things they were grateful for, and gave coherent verbal accounts of why these things were important to them.

Froh et al. (2008) attempted to replicate a 'seminal' study conducted by Emmons and McCullough (2003). They asked their participants (aged 11 to 13 years) to write about five things they were grateful for each day in one week (condition one) or once a week over five weeks (condition two). Like the original study, Froh et al. (2008) only found significant improvements in well-being for participants when compared to a negative control condition, who were asked to write about 'daily hassles'. The effect size of 0.04 between these two groups is noted to be a small effect. The authors acknowledged that this effect could have been achieved not because the gratitude intervention increased PA (as predicted), but because the hassles activity may have induced negative affect (and reduced levels of SWB). This is discussed further below.

Although the study did not find any main effects on LS across groups, it reported a significant increase in school satisfaction for the gratitude group. The Brief Multidimensional Life Satisfaction Scale (BMLSS), which was used to measure LS across various realms (home, school, friends etc.), has only five questions, and therefore the information on which this claim is based can be no more than a few questions from this scale. In fact, the claims made by Froh et al. (2008) were based on responses to one question. The demand characteristics imposed on participants because their participation took part in school could easily have primed 'school relevant' grateful memories over other material, thus explaining this effect. A major flaw of the study, acknowledged by its authors, again relates to their failure to measure dispositional gratitude as a plausible moderator of the positive effects noted. This might occur if for example there were more participants in one group than another with high levels of residual gratitude. Pre-existing levels of gratitude, or an effect where the intervention has a disproportionate impact on those with higher levels of gratitude, could feasibly mediate the noted effects.

Froh et al. (2009) studied the impact of a gratitude letter/visit. They found some evidence that the impact of gratitude interventions might be moderated by residual

levels of PA, and those low in PA at the start of the study increased in well-being following the intervention. Participants were asked to think of people who had been especially kind to them, but who they had never thanked, and write them a letter and deliver it in person. The children and youth in this study were 8 to 19 years (*N* = 89). Although no overall benefits were noted in the gratitude condition over the control, students low in PA at baseline showed statistically significant increases in subjective well-being after performing their gratitude visit, this was not the case in the control condition, or for those higher in PA. However, the gratitude intervention did not reduce NA. Although measures of gratitude were taken prior to intervention, these did not increase significantly. Attempts were made to check the validity of the intervention by one of the researchers who questioned each participant prior to post-intervention measures being taken. 100% of participants reported to the researcher that they had completed their gratitude visit. However, 0% of the students in grades eight and twelve (*N* = 58) returned letters sent by the research team to parents asking them to verify the children had actually carried out their visit. It seems feasible that low compliance may be one reason that overall measures of SWB did not improve for the treatment group as a whole after the gratitude intervention: the majority of participants simply had not carried out their gratitude visit. It should also be noted that the direct intervention of one of the researchers prior to measurement (who questioned participants about what they had done) might have biased some of the participants' later responses in the measures taken.

The gratitude activity used in this study received validation as an effective PPI in a prior study (Seligman et al., 2005). However, the participants in the original study were adults who joined the internet study because they were motivated to become happier and were thus a skewed or self-selected sample. The participants in the present study were from one particular school, were predominantly from higher income families and 74% indicated that God was extremely important in their lives. Belief in God is known to be associated with elevated levels gratitude as a trait (Emmons & Kneezel, 2005) and thus the participants in this study would be unlikely to respond in a manner representative of the wider community.

What this study seems to show is that although gratitude interventions can, and sometimes do improve SWB, the effect may be moderated by a number of variables not present in all studies or all samples. In this study the effect on SWB was moderated by low PA, but because of the quasi-experimental design, there may also have been other unidentified individual differences that affected the impact of gratitude

intervention, not detected. To identify these variables, further studies which randomly assign participants are needed, where individual differences are controlled for in a number of comparison groups.

Although Theory of Mind is generally established between ages 4 and 6 years (Harris, Johnson, Hutton, Andrews, & Cooke, 1989), this is unlikely to be the only developmental competency required to experience gratitude. For example, children in one study aged 7 years, although able to recognise common emotional expressions in faces (e.g. happy, sad), were not able to recognise gratitude (Harris, Olthof, Terwogt, & Hardman (1987). Although some authors claim that gratitude emerges following the development of a ToM (McAdams & Bauer, 2004), others such as Froh et al. (2009) stress that gratitude is an emotion that requires a level of cognitive complexity that emerges later in development than some other forms of prosocial thinking. Those with the highest levels of perspective taking are thought to be able to attain the highest levels of well-being from gratitude interventions and other PPIs (Layous et al., 2012). Gratitude is thought to emerge when children become less egocentric, as empathy skills develop, and as children are better able to understand when acts are intentional. Froh et al. (2009) conclude that gratitude develops between the ages of 7 and 10 years, but stress that the 'developmental trajectory of gratitude is unknown' (p.409).

Froh et al. (2014) outlined three cognitive appraisals which they claim must be carried out before an act can trigger an experience of gratitude. Firstly, to feel gratitude, the target of the prosocial act must realise they have acquired a benefit of value from the act. Secondly, they must make a judgement about whether this has been provided to them altruistically, and finally, they must make an assessment that this was accomplished at some cost to the giver. The ability to make these appraisals rests on pre-existing cognitive capacities including an ability to reflect on the perspectives of others (Layous & Lyubomirsky, 2014a). Froh et al. (2014) designed an educational intervention to teach these appraisals to see whether participants increased in their capacity to experience gratitude. Participants took part in a series of five half-hourly lessons where they were taught to understand and be aware of the intentions behind prosocial actions, the costs incurred to the givers, and the benefits to those who received them. Eighty-two children between 8 and 11 years were assigned to either the intervention group or an emotionally neutral 'attention control' condition. Their benefit appraisal curriculum was taught by graduate students who were assigned 'blind' to each class. Measures of grateful thinking were devised. These consisted of assessing participants' ability to answer questions about three vignettes depicting scenarios

relevant to gratitude, and to imagine they were part of each scenario e.g. '*How thankful would you feel in this situation?'*

A questionnaire was used to measure each participants' gratitude. Whilst the control group showed no change in any of the measures taken post-test, the gratitude condition demonstrated a large increase in grateful thinking (*d* = .78) and their growth in grateful mood was also significant, though the effect was described by the authors as 'small'. Positive mood increased and demonstrated a medium effect. The intervention did not seem to influence measures of negative affect or life satisfaction. Some of the positive effects were noted twenty weeks after the start of the intervention. The authors concluded that they were able to produce gratitude in children by teaching appraisals relevant to gratitude at an age where this quality is still under development. The authors acknowledged a number of weaknesses with the design. Firstly, they used a convenience sample, with each class, rather than each individual assigned to each condition. Not only this, the research took place in a school, and participants in each condition could have discussed the study and thus known which condition they were in. As a consequence, those in the control group could have developed a negative view of their place in the research because of the neutral nature of their own activity (thus suppressing a placebo effect in this group, but not in the intervention group).

Another flaw not acknowledged by the authors relates to what was measured. Although the intervention seemed to show small improvements in grateful feelings on a self-report questionnaire, no effect was found in LS or in NA. The main, and largest, effect of the intervention was in 'grateful thinking' as measured by use of gratitude vignettes and the children's ability to reason about the character's understanding in each vignette. It could be argued that the lessons had improved the children's ability to talk and reason abstractly about situations featuring giving and gratitude, without developing the ability to experience gratitude more fully. The process might be similar to that outlined in research on empathy, which defines a cognitive and an affective element, both of which are required to enact an understanding of another person's emotional state, and to experience the emotional contagion associated with empathy (Shamay-Tsoory, Aharon-Peretz, & Perry, 2009). In this case, the intervention may have developed cognitive gratitude only. Nevertheless, gratitude as a quality was measured, and this increased for the intervention group but not the control group. The study also demonstrated that reasoning about gratitude/benefit appraisals can be usefully developed through intervention.

Wood et al. (2010) link gratitude with the 'Big Five' model of personality (McCrae & Costa, 1990), and they claim that gratitude as a trait can uniquely predict 8% of SWB, after controlling for the thirty underlying traits of the Big Five personality dimensions. Grateful people have been shown in some research to have higher levels of extraversion, agreeableness, openness, conscientiousness and lower neuroticism (McCullough, Emmons, & Tsang, 2002). As a disposition, gratitude can be seen as a trait which orients the individual to noticing and appreciating the positive aspects of life and experience (Wood, Maltby, Stewart, Linley, & Joseph, 2008). Wood et al. (2010) reviewed the research on gratitude and found twelve studies linking gratitude to well-being, but also noted that in only two of these studies was gratitude found to be more effective than a genuine control condition. A number of hypotheses have been put forward to explain the mechanism which underlies this link between well-being and gratitude. Wood et al. (2008) used vignettes to explore why those high in trait gratitude might experience more gratitude following help. They concluded that grateful people have a schematic bias to viewing help as more beneficial, and this leads to increased feelings of gratitude. The positive affect hypothesis posits simply that gratitude is a pleasant emotion, that is also related to other positive emotions (with a large .51 correlation to positive emotion). The experience of gratitude over time increases levels of PA, and in turn increases general well-being (Diener, 1984).

Gratitude contributes not only to emotional well-being in grateful individuals but also in those who interact with them (Layous & Lyubomirsky, 2014a). Because gratitude increases pro-social behaviour, and results in stronger social bonds and levels of trust (Bartlett & DeSteno, 2006; as cited in Kerr et al., 2015), gratitude is related to perceived quality of relationships through self-report and peer report (Algoe, Haidt, & Gable, 2008). Adolescents higher in gratitude report giving more emotional support to others and experiencing more social support from peers (Froh et al., 2014). Not only this, gratitude interventions are 'inherently social' and evidence suggests that those who participate in a gratitude intervention are more likely to complete it, than with any other form of PPI (Geraghty, Wood, & Hyland, 2010). However, much of the research done on gratitude has been cross-sectional. Sedgwick (2014), identifies some of the limitations of this form of study, which include response and recall bias, and difficulties selecting a representative sample. In their systematic review of the field of positive psychology, Donaldson et al. (2015) found that 78% of what they considered empirical studies of positive psychology interventions used a cross-sectional design, with only 20% (105 studies out of 707) using an experimental design. Cross-sectional research is observational in nature and involves gathering a large amount of self-report data on

people high in trait gratitude, and looking for correlations to other traits or qualities. For example, higher levels of gratitude in adolescents predict fewer negative emotions, greater positive emotions and life satisfaction (Froh et al., 2014). However, cross-sectional research is unable to establish direction of causality, and cannot establish whether well-being, which is clearly correlated with gratitude, is caused by gratitude or whether higher levels of gratitude result from having higher levels of well-being. Although using an experimental design, where groups are assigned randomly to receive a gratitude intervention or a neutral activity may offer the possibility of establishing whether well-being can be improved through cultivating gratitude, this type of study also has limitations. One weakness arises because all psychosocial interventions raise the 'expectancy' of improvement, even where participants and researchers are 'blind' to the hypotheses (Kirsch, 2005). For example, participants keeping a gratitude diary might reasonably expect this act to improve their well-being, and this may contribute, like any placebo, to the effect. This can be overcome by planning a control group activity with a similar level of expectancy. Alternatively, the intervention could be compared to an existing and proven treatment to see whether it outperforms.

In their meta-analysis (*N* = 1775 from thirty-two samples), Davis et al. (2016) found 'weak evidence' for the effectiveness of gratitude interventions, unless they were compared to a non-neutral (i.e. negative) condition such as listing hassles. When this was the case, the experimental effect was described as 'impressive'. Those in a gratitude condition in one study increased their SWB by 25% more than those who were asked to list 'hassles' (Froh et al., 2008), presumably because listing hassles reduced SWB in the comparison group, thereby exaggerating the impact of the gratitude intervention when the two were compared. Froh et al. (2009) indicate that it is possible that the negative conditions drove the group differences and induced NA in the participants, instead of the gratitude condition increasing PA or well-being as expected. Seen from this perspective, the gratitude condition functions like the control group where the potent 'intervention' is the hassles group which increases NA. Also, gratitude interventions have failed to outperform psychologically active conditions e.g. completing a thought record (Geraghty et al., 2010). In this study, completing a gratitude diary or thought record both equally outperformed a control group in reducing body dissatisfaction. Following their large meta-analysis, Davis et al. (2016) raise a cautious possibility that gratitude interventions operate because of nothing more than the placebo effect.

In summary, gratitude interventions have included counting one's blessings or gratitude journaling (Froh et al., 2008) and expressing gratitude through a letter or visit (Froh et al., 2009). Davis et al. (2016) found no advantage in terms of impact on well-being between these two types of gratitude intervention in their large meta-analysis (with effect sizes of d = .20 for each). Gratitude interventions do sometimes outperform measurement only controls in terms of increasing well-being, but again with small effect sizes. They performed as well as, but not better than other psychologically active interventions. Developing gratitude in your everyday life can have an impact on LS, and simply encouraging participants to notice and identify the positive aspects of their day can help participants gradually build their self-esteem (Davis et al., 2016). Similarly, Froh et al. (2008) found that teaching and fostering gratitude in children led to greater life satisfaction, and most importantly they found a 'robust' relationship between gratitude and satisfaction with school. However, other measures of LS, prosocial behaviour and physical health did not increase as a result, and the positive effects of gratitude were only present when compared to a 'listing hassles' condition. Although Froh et al. (2014) demonstrated the ability to improve reasoning about gratitude in children, it is not clear whether this improved the children's ability to experience gratitude as an emotion or simply their cognitive ability to make benefit appraisals. In spite of these limitations, the large systematic review of PPIs by Donaldson et al. (2015) concluded that gratitude interventions looked 'promising' in their impact on well-being.

2.6.3 Studies Involving kindness and multi-target Interventions

A multi-target intervention is one which combines a number of interventions to target a number of skills or qualities (Suldo et al., 2014). These will be reviewed in this section alongside those involving only a kindness intervention. Kindness is 'booming' (Rowland, 2018) and a wide range of charities and research groups have been established in the US and UK with the purpose of promoting kindness and well-being because of the espoused benefits (see for example Random Acts of Kindness, or Kindness UK). The research evidence for benefits to children is much harder to find. Only three studies were identified for review here, that belong to the acts-of-kindness paradigm (i.e. those that incorporated a kindness intervention). In a study linking kindness, well-being and popularity, Layous et al. (2012) recruited children between the ages of 9 and 11 years (mean age 10.6, *N* = 415) across eleven schools in Canada. They underwent a weekly kindness intervention over four weeks (i.e. four hours in total). Classes were randomly assigned to one of two experimental conditions in this

quasi-experimental design. In the kindness condition, students were asked to complete three acts of kindness each week. In the 'whereabouts' condition, participants were asked to make three visits to somewhere in their locality each week. Pre and post measures of happiness, LS, PA and sociometric peer nominations (considered a measure of popularity) were taken. Children in both groups demonstrated a significant increase in PA and only marginal (i.e. non-significant) increases in LS and happiness ($p = 0.08$ and $p = 0.13$ respectively). Whilst both groups demonstrated an increase in peer nominations, only the kindness group demonstrated a significant increase in peer nominations, with each child gaining on average 1.5 more nominations (i.e. 1.5 more friends). In their statistical analysis, the authors indicate that they controlled for the impact of increases in well-being on peer nominations, and the effect was still evident for the kindness group. Although they claim that the kindness intervention improved levels of LS and happiness in participants, it did not do so more than the 'whereabouts' condition. This condition was designed to be a 'mildly pleasant and distracting' control condition (Layous et al., 2012, p.1). The authors indicate that this was done for ethical reasons (to avoid exposing participants to a 'boring' activity). They also assert that having a positive activity as a control, mitigates against the kindness group increasing in popularity simply because doing the kindness activities 'feels good' (i.e. they provided participants in both groups with activities that would have felt good). Thus, this study found no evidence that kindness interventions are any more beneficial than a pleasant control activity at increasing SWB. Although neutral control conditions have some disadvantages, the lack of a neutral control in this study, prevents any examination of short-term fluctuations in SWB or popularity, that might have occurred to participants through the duration of the study, e.g. caused by school or seasonal or unknown factors for instance. It would be interesting to have seen whether SWB in the neutral control remained constant as one might expect. Only with a neutral control can we be safe to assume that any effects were due to experimental manipulation rather than some general factor that all participants were exposed to. This is because levels of SWB can, and do fluctuate, and even fall significantly during the course of an experiment, even for those in the neutral control condition (see Suldo et al., 2014).

A similar study with adults (Buchanan & Bardi, 2010) provides a possible explanation for the effects noted in this study. They explored the possibility that simply performing novel acts (rather than pleasant acts) might account for the effects on well-being attributed to kindness interventions. They asked eighty-six participants assigned randomly to one of three groups to perform one act a day for ten days having measured subjective well-being before and after the ten day period. The kindness

group were instructed to perform one kind act a day. The novelty group were asked to perform one new activity each day, and the control group to perform no acts other than those usual for them. The control group did not differ in LS after the ten days, and both the kind and novel acts groups increased significantly in LS from baseline. Though the mean level of LS in the kindness group was slightly higher, the difference was not significant and an effect size of d = .21 (small) was found for both these groups. These findings seem to support the hypothesis that novelty increases happiness just as much as kindness. Because the kind acts that are typically studied are always prompted by participation in the study, they are novel by definition, and therefore the effect of novelty is a potential confound to the effects attributed to kindness. Novelty may be responsible for effects noted in gratitude studies and those in the prosocial spending paradigm. This might be explored in the future by having participants assigned to perform either novel or kind acts repeatedly over an extended period, and to a degree where the activities lose their novelty. If performing acts of kindness has an effect beyond novelty, the kindness group should demonstrate sustained improvements in SWB, whereas the novelty group should diminish in this respect. Although Layous et al. (2012) have demonstrated an effect of increased popularity in children, without replication and without a neutral control group, they have not adequately demonstrated that this was caused by a kindness intervention.

One can ask that if the main claim of kindness interventions wasn't demonstrated in this study (i.e. that they lead to significant improvements in well-being over a control group) why the activities should have had an impact on popularity? Indeed, Layous et al. (2012) failed to check whether the treatment condition was effective at increasing levels of kindness, as no measures were taken from participants to assess whether they rated themselves as kinder following the intervention. Because there was no information collected about whether the three weekly acts of kindness were performed by each participant, we do not know that the kind acts were performed. Without this knowledge we cannot say kindness caused the experimental effect of improved popularity. Without knowing whether the participants did more kind acts, or if their levels of kindness increased, we cannot claim any effects were due to kindness, because there is no evidence that participants' kindness levels changed. This is the first known demonstration that a kindness intervention might improve pupil popularity, and thus replication is needed, with measures of kindness incorporated into the design as a manipulation check. The measure of popularity used in this study was a sociometric scale, which asked participants to circle the names of other children in their class they 'would like to be in school activities with'. Although generally sociometric

measures are known to be stable, and reliable measures of popularity (Coie et al., 1982), the particular language used in this study is indirect in style, and its validity as a sensitive measure of friendships and popularity needs to be demonstrated empirically through other studies.

Suldo et al. (2014) describe their Well-being Intervention Programme, which was implemented in an elementary school in the USA. The programme included activities designed to increase levels of kindness as well as gratitude, optimistic thinking and character strengths. The ten week intervention was delivered to twenty-seven children aged 10 to 12 years with twenty-eight children randomly assigned to a waiting list control group. Students received the intervention in a group of seven led by a school psychologist and a doctoral psychology student. The study took place in the first term of the student's move to their middle school, known to be a difficult transition for students to adjust to. Programme fidelity between the groups was ensured by use of a detailed intervention manual written by the first author. Propensity score matching was required because the randomly selected treatment group had statistically lower levels of life satisfaction and higher externalising behaviour scores. This procedure involves only comparing those in the different experimental groups who have similar baseline scores. This procedure led to twenty students from each condition being matched on baseline measures and the data from the rest of the students being excluded. The life satisfaction scores in the intervention group increased significantly following intervention ($n^2 = 0.02$). PA and NA remained the same between and within groups at post-test. This gain in LS was maintained in the intervention group at 6-month follow-up, and matched by a similar gain in the control group. There were no changes in measures taken of psychopathology and NA remained constant post-intervention. It was unexpected that though improvements were noted in LS for the intervention group (and these were maintained at 6-month follow-up), that the mean levels of LS and PA at follow up were higher in the non-intervention group. Generally, the effects of the intervention were small and those in the control group 'caught up' and slightly overtook the students who had the intervention. This is even more unexpected if we consider that the intervention was designed and manualised by leading researchers in the field, implemented over ten weeks in small groups led by psychologists, and based on careful selection of those interventions deemed to be the most effective based on prior research. One possibility explaining the negligible impact of this programme is that the interventions selected in the study, work differentially with adults, perhaps because of the cognitive complexity of the activities chosen. The development of optimistic thinking skills is known to require higher levels of cognitive sophistication (Johnstone, Rooney,

Hassan, & Kane, 2014). These authors claim that optimism programmes require a level of abstract thinking that some children below the age of eleven are incapable of. This may partly explain the failure of Suldo et al. (2014) to demonstrate lasting improvements in SWB after their intense intervention. Another possible reason for limits in the efficacy of the programme may arise because the students who received the intervention were already at optimum levels of SWB and LS, and there was a ceiling effect on outcomes for the interventions provided. Suldo et al. (2014) claim that their use of random assignment to conditions, and then subsequent use of propensity score matching increases their confidence that the gains in LS they reported were due solely to intervention. However, this procedure left a sample of only twenty in each condition. Prior screening of 333 students in the school using a brief six question measure of life satisfaction led to 201 potential participants being excluded because they rated themselves as having high levels of SWB. They chose to include only those students (*N* = 132) whose scores indicated they were 'less than delighted' with their lives. In other words, 60% of the initial sample who scored at least one answer of seven on the 1-7 Likert scale in the questionnaire were excluded from participation. This ought to have reduced the potential for any ceiling effect on increases in SWB. The final forty were selected from this already screened group. Although they were randomly assigned, this level of screening drastically reduces the generalisability of findings to other samples of students. A follow up study using an adapted version of the programme (Suldo et al., 2015) found statistically significant improvements in PA (d =.52) and satisfaction with self (d =.40; which are both medium level effects) after intervention compared to baseline. These effects were maintained at follow-up two months later. In this programme the element of optimistic thinking was removed. This study was not reviewed here in detail because it had no control condition group (and in addition only twelve participants provided data for the study).

The final study reviewed is a twin study, set up to isolate the relative influence of genetic and environmental influences on well-being (Haworth et al., 2016) with 750 participants (average age 16.5 years) who completed on-line kindness and gratitude inducing activities once a week for six weeks after a two-week inactive control period. Participants demonstrated statistically significant improvements in well-being and mental health above baseline measures, though the authors concluded these amounted to small mean effect sizes. This study, given its size, offers the best demonstration of the effects of positive activities on well-being in children and youth reviewed so far. However, each twin in the pair acted as their own control, and therefore both twins would have taken part, and sharing the same household they

would likely have discussed the study. This means the participants could not have been 'blind' to the activities or the potential of a placebo effect causing the increases in well-being reported.

One of the early papers to explore the link between gratitude and kindness and their relationship to well-being was by Otake, Shimai, Tanaka-Matsumi, Otsui and Fredrickson (2006). This influential study has been cited 432 times (Google Scholar), and makes a number of bold claims about the nature of kindness and its relationship to happiness. It seems to demonstrate that simply counting kind acts can boost happiness. Otake et al. (2006) suggest that gratitude and kindness arise from the same character strength, and that both have a close relationship to subjective happiness, and may occur together. In their study, 175 undergraduate participants (mean age 19.1 years) were defined as happy or less happy, based on their scores on the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999). In the first stage of the study, and over a three week period, participants were asked to keep a diary of happy and unhappy experiences each day, and rate each in terms of its emotional intensity. Both the happy and less happy groups reported the same number of unhappy experiences, but each group differed in the number of happy experiences, which were more frequent and more intense in the happy group. By coding their diaries, the authors concluded that most of the happy group's happy memories, were related to social realtionships (40.3 %), and romantic relations (27.5%), and within this, that the happy group seemed to experience more grattitude in their memories.

In a separate study described in the same article, Otake et al. (2006) designed a counting kindness activity based on a seminal intervention in the field of gratitude research (counting blessings) created by Emmons and McCullough (2003), where participants were asked to write down every act of kindess they performed over one week. Measures of happiness were taken one month before, and one month after, for both the intervention group and the control group. Immediately after the intervention, participants were also asked a single question about how grateful they had felt during the intervention week. They found levels of subjective happiness had increased in the intervention group only. Those in the intervention group who experienced the greatest increase in happiness (N = 21) were compared to the remaining participants (N = 50). This group reported completing more kind acts and feeling more grateful. The authors concluded that 'those who became very happy people perform more acts of kindness and feel more gratitude.' (Otake et al., 2006; p.6). Furthermore, they assert that 'happy people are more kind in the first place and become even kinder, happier and more

grateful following a simple intervention' (p.6). They suggest the findings of the study indicate that the same relationship that exists between gratitude and happiness (Emmons & McCullough, 2003) also exists between kindness and hapiness, and speculate that these two character strengths co-exist.

These claims can be criticised on a number of grounds. Firstly, although they claim in study one that kind people are happier, this is based only on self-report data with no attempt to measure either kindness or happiness externally e.g. through observer ratings. Secondly, the claims that are made are correlational, and there is no evidence to suggest in this study that kindness causes greater happiness. In fact, the design of their first study did not have a control group, and the experimental activity (a diary of events that produced strong feelings) could be seen as a measure of happy/unhappy events rather than an intervention. The finding that happy people had more happy memories (as one might expect) was based on arbitrarily splitting the sample into two across the median based on their ratings on a questionnaire. Only three questions were asked about kindness at the outset of the experiment, to distinguish between those labelled as kind and less kind. Because nothing has been manipulated, we can only say that those people who report higher happiness ratings also report more happy memories.

Their second study did have a treatment group who were asked to count 'each and every kindness they performed for one week' (Otake et al., 2006; page 5) and this group showed a significant increase in subjective happiness, after having the same mean levels at baseline with the control group. But the treatment group increased in their happiness ratings by a small amount (0.44 on a 7 point happiness scale). This is an effect size of 0.06. Put in context, a short holiday contributes to an increase in SWB by a factor of 0.14 (Nawijn & Veenhoven, 2011) which is an effect almost 2.5 times greater in magnitude. This small effect, reported by Otake et al. (2006) may have been bolstered by choosing only female participants (the authors state this was done because of evidence that females are more 'attuned' to kindness interventions). The fact that the participants were psychology undergraduates may have further contributed to the significant effect due to a possibility of this group being more receptive to the benefits of such activities (as indicated by the authors). Participants were not allocated to conditions randomly, this was done by class, and the control group did not complete a similar activity, and instead simply completed the questionnaires. As indicated previously, any activity may have an expectancy of causing an effect, and therefore because the control group did not carry out an activity, there is no way of knowing whether the significant increases in the treatment group were due solely to a placebo

effect. This early and important study in the field of kindness research may, in hindsight, have exaggerated the impact of kindness as a correlate of SWB, and subsequent research on kindness has failed to go on to demonstrate the importance of kindness promised by such early studies in children or with adults.

Rowland and Curry (2018) used a single design to clarify the importance of the recipient as a possible moderator of some of the effects on well-being found in kindness studies. There seems to be a strong theoretical basis for believing kindness directed to family members might be rewarding (see for example the discussion of kin-altruism), with some empirical research supporting the hypothesis that giving to those with stronger relational ties produces the greatest boost to SWB (see Aknin et al., 2015). Rowland and Curry (2018) randomly assigned 691 participants to one of four treatment conditions with two of these designed to test whether relational ties between the giver and recipient of the kind acts affects SWB. Participants were instructed to perform at least one act of kindness a day in the following conditions, to the following recipients: a strong ties condition (kind acts performed for family and friends), weak ties (to strangers and those not known well), a kindness-to-self condition, and a group required to observe kindness. There was also a no-treatment control group. Participants were blind to the conditions and hypotheses. The researchers found that performing kind acts did boost SWB, as did simply observing them, and that the number of kind acts performed was a significant predictor of increases in levels of happiness. Unexpectedly, increases in happiness were not greater in the strong ties group. Happiness levels in the control group went down slightly. The control group was formed from those who failed to begin the experiment on the assigned day, and therefore one might speculate this group might not be a representative group in terms of their SWB, or motivation levels. Participants were recruited online and were members of a kindness network, with 88% of them female, from twenty-nine different countries. Gender aside, one could argue that the participants were interested in, and pre-disposed to kindness, prior to joining the research, and therefore cannot be expected to respond in the same manner as a representative sample. The study did not explore type of giver, and whether SWB was moderated by pre-existing levels of kindness in the giver. This study demonstrates the potential of kindness interventions with adults to improve well-being, but again has limitations in its selection of an unrepresentative sample of participants, and poorly conceived control group. However, it did seem to demonstrate that the amount of kindness practiced mediates the effect on SWB, as well as refuting the prediction that kind acts performed to family members and friends have a greater impact on SWB.

A five-week study with adults, exploring the possible intensity effects for kindness, compared the impact of performing five acts over the course of a single day to spreading them over one week (Lyubomirsky et al., 2005). The study found that completing five kind acts on one day worked more effectively to improve well-being than if the five acts were spread out. The authors suggest that where the acts are small their impact on well-being may be 'watered down' if spread out. These findings seem to suggest that the effects of kindness maybe small, and moderated by a number of factors, and if these factors are not present the small effects are mitigated or removed entirely. These authors speculate that 'dosage' is one such moderator, which may explain why some of the research reviewed here had only small effects (e.g. Otake et al., 2006), or none at all compared to control (e.g. Layous et al., 2012). Further research is needed to explore precisely which conditions produce the most effective kindness intervention.

There is some evidence that performing a variety of kind acts may prevent the tendency towards hedonic adaptation. Sheldon et al. (2012) provide tentative evidence for the claim that varied kind acts have the greatest impact on happiness. They asked their under-graduate participants (N = 52) to conduct kind acts over a ten-week period. One randomly assigned group were required to repeat the same acts each week (low-variety), the other group were instructed only to carry out new (i.e. varied) tasks. The hypothesis that the high variety condition would prevent this tendency to hedonic adaptation and thus demonstrate increased levels of SWB from baseline was supported, though only modestly. On closer examination, the happiness levels were only different between both groups because the mean level for the low variety group fell during the period of the study. Not only this, happiness was only assessed by a four-item questionnaire. Furthermore, the undergraduate sample cannot be said to be representative, and may have a number of external pressures (e.g. exams) affecting their well-being which could have confounded the results. Therefore, further study is required before concluding variety can mitigate genetic set-points and delay the tendency for happiness to revert to 'set' levels.

Kerr et al. (2015) asked their sample of forty-eight outpatients waiting for clinical psychology treatment to list five kind acts they had carried out each day for fourteen days. Another group of outpatients listed things for which they were grateful, and a further group kept what the authors describe as a 'mood monitoring neutral diary'. Those in the kindness and gratitude conditions reported greater optimism and connectedness to others, compared to those in the control group. Only those in the

gratitude group improved in levels of life satisfaction significantly compared to control. Gratitude, but not kindness, seemed to have some positive outcomes in this clinically distressed group. The same interventions were used as described in Lyubomirsky et al. (2005), where they had a significant impact on well-being. In Kerr et al. (2015) the intervention was over fourteen, rather than five days, and those in the kindness condition still failed to show an improvement. The authors speculate the interventions needed to be sustained for even longer because of the higher levels of mental health difficulties within their sample. The attrition rate for those who started the study, but did not finish, was 50%, with a further group who failed to complete a full set of diaries having their data excluded. Of the final forty-eight participants whose data was used, two thirds were female, which points to the possibility that those least pro-social, and most resistant to the benefits of the intervention, had already left the study. The poor mental health of the participants is one possible, and perhaps likely explanation for why kindness failed to have any impact on SWB here. However, another factor may relate to the type of measure used. The authors measured well-being by asking participants to take daily ratings of mood over the fourteen days of the study. These were then formed into a composite score to serve as the post-intervention measure of well-being. One could argue that this type of continuous rating of mood over the course of an intervention provides a more sensitive and reliable measure than a general questionnaire measure completed at a single point. Indeed, Veenhoven found correlations between an individual's ratings of the well-being in a single interview to be only 0.7, with test-retest reliability falling to 0.6 over one week (Veenhoven, 2012). In other words, some of the small effects noted in the kindness literature may not be present if more reliable measures are used to measure the impact of experimental interventions. Curry et al. (2018) are keen to point out that this variation in how kindness has been operationalised, and how well-being has been measured, has led to a lack of systematic investigation of which types of kindness, by whom, and for whom, improves well-being. In their meta-analysis of the research on kindness, only twenty-one of 428 studies conformed to their entry criteria (which excluded correlational research, or studies where control groups were not selected randomly). Their meta-analysis seemed to support the claim that performing acts of kindness does indeed improve levels of SWB, but the effect size was small-to-medium (.36) which the authors equate to a 0.8 increase on a 0-10 subjective well-being scale.

In summary, the current review seems to indicate that carrying out acts of kindness can have a small to medium sized beneficial effect on levels of SWB. Costly giving (when the kind act leads to a greater sacrifice on the part of the giver) seems to lead to the

greatest improvements in SWB, and this is true in children (Aknin et al., 2012a) and adults (Aknin et al. (2015) with the greatest efforts leading to the greatest improvements. However, there is an optimum range, with too little effort leading to diminished impact e.g. volunteering once a year (Luks & Payne, 1991), and with too much effort or cost also leading to diminished impact e.g. volunteering more than 16 hours per week (Windsor, Anstey, & Rodgers, 2008). Although five acts in a week, if small, may be insufficient to boost SWB, five acts in one day may combine to magnify the effect (Lyubomirsky et al., 2005). Doing a range of kind acts (high variety) rather than repeating a small number of kind acts (low variety) can result in higher levels of SWB (Sheldon et al., 2012). Kindness to family and friends may not be more rewarding in terms of SWB (Rowland & Curry, 2018). The current state of research on kindness suggests that that performing kind acts can, under some circumstances, improve well-being, although the effects sizes vary enormously between studies, as does the manner in which kindness is defined. Rowland (2018) suggests that more work needs to be done to define the psychological processes which underlie kindness and its measurement, and that if this is done, the effects of kindness and its impact will be better understood. For example, charitable donation, performing random acts, and giving gifts to family members, though all considered as kindness, all require different levels of commitment, are prompted by very different feelings, and produce very different psychological experiences. A smile to a colleague though having no particular cost, could also be considered kindness. In the research in this area, kind acts are targeted at family, strangers or in some cases this information is not even sought. Often no check is made as to whether the intervention itself has been carried out or that kindness was in fact induced in those taking part. This is problematic for future research because such uncontrolled variation prevents systematic exploration of kindness, and its affective and behavioural components. Without precise theories about which recipients and which altruists benefit most, we do not know the type of kindness that works best or for whom. If increasing well-being is to be a goal of promoting and teaching about kindness, it is important to know which variables mediate the desired effects. Due to the very small number of studies with child participants, even less is known about the effects and benefits for children.

2.7. Summary and conclusion

A review of the literature on kindness and gratitude interventions with children, and their impact on SWB, found very few studies, and the outcomes of these were mixed. Studies with young children from the ‘prosocial spending paradigm’ attempt to establish

the causal and reinforcing effect that an innate ‘warm glow’ might have on altruistic behaviour. However, the increases in positive affect demonstrated by participants could equally be explained by age related variations in ToM, symbolic pretence, complex language and social influences. A lack of systematic exploration of one kind of intervention at a time has failed to isolate any of these possible confounds.

The research on gratitude used gratitude visits or counting blessings as the intervention activity. Within this, the instructions given to participants varied, and at times prompted them to think about different forms of gratitude (e.g. Owens & Patterson, 2013). Only one study of a kindness intervention was found, and this did not demonstrate an increase in well-being compared to the control. In the other studies, kindness activities were combined with gratitude or a range of PPIs. This means it has been unclear which interventions have led to any observed effects, or whether combining them has any additive benefits.

Whilst interventions focussing on gratitude have been studied more with children than those focussed on kindness, these interventions did not always lead to higher levels of well-being, and significant findings were dependent on whether a neutral or negative control condition was compared to the gratitude condition. The possibility of unknown variables moderating the effects of PPIs has been considered, but only one study with children (Froh et al., 2009) found evidence for such a moderating variable (participants with lower levels of baseline PA derived significantly increased levels of SWB from a gratitude intervention). Not all studies had blind conditions, and only two had fully randomised allocation of participants to each condition. The acts of kindness or gratitude were not always verified externally, to ensure the experimental variable (doing a kind act or making a gratitude visit) had been carried out. Very few studies measured whether gratitude or kindness had changed within participants, as an outcome of intervention. This failure to measure whether the effect had been accompanied by higher levels of the experimental variable (i.e. kindness or gratitude) seriously weakens claims that the intervention could be said to be the key factor driving the improvements noted in SWB. Although costly giving was claimed to produce greater happiness, the experimental design of the two studies exploring this varied subtly, making systematic comparison difficult. The research with young children relied on measuring happiness by using external ratings of smiling and laughing behaviour, however this itself is not a straight forward measure of internal happiness. Further work is needed to provide unequivocal evidence for the hypothesis of studies within this paradigm, that altruism is innate.

The effect size of intervention studies were not always quoted (i.e. in values given for Cohen's d), but generally, effect sizes were small. This was true of the largest and best executed study of kindness in youth, which had a sample of 750 participants (Haworth et al., 2016). Where the effect sizes were largest, the samples were small (see for example Suldo et al., 2015), which had twelve participants. The samples were derived largely from North American urban populations, and within this, convenience samples were the norm. In other words, whole classes of children were allocated to a condition in a quasi-experimental design, with no attempt to balance participants by demographic variables such as race. Only one study used a statistical procedure to achieve balanced samples (Suldo et al., 2014), but this suffered from a small sample and high levels of screening before participants were selected. Where studies employed a control group, there was no ability to prevent those in the control condition talking with those in the treatment/active condition, and potentially introducing a placebo effect.

Only one study chose a non-urban setting in which to perform a replication (Aknin et al., 2015). This study relied on the use of puppets as the recipients of the experimental kind acts, and an assumption that the infant participants believed the puppets to be alive and sentient. Because puppets are unknown in this small island culture, it is not clear that the infant participants related to them in the same manner as the urban children from a Western culture. This may have provided a fundamental confounding variable, potentially invalidating results. Also, the study needed wider replication in an urban setting to verify that the effects existed, before exploration of the cross-cultural benefits of the intervention. The age of the children participating varied greatly across studies, and where an effect was found, further study should be undertaken where age and no other factors are varied. This will allow age as a moderating variable to be better understood. The developmental trajectory of gratitude remains unknown (Froh et al., 2009). We do not know at what age or at what level of cognitive and affective maturity that gratitude emerges in children, and therefore age will need to be treated as a variable that is systematically varied in future gratitude interventions.

Layous et al. (2012) provided the first evidence that sociometric acceptance (or popularity) can increase significantly following a kindness intervention in children, but this finding has never been replicated. This is a very promising area for future research given the benefits of positive peer relationships (Holder & Coleman, 2009). However, this study was not able to establish that participants in the treatment group increased in kindness more than the control group. Therefore, the direct link between kindness and increased popularity can only be inferred.

Future research is needed to replicate the possibility that increasing prosocial behaviour in children both improves levels of SWB and popularity. This research will require a design that allows natural fluctuations in well-being to be subtracted from the effects of any intervention. It might help if the intervention is designed to induce the highest levels of impact on SWB, since this is hypothesised to be the driving mechanism that leads to the improvements in popularity. A combined or multi-target intervention offers the best chance of achieving this.

Chapter 3

3. The empirical research study

3.1. Rationale for the current study

Happiness, well-being and friendship skills are important goals that many parents understandably hold for their children (Seligman et al., 2009). Schools have a prime role of 'promoting and protecting children's mental health and well-being' (House of Commons Education and Health Committees (2017, p.3). The literature review in the previous section demonstrates that promoting pro-social behaviour in schools has the potential to deliver some of these benefits. However, there is only a small body of research in this field with children and youth that demonstrates the utility of promoting kindness and gratitude in schools (summarised by Suldo, 2016). The wider research in the field of positive psychology suggests that the link between happiness and prosocial behaviour is thought to be bidirectional, and prosocial actions have been shown to result in raised levels of subjective well-being (Seligman, Steen, Park, & Peterson, 2005). PPIs are hypothesised to improve well-being by triggering positive emotions which broaden a person's positive orientation to incoming experiences, allowing them to develop enduring personal resources (i.e. their social, psychological and physical assets) thereby increasing happiness levels (Fredrickson, 2001). However, more research with children is required to further evidence these claims.

In addition, past studies have suffered from a number of flaws. Some have used small sample sizes with as few as twenty receiving the intervention (e.g. Suldo et al., 2015). Some interventions have used a negative control task (e.g. listing hassles). Whilst this may result in raised well-being for the treatment group, there exists a possibility that the effect is not due to the activity studied, but instead is caused by a negative control activity inducing lower rates of well-being (e.g. Froh, Sefick, & Emmons, 2008). Some of the interventions studied are of great intensity, or rely on many hours of intervention to achieve effects, for example Social Emotional Learning (SEL) programmes as described in Durlak, Weissberg, Dymnicki, Taylor and Schellinger (2011). Though effective, such interventions are not easily adopted in schools already short of time, in a climate of pressure arising from the demands of the curriculum and standard assessment tasks (Pell, 2017). Combining a number of PPIs into one intervention offers the chance of increasing the magnitude of any effects. However, there is a dearth of research on so-called multi-target interventions, and only two are known of

involving school aged children (Suldo et al., 2014; Suldo et al., 2015). This suggests the utility of further empirical work to identify the types of conditions, and the features of interventions designed to improve levels of well-being and relationships in a schools. Interventions which target student well-being have the potential of having most impact when delivered universally, to whole classes at one time, by proactively building the resources and well-being of all students in a class grouping, not just those who have demonstrated poor mental health.

The aim of the current study is to explore whether planned acts of kindness and gratitude, (and teaching some of the skills which foster these two qualities), is effective in improving children's well-being and popularity. A review of the literature conducted above found very few studies involving these two constructs with child participants. Although a small number of empirical studies have explored either some aspect of kindness or gratitude, these two constructs were never explored together, except in a small number of multi-target interventions (e.g. Suldo et al., 2014), and alongside other qualities such as character strengths. The connected nature of kindness and gratitude has been a source of speculation, and the utility of combining them as two aspects of the same underlying pro-social skill discussed (Otake et al., 2006). The current study aims to explore kindness and gratitude interventions in a single study, and whether they have a causal impact on SWB. The current study also aims to explore whether this link between kindness and popularity found in Layous et al. (2012) can be substantiated. Little is known about the impact of prosocial interventions on those children who are less popular, and the current study aims to explore the impact on this group as well. This has importance because more interventions are needed which enable teachers to provide better support for students with challenging behaviour (Gray, Miller, & Noakes, 2013) and through this, to promote peer acceptance for its protective benefits (Holder & Coleman, 2009).

The use of a repeated measures design, combined with a waiting list rather than a neutral control, will allow the impact of any expectancy effects to be detected and so offers an improvement on some of the research designs used previously in this area. Layous et al. (2012) is the only study which demonstrates a connection between kindness and improved levels of popularity in children. It is not known whether prosocial behaviour in children reduces levels of rejection, and whether it can increase the popularity of those who are least popular.

3.2. The Intervention: ‘Six Weeks of Kindness.’

The intervention was devised as a series of workshops written and presented by the current author as part of his work as an EP. Described to staff, pupils and parents as a kindness programme, this six week intervention encompasses a focus on both kindness and gratitude as two aspects of the same underlying quality, and approach to values and relationships. It was offered to fifteen schools, and two agreed to take up the offer. Parental consent to participate was sought by the head teacher of each host school. The class teacher and teaching assistant for each class were present and actively involved in presenting the intervention, which took place for one hour each week. After choosing to take part in the workshops, the two schools were approached and asked if they would consent to being part of this research project to evaluate the impact of the intervention. Both agreed.

The central element of the intervention was based on the activity used and described by Layous et al. (2012) which involved asking children to plan and carry out intentional acts of kindness. This was supplemented with gratitude practice as described in Froh et al. (2009). An outline of the elements that comprised a typical session is given below in Figure 3. An outline of the six weekly workshops is provided in Figure 4. As well as planning and preparing for weekly practical prosocial activities, additional information about the emotional elements and hypothesised benefits of prosocial behaviour was provided to students. A number of children’s stories were selected and read because they supported and reinforced the main themes in each session, along with a number of short animated films (freely available on YouTube). The detailed lesson plans for each workshop are outlined in Appendix B, and the resources used are listed in Appendix C (mindfulness script) and Appendix D (list of stories and films used).

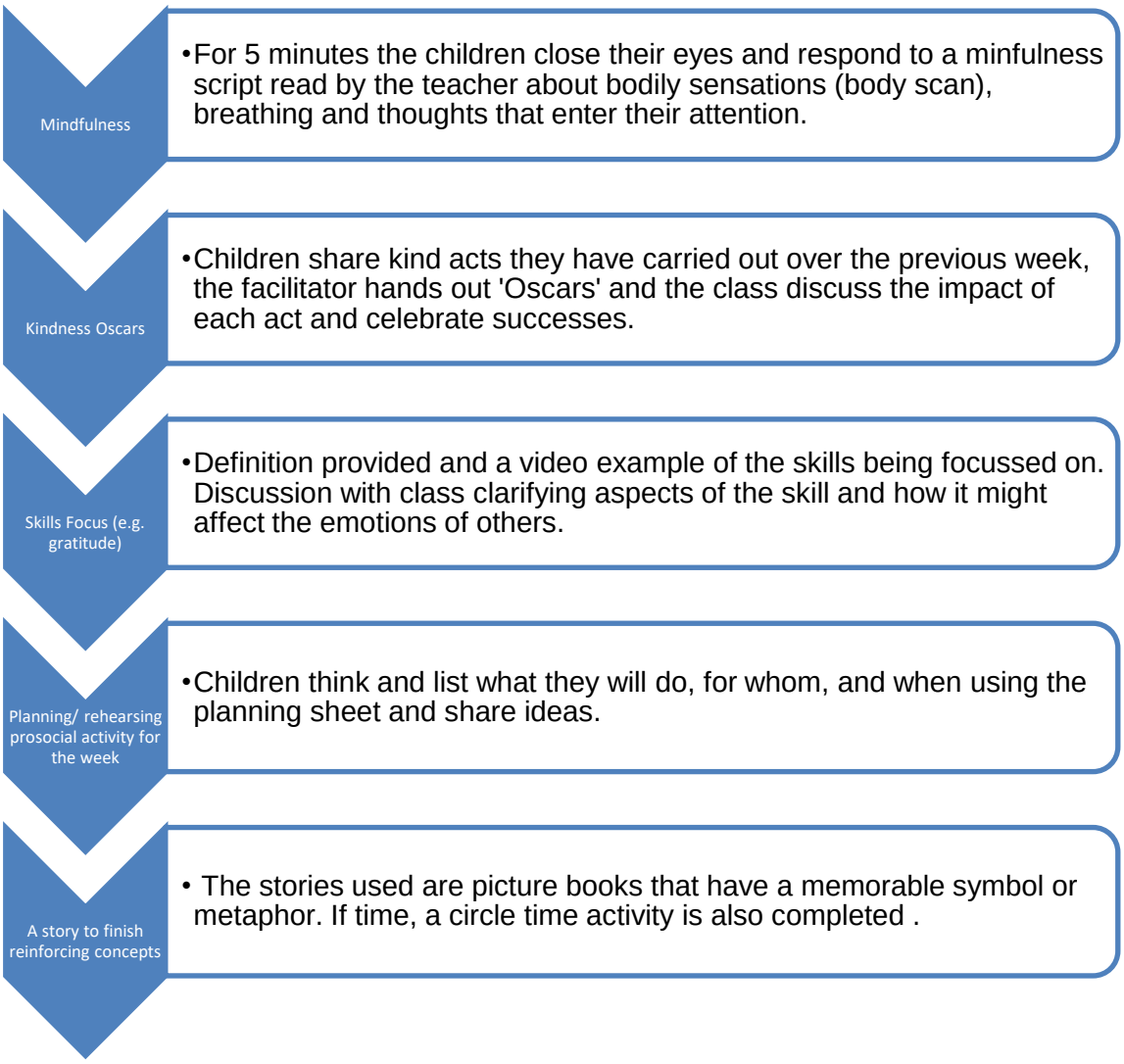

Figure 3: The Intervention: a typical workshop

The rest of this section provides details of the research questions. This is followed by a description of the particular design chosen for this research project, and the reasons behind these choices. Information about participants, and the manner in which variables have been controlled is also described. Ethical considerations are discussed, as are the measures taken to ensure the research complied with accepted ethical guidelines for research in psychology at the Cardiff University.

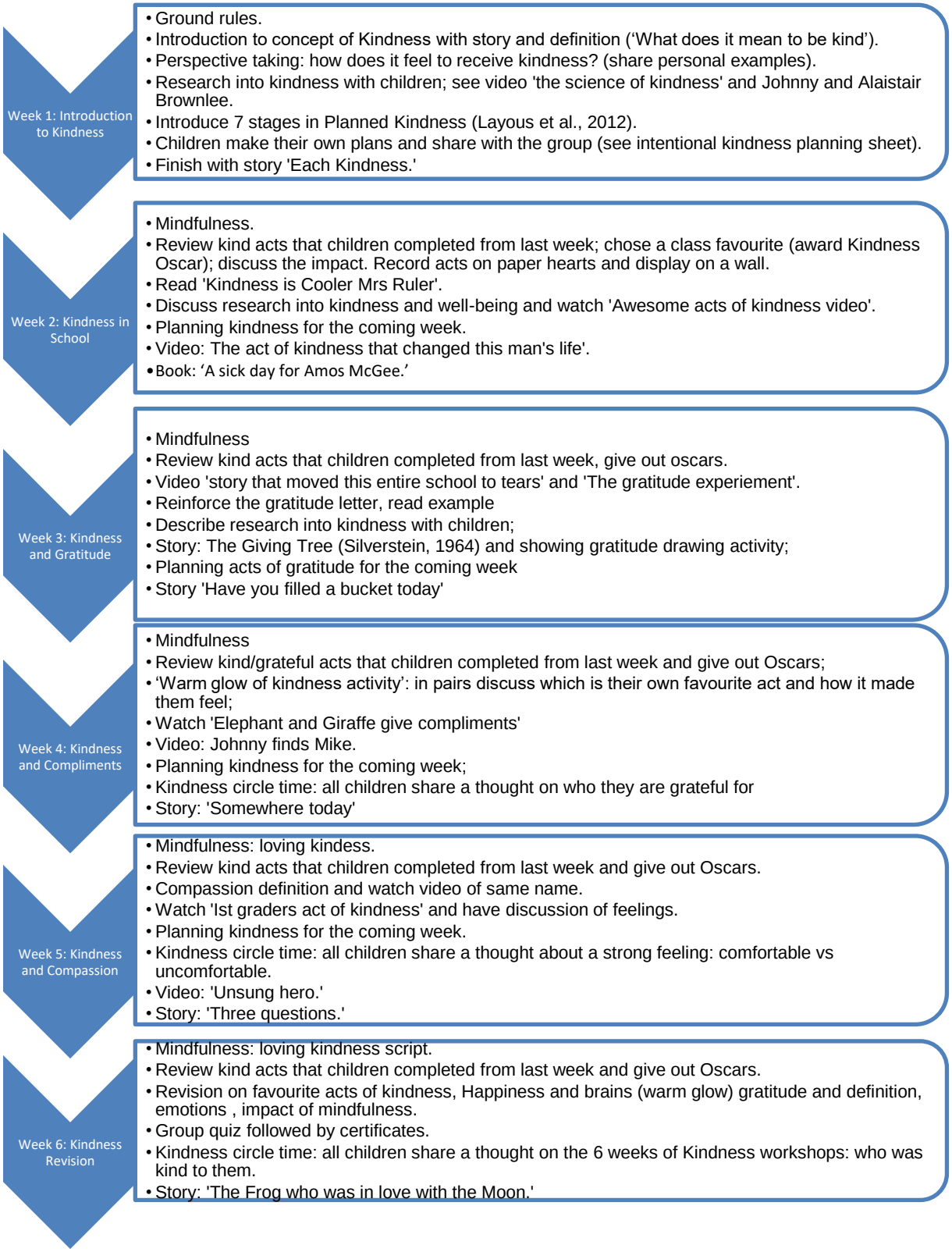

Figure 4: Outline of the six workshops

3.3. Research hypotheses

Based on the evidence reviewed in Chapter 2, the following nine hypotheses will be tested:

- H_{01} (Null Hypothesis): There is no significant effect of the programme on the children's SWB.
- H_{a1} (Alternative Hypothesis): Children who undergo an intervention to increase their levels of prosocial (i.e. kind and grateful) behaviour, will demonstrate significantly higher levels of SWB following intervention.
- H_{a2} (Alternative Hypothesis): Children who undergo an intervention to increase their levels of prosocial (i.e. kind and grateful) behaviour, will demonstrate significantly lower levels of SWB following intervention.

- H_{02} (Null Hypothesis): there is no significant effect of the programme on the children's sociometric popularity.
- H_{a3} (Alternative Hypothesis): Children who undergo an intervention to increase their levels of prosocial (i.e. kind and grateful) behaviour, will demonstrate significantly higher levels of sociometric popularity (measured by an increased number of positive peer ratings and a reduced number of negative peer ratings) following intervention.
- H_{a4} (Alternative Hypothesis): Children who undergo an intervention to increase their levels of prosocial (i.e. kind and grateful) behaviour, will demonstrate significantly lower levels of sociometric popularity (measured by a decreased number of positive peer ratings and an increased number of negative peer ratings) following intervention.

- H_{03} (Null Hypothesis): There is no significant effect of the programme on the children with low levels of sociometric popularity.
- H_{a5}: (Alternative Hypothesis): Those children lower in initial levels of sociometric popularity will increase significantly more in this measure following intervention.
- H_{a6}: (Alternative Hypothesis): Those children lower in initial levels of sociometric popularity will decrease significantly more in this measure following intervention.

3.4. Research questions (RQ)

The following research questions are proposed to explore whether a kindness and gratitude intervention over time will add to the internal resources and well-being of children, as predicted by the Broaden and Build Theory (Fredrickson, 2001) and whether any benefits are maintained at follow-up. They have been designed to explore the impact of a six-week combined gratitude and kindness intervention on primary aged school children.

RQ1: Does the intervention increase the SWB of children?

RQ2: Does the intervention increase children's satisfaction with school?

RQ3: Is there evidence that children's level of prosocial behaviour (i.e. kind and grateful behaviour) increases after intervention?

RQ4: Does the intervention increase the sociometric popularity of children (measured by an increase in the number of positive peer ratings and a reduction in the number of negative peer ratings)?

RQ5: Are there specific effects for children based on their initial levels of sociometric popularity?

RQ6: Do the children's parents and teachers believe they enjoyed and benefitted from the intervention?

RQ7: Do any of these effects maintain once the intervention has finished, and persist until follow-up 8 weeks later?

Chapter 4

4. Methodology

4.1. Epistemology and ontology

The epistemology and ontology of any psychological research determines the nature of the data sought and how it is collected, analysed, and essentially defines the scope of what it can be said to mean (Willig, 2013). Epistemology is the philosophical nature of what can be known and how it can be discovered (Willig, 2013). The ontology of a standpoint describes ones position in relation to this reality: what can be said to exist, what can be known and the limits of this understanding (Willig, 2013). From a positivist standpoint, knowledge is understood as being comprised of facts which the researcher uncovers through the process of scientific method and empirical discovery (Cohen, Manion, & Morrison, 2007). A social constructionist position considers that knowledge and reality is personally and socially constructed, and derived from a particular viewpoint where thoughts and perceptions, and not just facts, amount to knowledge (Burr, 2015). From this paradigm, the researcher adopts an active role co-constructing meaning from the data and through their interaction with it.

The current research adopts a stance described as critical realism, which occupies a philosophical space between these two positions, and considers knowledge as a social and historical artefact (Bhaskar, 2008) which can be interpreted as comprising aspects of the natural world as well as socially constructed reality. Critical realism admits a single verifiable reality which can only be understood through multiple and sometimes competing interpretations and experience (Bhaskar, 2008). This approach is consistent with the use of a mixed methods design (Johnson & Onwuegbuzie, 2004), essential to the aims of the current research, which is attempting to identify and substantiate a particular empirical position reliably, and with validity i.e. do kindness interventions work? At the same time, a complete understanding of the causes of any effect is limited by the small scale nature of the current research. This requires what McEvoy and Richards (2006) describe as ‘retroductive inference’, which is an approach derived from a triangulation of methods, both qualitative and quantitative. These methods (self-report and interviews) together will be used to explore the effectiveness of the kindness intervention with a greater sense of perspective and detail than could be achieved with just a positivist or an interpretivist perspective (McEvoy & Richards, 2006).

This allows causal relationships between the variables to be juxtaposed with the perceptions of those involved, so that speculative relationships can be corroborated or refuted. A mixed methods approach ensures that aspects of external and internal experience are sampled to give a more complete understanding of the possible impact of this positive psychology intervention, than can be offered by either method alone.

Questionnaires were thought appropriate to explore the perceptions of larger numbers of participants in detail, and thus offer a thorough examination of the experience of all participants in the study rather than a sample of them. In education, as in medicine, quantitative data is sometimes thought to have greater validity and utility in demonstrating impact. Questionnaires can provide consistent data, and inter-observer reliability, which allows results to be generalised to other similar situations (Cohen et al., 2007). Because they are anonymous, the use of questionnaires encourages honest introspection, and more so than perhaps interviews or focus groups (Cheng & Furnham, 2002). Self-report measures offer rich and direct information about an informant's private internal experience, in a direct manner, free of external interpretation by others. Self-report data provided by children has demonstrable validity, for example, children's ratings of their own anxiety levels predicted their anxiety related neuroendocrinal profiles more accurately than the ratings of clinicians (Joiner, Brown, Perez, Sethuraman, & Sallee, 2005). However, self-report data has also been criticised for being subject to contextual bias, which is the influence of the events or mood foremost in the rater's mind on their responses (Pavot, 2008). It may also be subject to idiosyncratic response styles, which potentially distort the effect being researched (Schwarz & Strack, 1999).

Nevertheless, self-reports of global well-being are considered to have moderate stability over long-periods (Lucas & Donnellan, 2007), and the 'modest' effects of social desirability (responding in a manner that is perceived to be favourable to others) do not invalidate measures of SWB (Myers & Diener, 1995). Indeed, these measures when used longitudinally are responsive to the impact that positive and negative events have on a person's SWB. In addition, LS (which is the cognitive element of SWB) has received consistent empirical support (Arthaud-Day, Rode, Mooney, & Near, 2005). There is also a convergence in self-reported well-being with peer and spouse reports (Lyubomirsky & Lepper, 1999). All of which suggests they can perform reliably in empirical studies. Because informant report (e.g. that provided by parents and teachers) is substantially correlated with self-reports (Pavot, 2008), use of both forms of data provides convergent validity and the potential to reduce response errors, so

improving the methodology compared to much of the research into SWB with children, which is almost entirely based on self-reported data alone (Suldo, 2016).

Interviews will be used in addition to questionnaires to gain a greater depth of understanding about the intervention, and how it might impact on the pupils involved. However, to avoid taking any further time from the pupil's education, which would be difficult to justify, interviews were instead planned with staff and parents rather than pupils. Interviews allow for greater depth of participation than questionnaires, and place value on opinions and perceptions (Cohen et al., 2007). Semi-structured interviews were selected because they offer participants the freedom to express ideas in their own terms, and a flexible structure which allows the interviewer to pursue and develop new perspectives as they emerge (Cohen & Crabtree, 2006). Semi-structured interviews allow the researcher to ask planned questions, ensuring that the topic is discussed in sufficient depth, whilst also asking questions in a manner allowing the researcher to investigate novel perspectives should they arise (Pietkiewicz & Smith, 2014; see Appendix E for interview schedules). Data will be analysed using thematic analysis as outlined by Braun and Clarke (2006), with semantic analysis used initially to draw out countable data and surface level content, helping to limit the researcher's interpretation and analysis to a descriptive or manifest level (Guest, Macqueen, & Namey, 2011). A latent analysis was then used to detect underlying structural themes to be developed from what was said across all of the interviews (a detailed account of the step-by-step process of the thematic analysis can be seen in Appendix F). As the semi-structured interviews will generate data related to the teachers' perceptions and subjective experiences of the intervention, thematic analysis was deemed a suitable method for examining the way these individuals experienced the intervention and it's meaning to them.

4.2. Recruiting participants

Two schools who had agreed to take part in the kindness and gratitude intervention were subsequently invited to participate in the current research project. These schools had already agreed to take part in the intervention before they agreed to be in the research project, and the intervention workshops were planned to proceed, whether or not they chose to join the subsequent research. The two primary schools were located in the North of a rural county in the Midlands. Both schools agreed to the request and two year five classes joined the project. Thus, a convenience sample of two classes in two separate schools was identified.

These children had written parental consent to take part in the intervention, given to the headteacher of each school. Once gatekeepers had been approached and given consent to take part in the research, parents were given information about the study, prior to requesting consent (see Appendix G for information on the ethical arrangements and considerations, and Appendix H for the information and consent letters provided to participants. Debriefing information is included in Appendix I). All parents in each class gave written consent allowing their children to participate. Pupils were then given a presentation about the research and their consent was also requested. Pupils gave this consent anonymously by completing the consent form and posting it into a box which was opened away from the pupils later. They were told that no one would know how they had answered, to reduce the possibility of acquiescence due to pressure.

4.3. Participants

All pupils in each class agreed to take part in the research (*N* = 56). All were aged between 9 and 10 years of age (with forty-five aged 9 years i.e. 80%). This age group was chosen to replicate earlier and similar studies e.g. Layous et al. (2012). The data of fifty-six participants was used (twenty-seven girls and twenty-nine boys, with 51% of the sample male). Eight pupils identified themselves as speaking a language other than English (14%). All pupils were considered by their teachers to have been in the English educational system long enough to understand the language used in the questionnaires and intervention. The pupils were asked to indicate their reading level. Eight pupils (14%) identified themselves as reading 'only a little', seventeen (31%) identified themselves as reading 'okay,' and thirty-one (55%) identified themselves able to read 'well.'

Questionnaire packs (see Appendix J for pupil questionnaire pack) were presented to teachers prior to the research commencing, and both agreed that the materials would be accessible to their pupils. All students considered to have special educational needs (SEN) by their teachers were supported more closely throughout the data gathering sessions (they were told to request guidance if they did not understand, and a member of staff checked on each individual periodically through the sessions). Children with SEN were also discussed with their teachers after the first data gathering session. In each case, the teachers felt these particular pupils had understood enough of the written questionnaire to make their answers reliable. Therefore, no participants were

excluded for failure to understand the materials used. Prior to the research beginning, it was decided that only participants who completed five out of the six intervention class sessions would be included. Only nine participants missed a session due to absence and no children missed more than one session, therefore no participants were excluded due to absence. Two children who happened to have spelling programmes at the same time were withdrawn for fifteen minutes in the first two sessions, although this practice was subsequently stopped by the teacher.

4.4. Ethical considerations

Prior to any of this activity, approval for the study was gained from Cardiff University Ethics Committee. The primary ethical concern was to ensure that the participants and their parents were provided with enough accessible information to ensure they were able to give informed consent. To ensure this was the case, a strictly agreed process was adhered to as outlined in Appendix G. That is, gatekeepers were provided with information and consent forms. Once this level of consent was agreed, further information and consent was sought from class teachers, parents and finally the pupils themselves (see Appendix H for all information and consent forms). All participants were informed of their right to withdraw at any time.

All participants were allocated an identity number to be used instead of their name, and all data collected and kept as part of the study had this number attached. The original numbered participant list for each class was kept by the teacher in each case (and thus separate from the data at all times to ensure confidentiality), and destroyed after the last data collection session. The data collected was stored securely until it was entered for analysis, and paper questionnaires were then destroyed as agreed. Participants received written or verbal debriefing (see Appendix I for debriefing forms). All data was gathered, stored and used in accordance with the ethical committee guidelines of Cardiff University.

4.5. Design

A within-participants design (Robson, 2015) was used (see Figure 5). This involved baseline and post-intervention measures taken with participants in two separate classes. A quasi-experimental design, as outlined by Cohen (2013) was adopted, because the control group and the treatment group were selected by convenience, as the only two schools who had already elected to join the intervention. These groups were not matched other than by age, the geographical location of their school and cultural/demographic factors.

Each class was selected to either a waiting list control group, or intervention group, by a coin toss. A waiting list control group was adopted because it is potentially unethical to ask one group of pupils to forgo an intervention that may be of value (see Jewell, 2011). Measures (i.e. questionnaires) were taken in both schools in the same week prior to the intervention beginning (Time 1). The participants in School Two then undertook the six weekly intervention sessions, and measures were repeated with each group (at Time 2), again in the same week. Following this, School One began the six week intervention and at the end of this period, both schools repeated the measures (Time 3). The school not receiving the intervention continued with their normal everyday activities. The design aimed to reduce any seasonal influences on the subjective well-being of participants by allowing comparison between groups of this dependent variable prior to intervention.

The data gathering sessions each took no more than an hour and were conducted by a second researcher not involved in delivering the intervention (this person was an educational psychologist with valid enhanced disclosure and barring service (DBS) checks). This was to reduce any response bias caused by having the same person delivering the intervention also collecting the data. Staff were also present as usual.

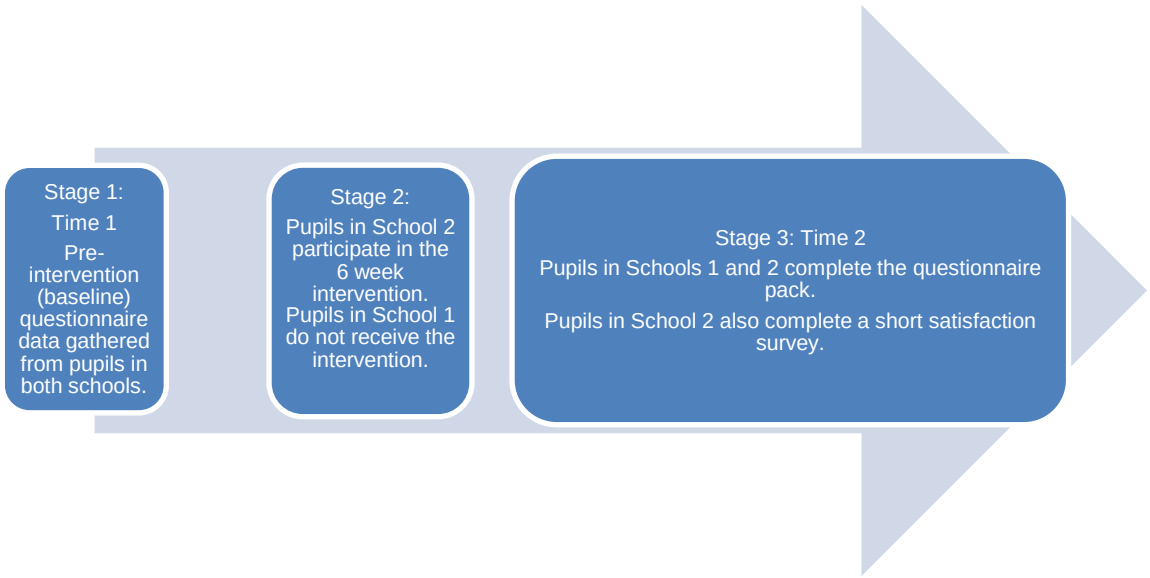

Figure 5: The Research Design: School 2 receives the intervention, School 1 acts as a waiting list control

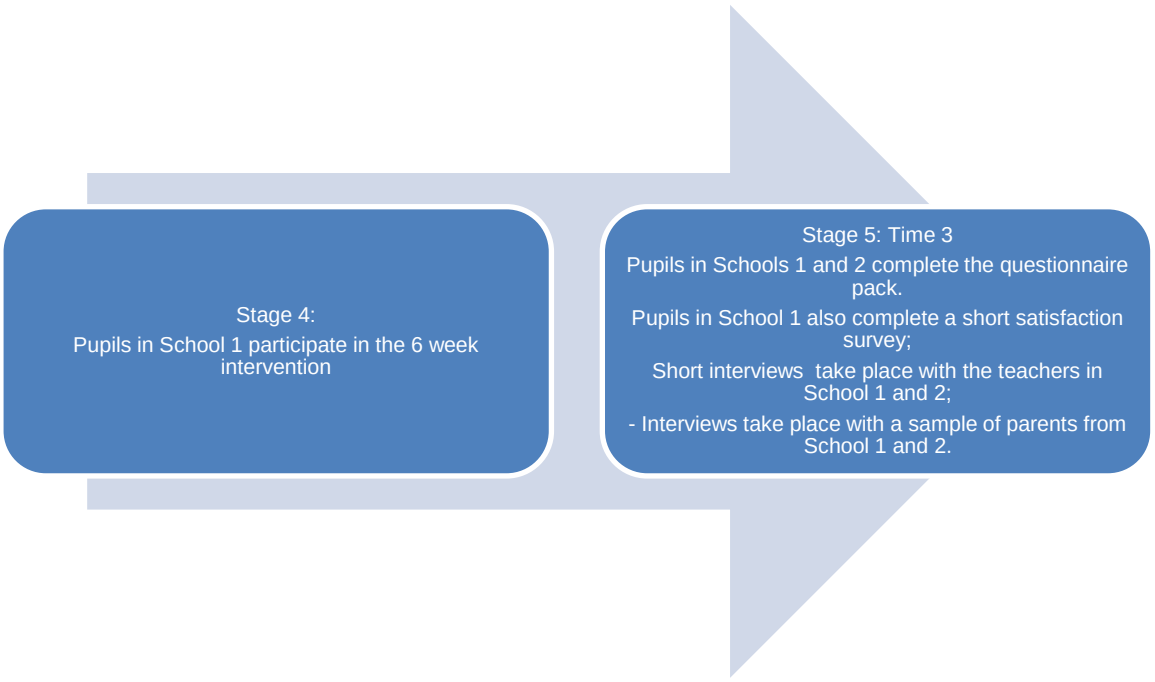

Figure 6: The Research Design: School 1 receives the intervention, School 2 are post-intervention and follow-up data is collected.

4.6. Experimental measures

The scales described below were used in the current study and comprised a questionnaire booklet used at each time point and reproduced in Appendix J.

4.6.1. The Positive and Negative Affect Scale (PANAS)

Devised by Watson et al. (1988), this thirty item self-report scale lists feelings e.g. *lonely, cheerful*, and asks the participant to rate how often they have felt these in the last week. The instrument has two subscales: positive and negative affect. The scale has high internal consistency: Cronbach's Alpha coefficient of 0.86 to 0.9 for positive affect (PA) and 0.84 to 0.87 for negative affect (NA). The test-retest reliability over an eight-week period ranged from 0.47 to 0.68 for PA and 0.39 to 0.71 for NA. The authors report that the scale correlates well with other instruments which measure moods (e.g. depression, anxiety and general stress). The original scale was standardised on college students (N = 668) with the version used here adapted for children by Layous et al. (2012) and used in their study on kindness.

Santos (1999) indicates that questionnaire items should have a high degree of correlation (0.8 or above when measured using Cronbach's alpha) in order to assume they all measure the same underlying construct, and perform as a reliable scale. In the current research these items formed a reliable scale at Time 1 (α = .882, M = 91.82, SD

= 14.26), at Time 2 (α = .825, M = 91.71, SD = 10.517), and at Time 3 (α = .787, M = 91.00, SD = 9.265) with high levels of internal consistency.

4.6.2. The Prosocial Behaviour Scale (PBS)

Devised by Caprara and Pastorelli (1993), this fourteen item self-rating scale explores children's prosocial thinking and behaviour. It measures the frequency of thoughts, feelings and behaviours associated with prosocial acts. For example *'I often feel sorry for people who don't have the things I have.'* The scale is scored with five options (*Not at all like me, A little like me, Sometimes like me, A lot like me, Always like me).* It was standardised for use on 7 to 10 year olds, and the authors claim it has satisfactory convergent validity when compared to data provided by multiple informants (e.g. teachers, parents and peers). It demonstrates good internal validity (with Cronbach's Alpha coefficient ranging from 0.78 to 0.9).

In the current research these items formed a reliable scale at Time 1 (α = .912, M = 41.98, SD = 10.75), at Time 2 (α = .874, M = 39.75, SD = 8.789), and at Time Three (α = .916, M = 42.30, SD= 9.540).

4.6.3. The School Kindness Scale (SKS)

This fourteen item self-report scale (Binfet, Gadermann, & Schonert-Reichl, 2016) was used to assess pre-existing levels of kindness in the sample, and to indicate if manipulation has occurred (i.e. to claim kindness increases SWB one must establish that the experimental treatment has resulted in an increase in this measure in participants). The items ask the participant to rate how often they perform a variety of everyday kind acts such as *'How often do you keep promises, How often do you help classmates new things.'* The scale has a five point rating range from *Not at all* to *All the time*. The authors of the scale claim it is significantly and positively associated with teacher reports of student empathy (correlated at 0.71), social skills (0.78) and peer acceptance (0.91). This amounts to good convergent validity with related constructs.

In the current research these items formed a reliable scale with good internal consistency at Time 1 (α = .876, M = 50, SD = 9.626), and at Time 2 (α = .874, M = 48.43, SD = 9.063), and at Time Three (α = .809, M = 50.61, SD = 6.938).

4.6.4. My Life in School Checklist (MLSC)

Devised by Arora (1994) this forty item self-report scale asks pupils about the frequency of both positive and negative peer interactions in school e.g. '*This week another pupil called me a name…said something nice*.' The scale was used to measure any perceived changes in the frequency of positive and negative behaviours. A three point frequency scale is used with the options: *Not at all, Only once, More than once*. A primary and secondary aged version is available with the latter being used here because the language was more suited to the age of participants, whilst remaining accessible. The scale was reduced in length to twenty-one questions by the current researcher, with nineteen questions removed for brevity, with those most related to kind and unkind behaviours between peers retained. Although designed to provide a measure of children's perceptions of bullying, because this scale asks for ratings of overt behaviour, it offers a possibility of being sensitive to changes in prosocial behaviours amongst peers. The scale has not been fully standardised although it has been used on a large sample (1,940) and the results compared to existing scales. This is reported to have produced comparable findings about the type and prevalence of bullying (Smith, 1992; as cited in Sharp, 1999).

In the current research these items formed a reliable scale with moderate internal consistency at Time 1 (α = .797,M = 42.16, SD = 5.833), and at Time 2 (α = .775, M = 43.38, SD = 5.341), and at Time Three (α= .846, 42.82, SD= 6.32).

4.6.5. The School Children's Happiness Inventory (SCHI)

This is a thirty item inventory designed by Ivens (2007) to measure the impact of school based interventions on children's happiness in school and subjective well-being. This self-report measure has predictive validity when compared with existing measures of self-esteem and affect (for example, it correlates moderately with The Culture-Free Self-Esteem Inventory (Battle, 2002; r = .49); and The Children's Depression Inventory (Kovacs, 1985; r = -.55); and highly with the Positive and Negative Affect Scale (Watson et al., 1988; r = .71). It also has a good level of internal consistency (α = .86).

In the current research these items formed a reliable scale with good internal consistency at Time 1 (α = .940, M = 72.73, SD = 10.626), and at Time 2 (α = .826, M = 89.52, SD = 9.87), and at Time Three (α = .821, 88.50, SD = 9.844).

4.6.6. The Beck Youth Inventories: Self-concept Scale (BYISC)

The Self-concepts of the Beck Youth Inventory (Beck, Beck, & Jolly, 2001) was used to measure whether the intervention had any impact on participant's self-concept (sometimes known as self-esteem). This twenty item self-report sub-scale was chosen because it can stand alone from the rest of the inventory and is a recognised measure of this construct. The scale was designed for use with children aged 7 to 14 years of age. It asks participants to rate statements such as *'I like myself, People want to be with me, I tell the truth'* on a four point scale (Never, Sometimes, Often and Always). The sub-scale has good internal consistency (with Cronbach's Alpha ranging between .86 to .91) and with high test-re-test reliability over a one-week period of 0.74 to 0.90). The authors report it correlates reasonably well with existing measures of self-esteem (0.77).

In the current research, these items formed a reliable scale at Time 1 (α = .920,M = 59.98, SD = 11.287), and at Time 2 (α = .888, M = 55.98, SD= 9.040), and at Time Three (α = .849, M = 58.09, SD = 7.707).

4.6.7. The Guess Who Peer Assessment Technique

This long established peer assessment or sociometric technique (see Hartshorne, 1929; Coie et al., 1982) consists of a list of pupil names on the left hand side of the page (i.e. a class list). Pupils are asked to rate their peers as having a particular quality listed in the heading to the sheet. The qualities listed are typically those qualities in their peers that might be expected to affect friendships and popularity. The version used here, adapted by the author from Layous et al. (2012), asked participants to tick the names of class mates who possess each of the following seven qualities:

- 5 positive qualities: *Children who share; Children I like to play with; Children who help you if you have a problem; Children who are kind; Children who understand my point of view.*

-2 negative qualities: *Children I stay away from; Children who do things they shouldn't.*

The qualities were chosen to allow peers to make judgements about a range of positive and negative qualities and behaviours that might be influenced by the workshops, and which might provide a measure of each student's popularity with peers. Each item was scored as a one or zero, yielding a popularity and unpopularity score at each measurement point for each participant. Previous research suggests that this type of measure can be used reliably with students over the age of 8 years although prior to

this age pupils tend not to notice behavioural consistencies (Rholes & Ruble, 1984). Coie et al. (1982) found a reasonable level of stability in ratings using this type of technique over a five year period (test-retest reliability ranging from 0.53 to 0.84) for 10 to 11 year old pupils. Using similar positive statements (e.g. *'This person cooperates'*) and negative statements (*'This person disrupts'*), Frederickson and Graham (1994) found high levels of test-retest reliability over a five-week period in a similar age group. This technique was selected to be sensitive to changes in quite subtle, complex and private behaviour of the child participants not accessible to adult observers (i.e. their teachers).

In the current research these items formed a reliable scale with good internal consistency at Time 1 (α = .824, mean, M = 99.79, standard deviation, SD = 18.923), and at Time 2 (α = .952, M = 83.61, SD = 23.097), and at Time 3 (α = .900, M = 82.63, SD = 22.110).

4.6.8. Satisfaction scale: 'Six-weeks of Kindness'

This thirteen item self-report questionnaire was designed by the current author to measure the participant's satisfaction with the intervention and whether participants perceived the intervention to have had an impact on their levels of happiness and pro-social behaviour. Items were rated on a four point scale (I disagree, I disagree a little, I agree, I agree a lot). A balance of positive and negative statements was used. Examples of items included '*I liked learning about kindness, Learning about kindness made some children more unkind.'* Negative items were reversed when scored. This scale was only administered after the intervention. In the current research these items formed a reliable scale with good internal consistency (α = .882, M = 42.95, SD = 6.174).

4.6.9. The Satisfaction with Life Scale for Children (SWLS-C)

The SWLS-C is a self-report scale for use with children devised by Gadermann, Schonert-Reichl and Zumbo (2010). Two items from this five item scale were taken and used following the example of Layous et al. (2012) to provide a very brief sample of SWB immediately before and after the last workshops. Both items ask the participant how they have felt during the previous week on a six-point scale from D*isagree a great deal* to *Agree a great deal*.

The first item measures positive affect: *I have felt happy in the last week.* The second item measures life-satisfaction: *I have felt satisfied with my life in the last week.* These two questions were selected for use immediately before the intervention (first

intervention session) and immediately after the intervention (in the last/ sixth intervention session). These two questions were used by Layous at al. (2012) and again in the current study as a quick 'consistency check' for participant ratings: to measure whether their ratings were consistent with those provided when they completed the questionnaire booklets. The alpha coefficient for the scale ranges from .79 to .89, indicating that the scale has high internal consistency. The scale was also found to have good test-retest correlations (.80 over a month interval). In the current research these items formed a reliable scale before each group began the intervention (α = .607, mean, M = 9.62, standard deviation, SD = 2.162), and after intervention (α = .622, M = 10.68, SD = 2.010).

4.6.10. Semi-structured Interviews

Semi-structured interviews were conducted by a second researcher not associated with the intervention to reduce the effects of response bias. Each class teacher was interviewed (two teachers in total); and a shorter semi-structured interview with a random sample of seven parents who had consented for follow-up contact. Silverman (2015) recommends the use of interviews for gathering opinions and beliefs about facts, and for commenting on the standards of an action. This is suited to the main theme of exploration in the current study: the behaviours of children through the perceptions and observations of their teachers and parents, and particularly, if respondents were aware of any noted effects or impact of the intervention.

Cohen et al. (2007) recommend the use of semi-structured interviews particularly in research where the researcher is not aware of what is not known. In this case it could not be predicted how the intervention might have impacted on the complex, subtle and private interactions of pupils. This format also increases the comprehensiveness of the data collected as it allows the respondent to project their own ways of defining the world on to the topic being explored, and allows matters to be raised that were not predicted in the pre-devised schedule of open-ended questions. The format is suited to a naturalistic research environment (such as a school) and an accessible conversational style, suited to parents and allowing digressions and expansions of interest and relevance to them (Robson, 2015). Although this method can result in substantially different responses, which potentially reduces the compatibility of the data collected (Cohen et al., 2007), this was not thought to be a problem considering the small number of respondents to be interviewed.

During the semi-structured interviews the participants were asked a series of questions regarding the intervention and their perceptions of whether it had led to any improvements in pro-social behaviour at school or out of school. The participants were also asked to comment on the advantages and disadvantages of the intervention. For a full schedule of the semi-structured interview questions used with teachers and parents refer to Appendix E. These responses will be discussed in greater detail within the Results section and again in the Discussion section of this thesis.

4.7. Procedures

Ethical approval was gained from Cardiff University Ethics Committee. The ethical considerations including consent, withdrawal and debriefing are detailed in Appendices G, H and I.

4.7.1. Data collection

The measures were administered in the form of a booklet to each experimental group at three points in time (see Figure 5), by a second researcher, who read the brief instructions for each questionnaire to the whole class to ensure exactly the same conditions and expectations were created for each group as far as possible. The class teacher was present in each of these data gathering sessions to provide further explanations as necessary. There is a possibility that a failure to insist on adherence to a script during the sessions, for all staff present may have introduced a confounding variable through a failure to adequately control the instructions given to pupils in each data collection session. This possibility is discussed further in the final section of this thesis. The booklet had practice items to attune the pupils to this kind of activity, and to elucidate the meaning of the different scoring scales, which were completed and discussed prior to pupil participants being asked to complete booklets on their own. Support in both classes from a teaching assistant was also provided at each data gathering point. Pupils are accustomed to completing assessments under test conditions and they were instructed to treat the data gathering sessions in this manner. They were instructed to work in silence, read each item, and complete their answers without discussing them, and not to look at other pupil's answers. The teaching staff reinforced these instructions throughout the sessions and were also available for those who were unsure how to respond to particular questions.

4.7.2. Materials

The following materials were required:

- Six detailed lesson plans (see Appendix B).
- A mindfulness script (Appendix C, and various children's stories and animated films listed in Appendix D).
- A large interactive white-board with speakers linked to a computer with internet access.
- A questionnaire pack for each participant at each of the three data collection sessions.
- A numbered pupil class list in each school.
- Interview schedules for parents and teachers.
- A digital audio recording device.

4.7.3. Timetable for the study

In each school the intervention took place on the same day and time each week, chosen by the teacher for their convenience. The data collection points were scheduled to be on this same day and time before and after the intervention to ensure continuity of experience for the staff and participants. A timetable of the study is detailed in Figure 7 below:

	Time 1: October 2017	Time 2: January 2017	Time 3: February 2018
School 1	Provide baseline data wait for 6 weeks.	Provide pre-intervention data. Participate in intervention for 6 weeks.	Provide post-intervention data.
School 2	Provide baseline data Participate in intervention for 6 weeks	Provide post-intervention data	Provide follow-up data

Figure 7: Duration and timetable for the study

Chapter 5

5. Results

5.1. Introduction to results

Prior to analysis, the raw questionnaire data was subjected to a missing values analysis using SPSS, and this small amount of missing data was imputed. The baseline questionnaire data for all participants (i.e. questionnaires completed at Time 1; *N* = 56) was then subjected to a polychoric correlation to ensure each scale had adequate internal consistency, and measured a unitary construct (see Appendix R for the code used to operate the statistical software). Polychoric correlations are recommended when data is gathered from multiple raters on an ordinal/ordered category scale (Drasgow, 2004). This technique allows measurement of rater agreement, and estimates what the correlation between raters would be if the ratings were made on a continuous scale (Uebersax, 2006). Cronbach's alpha for each scale has been quoted in the previous section (4.61 - 4.69) and the coefficients confirmed the scales used had high internal consistency.

The polychoric correlation matrix for each scale was then used to perform a principal components analysis (PCA). This technique allows clusters of items (i.e. questions) to be identified that may function as a component with the same underlying cause, with groups of questions functioning as distinct sub-scales because they measure the same underlying construct, and which can be summed to provide a sub-scale score instead of reducing the data to an overall single score or construct. This allows more subtle patterns of variation to be analysed and compared within the data (Gardner, 1996; Appendix L shows which questionnaire items were formed into distinct sub-scales so that the means for each sub-scale could be analysed). At this stage, factor analysis was used to confirm which item numbers correlated with which factors to comprise each sub-scale.

Following PCA, questionnaire items with an Eigen value of less than one in the baseline data gathered at Time 1 were marked as items that might potentially be deleted from the questionnaire, as this is an accepted method used in questionnaire analysis and design for removing extraneous items which do not provide much additional value to the information already surveyed (Bowling, 2005). The correlations between items in the sub-scale were also examined. Items with a loading or correlation of .3 are by some authors considered to capture enough variance to remain as part of a

scale (Casalo, Flavian, & Guinaliu, 2007). Consistent with this practice, items with correlations below this level were also marked. Those items with both Eigen values below one, and with less than a .3 inter-item correlation were subsequently deleted from the sub-scale and this data was not used in subsequent analysis. Only six questions were removed from questionnaires across the whole analysis involving a total of 129 items (see Appendix L for an indication of which items were deleted).

5.2. Overview of questionnaire Analysis

There has been much discussion about whether Likert scale items (which are considered to provide ordinal rather than continuous data) require parametric or non-parametric analysis (Carifio & Perla, 2008). De Winter and Dodou (2010) explored the properties of the *t*-test versus Mann-Whitney-Wilcoxon for use on Likert scales. They found these two tests had equivalent power in most situations where samples in the experimental conditions were from a non-skewed, multimodal population, with error rates of 3%. They concluded that for Likert items, the *t*-test and Mann-Whitney generally have similar power, and researchers should not be concerned which of these to choose, when there is no difference between the samples being studied across experimental conditions. The *t*-test was used in the current research in preference to non-parametric tests. The *t*-test is based on a number of assumptions (Clark-Carter, 2009). Firstly, the data should be continuous in nature, this was discussed above. Secondly, the sample should be of adequate size and randomly selected. Clark-Carter suggests that a sample of forty or more is satisfactory, particularly if the final assumptions below are satisfied. A fourth assumption is that the data is normally distributed. Ghasemi and Zahediasl (2012) indicate that tests of kurtosis and skewness which yield results in a range between -2 and 2 are acceptable levels to assume the data is normally distributed. The table displayed in Appendix M provides the statistics for these two measures, and indicates that some of the questionnaire data exceeded these limits for kurtosis (nine data sets) and for skewness (three data sets). Where data sets have exceeded these limits, non-parametric tests have been used instead. The final assumption for parametric assessment is homogeneity of variance, assessed using Levene's test which was carried out and has been reported alongside each *t*-test.

5.3. Overview of experimental conditions

The research design with a treatment group and waiting list control allows for nine meaningful comparisons to be made between, and within, School One and Two over the three time points. Table 1 below sets out a key to describe the statistical

comparisons that will be made, and labels each data set by school and by time. For example, comparison of Data A1 with Data B1 allows an understanding of whether both groups (treatment and control) were equal at the start of the study on important baseline dependent variables such as SWB. Only if this is the case can any increase in a dependent variable be claimed as an outcome of the intervention when the pre and post intervention data are compared.

Table 1: School by time: possible data comparisons across experimental conditions.

	Time 1	Time 2	Time 3
School 1	**Data A1**	**Data A2**	**Data A3**
School 2	**Data B1**	**Data B2**	**Data B3**

Table 2 below defines in more detail which data sets were compared, the predicted direction of experimental effects, and summarises any statistically significant differences in the measures taken. It should be noted that although each and every comparison was examined using either parametric or non-parametric tests, only those that achieved a level of significance are described in the following paragraphs (5.3 - 5.14) for brevity. Data from seven questionnaires were analysed, with some of these being separated into further sub-scales allowing a total of seventeen statistical comparisons in each condition.

Table 2: Overview of the comparisons made between experimental conditions (across schools and over time), predictions and significant results.

Schools and times compared	**Predictions**	**Para-graph**	**Summary of significant results**
School 1 x School 2 at Time 1 **(A1 v B1)**	Levels of dependent variable (DV) at baseline are the same in each school (i.e. School 1 is a fair control to School 2)	5.4	2 scales different: PANAS1, SCHI. i.e. both schools have similar levels of DV at baseline. No significant difference in 15 scales.
School 2 at Time 1 x School 2 at Time 2 **(B1 v B2)**	Post-intervention School 2 will demonstrate higher levels of each DV than it did at Time 1.	5.5	1 scale was significantly higher post-intervention (PANAS 1). No significant difference in 16 scales.
School 1 at Time 1 x School 1 at Time 2 **(A1 v A2)**	Levels of the DV will remain constant for School 1 as it waits for intervention	5.6	3 scales were significantly higher (KIQ factor 1, SCHI, and the BYI-SC). No significant difference in 14 scales.

School 1 x School 2 at Time 2 (**A2 v B2)**	Levels of the DV will be higher in School 2 than School 1 because they have received intervention.	5.7	No significant differences.
School 1 at Time 2 x School 1 at Time 3 **(A2 v A3)**	Post-intervention School 1 will demonstrate higher levels of each DV than it did at Time 1 due to intervention	5.8	2 scales were significantly higher post-intervention (PBS1, KIQ1). No significant differences in 15 scales.
School 2 at Time 2 x School 2 at Time 3 **(B2 v B3)**	Levels of each DV at Time 3 will be the same as at Time 2 i.e. the effects of the intervention will persist at follow-up.	5.9	No significant differences in 17 scales.
School 1 x School 2 at Time 3 **(A3 v B3)**	Levels of each DV will be the same in both School 1 and School 2	5.10	1 scale had a different score when schools compared (PANAS-2). No significant differences in 16 scales.
School 1 at Time 1 x School 1 at Time 3 **(A1 v A3)**	Post-intervention (at Time 3) School 1 will demonstrate higher levels of each DV than it did at Time 1.	5.11	1 scale demonstrated a significant increase (SCHI), 1 scale demonstrated a significant fall (BYI-SC). No significant differences in 15 scales.
School 2 at Time 1 x School 2 at Time 3 **(B1 v B3)**	At follow-up (Time 3) School 2 will continue to demonstrate higher levels of each DV than it did at Time 1.	5.12	1 scale demonstrated a significant increase over the period measured for 1 variable (MLIS factor 2). No significant differences in 16 scales.

In the next section, each of the comparisons made will be described in more detail in relation to the initial research questions.

5.4. Are both groups equal before intervention? (A1 v B1):

Prior to any intervention both groups completed the same baseline measures to determine whether School 1 was able to act as a waiting list control group for later comparison. Although no significant differences were found between the two groups on fifteen scales, the participants from School 1 (*N* = 30) demonstrated higher levels of positive emotion at Time 1 on one of the questionnaire scales (see Table 3 below for descriptive statistics). This was on sub-scale 1 of the PANAS: *M* = 52.17 (*SD* = 7.670). The pre-intervention group (School 2; *N* = *26*) demonstrated a lower level of positive emotion (*M* = 47.08; *SD* = 10.253). To test the null hypothesis that participants in School 1 and School 2 demonstrated similar levels of positive emotion, a Mann-Whitney test was used which indicated that scores on the PANAS1 scale were

significantly higher for School 1 (*Mdn* = 55) compared to School 2 (*Mdn* = 47), *U* = 270, *p* = .048.

This significant difference between the two groups indicates that the null hypothesis was rejected, and both groups differed in the initial levels of positive emotion before intervention, with School 1 significantly higher on this one scale.

Table 3: Descriptive statistics for data provided by participants in School 1 and School 2 at Time 1 (A1 v B1)

Sub-scales (with codes used in analysis)	School	N	Mean	Std. Deviation	Std. Error Mean
PANAS 1	1	30	52.17	7.670	1.400
PanFac1T1	2	26	47.08	10.253	2.011
PANAS 2	1	30	11.00	2.626	.479
PanFac2T1	2	26	11.46	2.657	.521
PANAS 3	1	30	21.03	3.624	.662
PanFac3T1	2	26	22.08	4.741	.930
PANAS 4	1	30	9.07	2.664	.486
PanFac4T1	2	26	9.54	2.803	.550
PBS 1	1	30	27.90	7.121	1.300
TfFac1T1	2	26	29.62	8.936	1.752
PBS 2	1	30	13.30	3.395	.620
TfFac2T1	2	26	13.27	3.595	.705
SKS 1	1	30	25.90	4.294	.784
KIQFac1T1	2	26	26.12	6.327	1.241
SKS 2	1	30	10.60	2.931	.535
KIQFac2T1	2	26	11.31	2.259	.443
SKS 3	1	30	9.50	2.596	.474
KIQFac3T1	2	26	9.92	2.741	.538
SKS 4	1	30	3.40	1.133	.207
KIQFac4T1	2	26	3.35	1.325	.260
MLSC 1	1	30	8.87	2.193	.400
MLFac1T1	2	26	9.62	2.531	.496
MLSC 2	1	30	7.40	1.276	.233
MLFac2T1	2	26	7.19	1.386	.272
MLSC 3	1	30	8.70	2.548	.465
MLFac3T1	2	26	8.58	2.419	.474
MLSC 4	1	30	7.13	1.456	.266
MLFac4T1	2	26	7.62	1.267	.249
MLSC 5	1	30	9.60	2.010	.367
MLFac5T1	2	26	9.69	2.294	.450
SCHI 1	1	30	59.30	13.225	2.415
Shi-totT1	2	26	88.23	16.330	3.203
BYI-SC	1	30	60.40	9.073	1.656
Sc-totT1	2	26	57.35	13.401	2.628

Conversely, School 2 scored higher on the SCHI (a measure of school happiness): *M* = 88.23 (*SD* = 16.330). By comparison the waiting list group (School 1) was associated with a numerically lower level of positive emotion (*M = 59.30*; *SD* = 13.225). To test the null hypothesis that participants in School 1 and School 2 had similar levels of school happiness, an independent samples *t*-test was performed. The sample distribution was normal for the purpose of conducting a *t*-test (see appendix M for measures of skew and kurtosis). Additionally, the assumption of homogeneity of variances was tested and satisfied with Levene's *F* test, *F (df54)* = .810, p = .372. The independent samples *t*-test was associated with a statistically significant effect, t (54) = -7.323, *p* = 0.0009. Thus, the participants in School 2 were associated with a statistically significant higher level of happiness at the start of the study on this single scale, and the null hypothesis was rejected. Cohen's *d* was estimated at 1.9 which is a large sized difference based on Cohen's (1992) guidelines. This noted difference will need to be considered in any further comparison of School 1 and School 2, however no other significant differences at Time 1 between schools were evident. This indicates that School 1 can be considered to function as a waiting list control group on fifteen of the seventeen sub-scales used as dependent variables.

5.5. Intervention for School 2: Analysis of data at Time 1 and Time 2 (B1 v B2)

To establish whether participant levels of the dependent variables increased after intervention, comparison was conducted of data for School 2 before and after intervention. The participants from School 2 (*N* = 26) were the first to take part in the intervention and their scores on the measures taken changed significantly on one questionnaire scale only: PANAS sub-scale 1 (a measure of positive affect (see Table 4 below for the descriptive statistics)).

Table 4: Descriptive statistics for data provided by participants in School 2 at Time 1 and Time 2 (B1 v B2)

Sub-scales (with codes used in analysis)	Time	Mean	N	Std. Deviation	Std. Error Mean
PANAS 1 PanFac1T1	1	47.08	26	10.253	2.011
	2	49.88	26	7.876	1.545
PANAS 2 PanFac2T1	1	11.46	26	2.657	.521
	2	11.00	26	1.918	.376
PANAS 3 PanFac3T1	1	22.08	26	4.741	.930
	2	22.08	26	3.719	.729
PANAS 4 PanFac4T1	1	9.54	26	2.803	.550
	2	9.92	26	2.415	.474
PBS 1 TfFac1T1	1	29.62	26	8.936	1.752
	2	28.62	26	6.963	1.366
PBS 2 TfFac2T1	1	12.52	26	3.074	.545
	2	13.15	26	3.082	.606
SKS 1 KIQFac1T1	1	26.12	26	6.327	1.241
	2	26.19	26	5.593	1.097
SKS 2 KIQFac2T1	1	11.31	26	2.259	.443
	2	10.42	26	2.831	.555
SKS 3 KIQFac3T1	1	9.92	26	2.741	.538
	2	10.42	26	2.641	.518
SKS 4 KIQFac4T1	1	3.35	26	1.325	.260
	2	3.23	26	1.070	.210
MLSC 1 MLFac1T1	1	9.62	26	2.531	.496
	2	9.42	26	2.283	.448
MLSC 2 MLFac2T1	1	7.19	26	1.386	.272
	2	7.31	26	1.490	.292
MLSC 3 MLFac3T1	1	8.58	26	2.419	.474
	2	8.92	26	1.831	.359
MLSC 4 MLFac4T1	1	7.62	26	1.267	.249
	2	7.46	26	1.303	.256
MLSC 5 MLFac5T1	1	9.69	26	2.294	.450
	2	9.73	26	2.183	.428
SCHI 1 Shi-totT1	1	88.23	26	16.330	3.203
	2	89.19	26	12.100	2.373
BYI-SC Sc-totT1	1	57.35	26	13.401	2.628
	2	55.35	26	10.759	2.110

To test the null hypothesis (H_{01}- see paragraph 3.3 for hypotheses) that the pre-intervention (*M* = 47.08; *SD* = 10.253) and post-intervention means (*M* = 49.88; *SD* = 7.876) were equal, a Wilcoxon Signed-ranks test was carried out, which indicated that scores on the PANAS1 scale were significantly higher for School 2 at Time 2 (*Mdn* = 51) compared to Time 1 (*Mdn* = 47), *Z* = -2.129, *p* = .033.

Thus, post-intervention, positive emotion as measured by this sub-scale of the PANAS consisting of 12 items was significantly higher for the post intervention group, indicating that there is evidence to reject the null hypothesis in favour of the alternative hypothesis ($H_{a1;}$ see paragraph 3.3 for hypotheses) but in relation to this variable only. Cohen's *d* was calculated at 0.31. This is a small effect. To conclude, on the seventeen pairs of means analysed, there was only one statistically significant difference: the score on a measure of positive affect was significantly higher after intervention, though the effect size was small.

5.6. Pre-intervention for School 1: Analysis of data at Time 1 and Time 2 (A1 v A2)

It was important to compare the control group (School 1) to itself between Time 1 and 2 (and period prior to intervention) to assess whether the measures remained stable as predicted, or were subject to external factors which might affect the well-being of participants in both groups and confound the results (see Table 5 below).

Table 5: Descriptive statistics for data provided by participants in School 1 at Time 1 and 2 (A1 v A2)

Sub-scales (with codes used in analysis)	Time	Mean	Std. Deviation	Std. Error Mean
PANAS 1 PanFac1T1	1	52.17	7.670	1.400
	2	50.67	7.604	1.388
PANAS 2 PanFac2T1	1	11.00	2.626	.479
	2	10.00	1.875	.342
PANAS 3 PanFac3T1	1	21.03	3.624	.662
	2	20.77	3.411	.623
PANAS 4 PanFac4T1	1	9.07	2.664	.486
	2	9.27	2.392	.437
PBS 1 TfFac1T1	1	27.90	7.121	1.300
	2	26.00	6.286	1.148
PBS 2 TfFac2T1	1	13.30	3.395	.620
	2	12.23	3.014	.550
SKS 1 KIQFac1T1	1	25.90	4.294	.784
	2	24.13	3.972	.725
SKS 2 KIQFac2T1	1	10.60	2.931	.535
	2	10.23	2.223	.406
SKS 3 KIQFac3T1	1	9.50	2.596	.474
	2	9.47	2.193	.400
SKS 4 KIQFac4T1	1	3.40	1.133	.207
	2	3.00	1.145	.209
MLSC 1 MLFac1T1	1	8.87	2.193	.400
	2	9.50	1.961	.358
MLSC 2	1	7.40	1.276	.233

MLFac2T1	2	7.37	1.450	.265
MLSC 3	1	8.70	2.548	.465
MLFac3T1	2	9.33	2.202	.402
MLSC 4	1	7.13	1.456	.266
MLFac4T1	2	7.53	1.332	.243
MLSC 5	1	9.60	2.010	.367
MLFac5T1	2	10.10	2.090	.382
SCHI 1	1	59.30	13.225	2.415
Shi-totT1	2	89.80	7.658	1.398
BYI-SC	1	60.40	9.073	1.656
Sc-totT1	2	56.53	7.385	1.348

A paired samples *t*-test was used to test the null hypothesis (H_{01})that the scores remained similar at each of these time points. This indicated that scores were significantly higher for the SCHI scale (a measure of school happiness) at Time 2 (*M* = 89.80, *SD* = 7.658) than for this scale at Time 1 (*M* = 59.30, *SD* = 13.255), *t* (29) = -9.981, *p* = .000. Therefore, the null hypothesis was rejected, but for this variable only. Sixteen other measures remained at similar levels in this pre-intervention period, with three of the scale scores changing. The large and unexplainable increase in the SCHI is of particular note and a discussion of response bias is undertaken in the final chapter of this dissertation as a partial explanation.

5.7. Intervention group compared to control group at Time 2 (A2 v B2)

A table of the means for each school is shown below (Table 6). None of the differences between the means for each condition was significantly different following analysis using an independent samples *t*-test, indicating that the null hypothesis (H_{01}) was supported. This indicates that at Time 2, following intervention the participants in School 2 did not demonstrate significantly increased levels of positive emotion or well-being. In fact, School 2 showed no significant differences on any dependent variable compared to School 1 (waiting list control group). Initial differences at Time 1 between the two schools partially explain why a small increase in the PANAS1 scale for School 2 after intervention did not reach significance (i.e. because School 1 was significantly higher in this measure at the start), and thus the intervention may have helped School 2 ‘catch up’. The other difference between groups at Time 1 was resolved due to a large unexplainable increase for School 1 in the SCHI scale, possibly due to response bias.

Table 6: Descriptive statistics for data provided by participants in School 1 and 2 at Time 2 (A2 v B2)

Sub-scales (with codes used in analysis)	School	N	Mean	Std. Deviation	Std. Error Mean
PANAS 1	1	30	50.67	7.604	1.388
PanFac1T1	2	26	49.88	7.876	1.545
PANAS 2	1	30	10.00	1.875	.342
PanFac2T1	2	26	11.00	1.918	.376
PANAS 3	1	30	20.77	3.411	.623
PanFac3T1	2	26	22.08	3.719	.729
PANAS 4	1	30	9.27	2.392	.437
PanFac4T1	2	26	9.92	2.415	.474
PBS 1	1	30	26.00	6.286	1.148
TfFac1T1	2	26	28.62	6.963	1.366
PBS 2	1	30	12.23	3.014	.550
TfFac2T1	2	26	12.88	2.998	.588
SKS 1	1	30	24.13	3.972	.725
KIQFac1T1	2	26	26.19	5.593	1.097
SKS 2	1	30	10.23	2.223	.406
KIQFac2T1	2	26	10.42	2.831	.555
SKS 3	1	30	9.47	2.193	.400
KIQFac3T1	2	26	10.42	2.641	.518
SKS 4	1	30	3.00	1.145	.209
KIQFac4T1	2	26	3.23	1.070	.210
MLSC 1	1	30	9.50	1.961	.358
MLFac1T1	2	26	9.42	2.283	.448
MLSC 2	1	30	7.37	1.450	.265
MLFac2T1	2	26	7.31	1.490	.292
MLSC 3	1	30	9.33	2.202	.402
MLFac3T1	2	26	8.92	1.831	.359
MLSC 4	1	30	7.53	1.332	.243
MLFac4T1	2	26	7.46	1.303	.256
MLSC 5	1	30	10.10	2.090	.382
MLFac5T1	2	26	9.73	2.183	.428
SCHI 1	1	30	89.80	7.658	1.398
Shi-totT1	2	26	89.19	12.100	2.373
BYI-SC	1	30	56.53	7.385	1.348
Sc-totT1	2	26	55.35	10.759	2.110

5.8. Intervention for School 1: Analysis of data at Time 2 and Time 3 (A2 v A3)

The participants from School 1 (*N* = 30) were the second of the two schools to take part in the intervention. This groups scores changed significantly on two of the questionnaire sub-scales only (see Table 7 for the descriptive statistics).

Table 7: Descriptive statistics for data provided by participants in School 1 at Time 2 and Time 3 (A2 v A3)

Sub-scales (with codes used in analysis)	Time	Mean	N	Std. Deviation	Std. Error Mean
PANAS 1 PanFac1T1	2	50.67	30	7.604	1.388
	3	50.27	30	7.315	1.336
PANAS 2 PanFac2T1	2	10.00	30	1.875	.342
	3	10.17	30	2.069	.378
PANAS 3 PanFac3T1	2	20.77	30	3.411	.623
	3	21.43	30	2.459	.449
PANAS 4 PanFac4T1	2	9.27	30	2.392	.437
	3	9.13	30	2.330	.425
PBS 1 TfFac1T1	2	26.00	30	6.286	1.148
	3	28.63	30	6.173	1.127
PBS 2 TfFac2T1	2	12.23	30	3.014	.550
	3	12.93	30	3.095	.565
SKS 1 KIQFac1T1	2	24.13	30	3.972	.725
	3	26.17	30	3.896	.711
SKS 2 KIQFac2T1	2	10.23	30	2.223	.406
	3	10.60	30	2.343	.428
SKS 3 KIQFac3T1	2	9.47	30	2.193	.400
	3	9.97	30	1.956	.357
SKS 4 KIQFac4T1	2	3.00	30	1.145	.209
	3	3.57	30	.858	.157
MLSC 1 MLFac1T1	2	9.50	30	1.961	.358
	3	9.63	30	2.059	.376
MLSC 2 MLFac2T1	2	7.37	30	1.450	.265
	3	7.63	30	1.245	.227
MLSC 3 MLFac3T1	2	9.33	30	2.202	.402
	3	8.70	30	2.103	.384
MLSC 4 MLFac4T1	2	7.53	30	1.332	.243
	3	7.37	30	1.520	.277
MLSC 5 MLFac5T1	2	10.10	30	2.090	.382
	3	9.93	30	1.837	.335
SCHI 1 Shi-totT1	2	89.80	30	7.658	1.398
	3	88.83	30	9.938	1.814
BYI-SC Sc-totT1	2	56.53	30	7.385	1.348
	3	57.20	30	8.244	1.505

A Mann-Whitney test was used to test the null hypothesis (H_{01}) that there were no differences in the levels of SWB between scores across these two time points for School 1. This indicated that scores on this scale of the PBS1 were significantly higher at Time 3 (*Mdn* = 29) compared to Time 2 (*Mdn* = 27), *U* = -2.330, *p* = .020.The null hypothesis that levels of prosocial behaviour would remain constant following intervention was rejected with the alternative hypothesis supported (H_{a1}), though for this variable only. Thus, post-intervention, prosocial behaviour as measured by this

sub-scale of the PBS consisting of nine items, was significantly higher than levels in the same group before the intervention. Cohen's *d* was calculated at 0.422. This is a small effect (Cohen, 1992).

A Mann-Whitney test was conducted to evaluate the null hypothesis, that scores for the SKS1 scale (a measure of kindness in school) would remain constant for School 1 at Time 2 and Time 3. This indicated that scores on this scale were significantly higher at Time 3 (*Mdn* = 27) compared to Time 2 (*Mdn* = 24), *U* = -2.457 , *p* = .014. Thus, post-intervention, kindness as measured by this sub-scale of the SKS consisting of seven items was significantly higher, with evidence indicating that the null hypothesis should be rejected. Cohen's *d* was calculated at 0.518. This is a moderate effect size (Cohen, 1992).

In summary, following intervention at Time 3, the participants in School 1 demonstrated an increase in two measures of kindness or prosocial thinking and behaviour. However, no other significant differences were found.

5.9. Comparison of School 2 at Time 2 and Time 3 (B2 v B3)

A table of the means for this school at both time points is shown below (Table 8). A paired samples *t*-test as conducted to evaluate the null hypothesis (H_{01}), that the scores achieved at Time 2 would remain the same at Time 3. The null hypothesis was supported. None of the differences between the means for each condition were significant following analysis. However, since the measures at Time 2 were not significantly higher post intervention than at Time 1 (in sixteen of the variables), the data suggests the intervention did not have any effects. In other words, the levels of dependent variable remained broadly constant for School 2 at Time 1, Time 2 and here at Time 3. Thus, the alternative hypothesis (H_{a1}): that the experimental effects of the intervention would persist six weeks after intervention was not supported, but not because the effects dissipated, but because the intervention did not result in the predicted effects.

Table 8: Descriptive statistics for data provided by participants in School 2 at Time 2 and Time 3 (B2 v B3)

Sub-scales (with codes used in analysis)	Time	Mean	N	Std. Deviation	Std. Error Mean
PANAS 1 PanFac1T1	2	49.88	26	7.876	1.545
	3	47.92	26	5.837	1.145

PANAS 2 PanFac2T1	2	11.00	26	1.918	.376
	3	11.54	26	2.005	.393
PANAS 3 PanFac3T1	2	22.08	26	3.719	.729
	3	22.62	26	2.743	.538
PANAS 4 PanFac4T1	2	9.92	26	2.415	.474
	3	10.15	26	2.053	.403
PBS 1 TfFac1T1	2	28.62	26	6.963	1.366
	3	29.31	26	7.791	1.528
PBS 2 TfFac2T1	2	12.88	26	2.998	.588
	3	13.85	26	3.081	.604
SKS 1 KIQFac1T1	2	26.19	26	5.593	1.097
	3	26.46	26	4.140	.812
SKS 2 KIQFac2T1	2	10.42	26	2.831	.555
	3	11.50	26	1.903	.373
SKS 3 KIQFac3T1	2	3.23	26	1.070	.210
	3	10.08	26	2.279	.447
SKS 4 KIQFac4T1	2	3.23	26	1.070	.210
	3	2.92	26	1.017	.199
MLSC 1 MLFac1T1	2	9.42	26	2.283	.448
	3	8.81	26	2.154	.423
MLSC 2 MLFac2T1	2	7.31	26	1.490	.292
	3	8.08	26	1.197	.235
MLSC 3 MLFac3T1	1	8.92	26	1.831	.359
	2	9.27	26	2.031	.398
MLSC 4 MLFac4T1	2	7.46	26	1.303	.256
	3	7.12	26	1.395	.274
MLSC 5 MLFac5T1	2	9.73	26	2.183	.428
	3	9.04	26	2.068	.406
SCHI 1 Shi-totT1	2	89.19	26	12.100	2.373
	3	88.12	26	9.917	1.945
BYI-SC Sc-totT1	2	55.35	26	10.759	2.110
	3	59.12	26	7.056	1.384

5.10. Comparison of School 1 and School 2 at Time 3 (A3 v B3)

An independent samples *t*-test was conducted to evaluate the null hypothesis (H_{01}) that levels of SWB and prosocial behaviour were the same in both groups following intervention for School 1 at Time 3. A table of the means for each school is shown below (Table 9). Only one of the differences between the means for these two groups was significantly higher at Time 3, indicating that the null hypothesis was supported for sixteen of the seventeen variables compared.

Table 9: Descriptive statistics for data provided by participants in School 1 and 2 at Time 3 (A3 v B3)

Sub-scales (with codes used in analysis)	School	N	Mean	Std. Deviation	Std. Error Mean
PANAS 1	1	30	50.27	7.315	1.336
PanFac1T1	2	26	47.92	5.837	1.145
PANAS 2	1	30	10.17	2.069	.378
PanFac2T1	2	26	11.54	2.005	.393
PANAS 3	1	30	21.43	2.459	.449
PanFac3T1	2	26	22.62	2.743	.538
PANAS 4	1	30	9.13	2.330	.425
PanFac4T1	2	26	10.15	2.053	.403
PBS 1	1	30	28.63	6.173	1.127
TfFac1T1	2	26	29.31	7.791	1.528
PBS 2	1	30	12.93	3.095	.565
TfFac2T1	2	26	13.85	3.081	.604
SKS 1	1	30	26.17	3.896	.711
KIQFac1T1	2	26	26.46	4.140	.812
SKS 2	1	30	10.60	2.343	.428
KIQFac2T1	2	26	11.50	1.903	.373
SKS 3	1	30	9.97	1.956	.357
KIQFac3T1	2	26	10.08	2.279	.447
SKS 4	1	30	3.57	.858	.157
KIQFac4T1	2	26	2.92	1.017	.199
MLSC 1	1	30	9.63	2.059	.376
MLFac1T1	2	26	8.81	2.154	.423
MLSC 2	1	30	7.63	1.245	.227
MLFac2T1	2	26	8.08	1.197	.235
MLSC 3	1	30	8.70	2.103	.384
MLFac3T1	2	26	9.27	2.031	.398
MLSC 4	1	30	7.37	1.520	.277
MLFac4T1	2	26	7.12	1.395	.274
MLSC 5	1	30	9.93	1.837	.335
MLFac5T1	2	26	9.04	2.068	.406
SCHI 1	1	30	88.83	9.938	1.814
Shi-totT1	2	26	88.12	9.917	1.945
BYI-SC	1	30	57.20	8.244	1.505
Sc-totT1	2	26	59.12	7.056	1.384

School 2 scored higher on the PANAS (sub-scale 2, a measure of positive emotion): *M* = 11.54 (*SD* = 2.005) whereas School 1 (when measured immediately post-intervention) achieved lower scores on this measure of positive emotion (*M* = 10.17; *SD* = 2.069). To test the null hypothesis (H_{01}) that participants in School 1 and School 2 demonstrated no significant differences in levels of positive emotion at Time 3, an independent samples *t*-test was performed. The sample distribution was normal for the purpose of conducting a *t*-test (i.e. the skew and kurtosis levels were < 2.0 (Ghasemi &

Zahediasl, 2012), see Appendix M for actual levels). Additionally, the assumption of homogeneity of variances was tested and satisfied with Levene's *F* test, *F (*54*)* = .103, *p* = .749. The independent samples *t*-test was associated with a statistically significant effect, *t* (54) = -2.569, *p* = 0.015. Thus, the null hypothesis was rejected, and participants in School 2 were associated with statistically significant higher levels of positive emotion than participants who had just completed the intervention in School 1. Cohen's *d* was estimated at 0.67 which is a moderate sized difference based on Cohen's (1992) guidelines. No other significant differences were noted between schools at this time point. Examination of the mean of this scale for School 2 at Time 1 (*M* =11.56; *SD* = 2.657) indicates that School 2 remained at almost identical levels for this measure, whereas as levels of this measure of positive emotion fell for School 1 at time 2 and again at Time 3. This suggests the difference between School 1 and 2 at Time 3 was not likely to be due to the intervention.

5.11. Comparison of School 1 at Time 1 and Time 3 (A1 v A3)

When post-intervention measures were compared at Time 3, with pre-intervention levels at Time 2, School 1 demonstrated a significant increase in two measures of kindness. A comparison of measures at T3 with T1 was necessary to detect whether any unexpected variations in levels of SWB across the period of study might have affected the results (see Table 11 for descriptive statistics). For example, this might have occurred if SWB increased seasonally as children approached the Christmas holiday. A short-term increase of this nature would obscure any effects of the intervention between T2 and T3.

Table 10: Descriptive statistics for data provided by participants in School 1 at Time 1 and Time 3 (A1 v A3)

Sub-scales (with codes used in analysis)	Time	N	Mean	Std. Deviation	Std. Error Mean
PANAS 1	1	52.17	30	7.670	1.400
PanFac1T1	3	50.27	30	7.315	1.336
PANAS 2	1	11.00	30	2.626	.479
PanFac2T1	3	10.17	30	2.069	.378
PANAS 3	1	21.03	30	3.624	.662
PanFac3T1	3	21.43	30	2.459	.449
PANAS 4	1	9.07	30	2.664	.486
PanFac4T1	3	9.13	30	2.330	.425
PBS 1	1	27.90	30	7.121	1.300
TfFac1T1	3	28.63	30	6.173	1.127
PBS 2	1	13.30	30	3.395	.620

TfFac2T1	3	12.93	30	3.095	.565
SKS 1	1	25.90	30	4.294	.784
KIQFac1T1	3	26.17	30	3.896	.711
SKS 2	1	10.60	30	2.931	.535
KIQFac2T1	3	10.60	30	2.343	.428
SKS 3	1	9.50	30	2.596	.474
KIQFac3T1	3	9.97	30	1.956	.357
SKS 4	1	3.40	30	1.133	.207
KIQFac4T1	3	3.57	30	.858	.157
MLSC 1	1	8.87	30	2.193	.400
MLFac1T1	3	9.63	30	2.059	.376
MLSC 2	1	7.40	30	1.276	.233
MLFac2T1	3	7.63	30	1.245	.227
MLSC 3	1	8.70	30	2.548	.465
MLFac3T1	3	8.70	30	2.103	.384
MLSC 4	1	7.13	30	1.456	.266
MLFac4T1	3	7.37	30	1.520	.277
MLSC 5	1	9.60	30	2.010	.367
MLFac5T1	3	9.93	30	1.837	.335
SCHI 1	1	59.30	30	13.225	2.415
Shi-totT1	3	88.83	30	9.938	1.814
BYI-SC	1	60.40	30	9.073	1.656
Sc-totT1	3	57.20	30	8.244	1.505

A paired samples *t*-test was conducted to evaluate the null hypothesis (H_{01}) that there were no significant changes in scores for School 1 between Time 1 and Time 3. School 1 scored higher on the BYI-SC (a measure of self-esteem) at Time 1 (*M* = 60.40*, SD* = 9.073) than at Time 3 (*M* = 57.20; *SD* = 8.224). The sample distribution was normal for the purpose of conducting a *t*-test (i.e. skew and kurtosis < 2.0 (Ghasemi & Zahediasl, 2012), see Appendix M for levels). Additionally, the assumption of homogeneity of variances was tested and satisfied with Levene's *F* test, *F (df*54*) = .810*, p = .372. The paired samples *t*-test was associated with a statistically significant effect, *t* (29) = 2.096, *p* = 0.045. Thus, the null hypothesis was rejected and levels of this measure fell significantly over the period studied and the alternative hypothesis (H_{a2}) was supported.

The very large increase in the SCHI (a measure of happiness in school) from levels at T1 (*M* = 59.30, *SD* = 13.255) and post-intervention at T3 (*M* = *88.83*, *SD* = 9.938) was discussed above in paragraph 5.7. A Wilcoxon Signed-ranks test was conducted to evaluate the null hypothesis (H_{01}) that there were no significant changes in scores on this measure between these two time points. This indicated that scores on the SCHI were significantly higher at Time 3 (*Mdn* = 89.50), compared to Time 2 (*Mdn* = 56), *Z* = -4.660, indicating that the null hypothesis should be rejected.

In summary, across the period of the study, School 1 fell on one measure with all other dependent variables remaining stable, except for one which increased at large and significant levels prior to intervention and possibly due to some confounding variable.

5.12. Comparison of School 2 at Time 1 and Time 3 (B1 v B3)

Although the intervention appeared to have little impact on School 2, it is possible that any effects might have been incremental, accumulating even after the intervention was over. For example, if the teachers involved continued to use and reinforce techniques presented in the workshops. Therefore, it was necessary to compare School 2 on the measures taken across the whole period of the study (descriptive statistics are displayed below in Table 10). A paired samples *t*-test was conducted to explore the null hypothesis that the scores for the dependent variables in School 2 were the same when measured at baseline and again at Time 3. The MLIS2 sub-scale (a measure of prosocial behaviour in school) was significantly higher at Time 3 (*M* = 8.08, *SD* = 1.197), compared with levels at Time 1 (M = 7.19, *SD* = 1.386), indicating significantly higher levels of this measure post-intervention: *t* (25) = -2.481, *p* = .020. The null hypothesis was rejected for this single variable but supported for the sixteen other variables that did not change significantly over the time period of the study.

Table 11: Descriptive statistics for data provided by participants in School 2 at Time 1and Time 3 (B1 v B3)

Sub-scales (with codes used in analysis)	Time	N	Mean	Std. Deviation	Std. Error Mean
PANAS 1	1	47.08	26	10.253	2.011
PanFac1T1	3	47.92	26	5.837	1.145
PANAS 2	1	11.46	26	2.657	.521
PanFac2T1	3	11.54	26	2.005	.393
PANAS 3	1	22.08	26	4.741	.930
PanFac3T1	3	22.62	26	2.743	.538
PANAS 4	1	9.54	26	2.803	.550
PanFac4T1	3	10.15	26	2.053	.403
PBS 1	1	29.62	26	8.936	1.752
TfFac1T1	3	29.31	26	7.791	1.528
PBS 2	1	13.27	26	3.595	.705
TfFac2T1	3	13.85	26	3.081	.604
SKS 1	1	26.12	26	6.327	1.241
KIQFac1T1	3	26.46	26	4.140	.812
SKS 2	1	11.31	26	2.259	.443
KIQFac2T1	3	11.50	26	1.903	.373
SKS 3	1	9.92	26	2.741	.538

KIQFac3T1	3	10.08	26	2.279	.447
SKS 4	1	3.35	26	1.325	.260
KIQFac4T1	3	2.92	26	1.017	.199
MLSC 1	1	9.62	26	2.531	.496
MLFac1T1	3	8.81	26	2.154	.423
MLSC 2	1	7.19	26	1.386	.272
MLFac2T1	3	8.08	26	1.197	.235
MLSC 3	1	8.58	26	2.419	.474
MLFac3T1	3	9.27	26	2.031	.398
MLSC 4	1	7.62	26	1.267	.249
MLFac4T1	3	7.12	26	1.395	.274
MLSC 5	1	9.69	26	2.294	.450
MLFac5T1	3	9.04	26	2.068	.406
SCHI 1	1	88.23	26	16.330	3.203
Shi-totT1	3	88.12	26	9.917	1.945
BYI-SC	1	57.35	26	13.401	2.682
Sc-totT1	3	59.12	26	7.056	1.384

5.13. The Satisfaction with Life Scale for Children (SWLS-C)

This measure was completed by participants at the start of the first intervention session and at the end of the last intervention session in each school, as an immediate and brief assessment of subjective well-being (see Appendix K1 for a copy). Only two questions were selected to use from the five-item scale in the current research: one relating to happiness and one relating to satisfaction with life. Descriptive statistics are given in Table 12 below.

Table 12: Descriptive Statistics for data provided by participants immediately before and after intervention on Satisfaction with Life Scale for Children (SWLS-C)

Question	School	Time	Mean	N	Std. Deviation	Std. Error Mean
Happiness	1	Before	4.93	30	1.172	.214
Happiness	1	After	5.13	30	1.137	.208
Life satisfaction	1	Before	4.90	30	1.269	.232
Life satisfaction	1	After	5.50	30	1.106	.202
Happiness	2	Before	4.69	26	1.289	.253
Happiness	2	After	5.08	26	1.294	.254
Life satisfaction	2	Before	4.69	26	1.408	.276

Life satisfaction	2	After	5.65	26	1.231	.241

School 1: To test the null hypothesis that the pre-intervention levels of SWB (*M* = 4.90; *SD* = 1.269) were the same as post-intervention levels (*M = 5.50*; *SD* = 1.106) for the question relating to life satisfaction, a paired samples *t*-test was performed. Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was satisfied as the skew and kurtosis levels were less than the maximum allowable levels for a *t*-test i.e. < 2 (Ghasemi & Zahediasl, 2012), with a skew level of .777 (*SD:* .427) and kurtosis of .049 (*SD*: .833). It was also noted that the correlation between the two conditions was estimated at *r* =.135, *p* = .447, suggesting the dependent samples *t*-test was appropriate in this case. The null hypothesis, that the means for this sub-scale of the SWLS-C Life were equal, was rejected, *t* (29) = -2.097, *p* = .045. Thus, post-intervention, satisfaction with life as measured by this single question was significantly higher. Cohen's *d* was calculated at 0.5. This is a moderate effect size (Cohen, 1992). Statistical analysis of the ratings provided for the other question on this scale about happiness did not indicate a significant difference, following intervention, when analysed using a paired samples *t*-test.

School 2: To test the null hypothesis that the pre-intervention levels of SWB (*M* = 4.69; *SD* = 1.408) were the same as post-intervention levels (*M = 5.65*; *SD* = 1.231) for the question relating to life satisfaction, a paired samples *t*-test was performed. Prior to conducting the analysis, the assumption of normally distributed difference scores was satisfied, as the skew and kurtosis levels were less than the maximum allowable levels for a *t*-test i.e. < 2 (Ghasemi & Zahediasl, 2012), with a skew level of -.055 (*SD = .456*) and kurtosis of .740 (*SD* = .887). It was also noted that the correlation between the two conditions was estimated at *r* =.467, *p* = .016, suggesting the dependent samples *t*-test was appropriate in this case. The null hypothesis, that the means for this sub-scale of the SWLS-C were equal, was rejected, *t* (25) = -3.577, *p* = .001. Thus, post-intervention, satisfaction with life as measured by this single question was significantly higher. Cohen's *d* was calculated at 0.72. This is a moderate effect size. Statistical analysis of the ratings provided for the other question on this scale about happiness did not indicate a significant difference, following intervention, when analysed using a paired samples *t*-test.

5.14. The Guess Who Peer Assessment?

Participants were asked to rate each of their classmates by ticking their name on a class list against seven qualities: five positive (e.g. *Children who are kind*) and two negative (e.g. *Children I stay away from*). The scale was used to provide a measure of pupil popularity and friendships. The descriptive statistics for this scale are in Table 13 below.

Table 13: Descriptive Statistics for the positive and negative peer ratings

Scale	School	Time	Mean	N	Std. Deviation	Std. Error Mean
Negative	1	1	10.00	29	10.596	1.968
Negative	1	2	39.00	29	12.236	2.272
Negative	1	3	12.59	29	11.472	2.130
Positive	1	1	99.14	29	22.743	4.223
Positive	1	2	85.14	29	21.679	4.026
Positive	1	3	79.52	29	21.725	4.034
Negative	2	1	14.04	26	7.977	1.564
Negative	2	2	12.88	26	8.335	1.635
Negative	2	3	10.46	26	7.101	1.393
Positive	2	1	98.38	26	22.968	4.504
Positive	2	2	83.96	26	23.010	4.513
Positive	2	3	85.58	26	22.792	4.470

Table 14 below details the outcomes for the sociometric data. A combination of dependent and independent sample *t*-tests were performed and these are described further in 5.11.1 below.

School	Condition	Actual outcome	Statistically Significant?
1 at T1 v T2	Waiting intervention	Reduced	Yes
1 at T2 v T3	Post-intervention	Reduced	Yes
2 at T1 v T2	Post-intervention	Reduced	Yes
2 at T2 v T3	Follow-up	Increased	Yes
2 at T1 v T3	Baseline to follow-up	Decreased	Yes
School	**Condition**	**Actual outcome?**	**Statistically Significant?**
1 at T1 v T2	Waiting intervention	Increased	Yes
1 at T2 v T3	Post-intervention	Reduced	Yes
2 at T1 v T2	Post-intervention	Reduced	No
2 at T2 v T3	Follow-up	Reduced	Yes

2 at T2 v T3	Baseline to follow-up	Reduced	Yes

5.14.1 Analysis of Positive Peer Ratings Immediately Post Intervention

A paired samples *t*-test was conducted to test the null hypothesis (H_{02}) that the pre-intervention sociometric scores (*M* = 98.38; *SD*= 22.988) were not significantly different to post-intervention measures (*M* = 83.96; *SD* = 23.10) for School 2 (the first school to receive intervention). Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was satisfied as the skew and kurtosis levels were less than the maximum allowable levels for a *t*-test (i.e. skew and kurtosis < 2 (Ghasemi & Zahediasl, 2012), see Appendix N for exact levels). It was also noted that the correlation between the two conditions was estimated at *r* =.489, *p* = .011, suggesting the dependent samples *t*-test is appropriate in this case. The null hypothesis that the means for this measure of peer popularity were equal, was rejected, *t* (25) = 3.165, *p* = .004. Thus, post-intervention, the number of positive ratings, considered as a measure of peer popularity actually fell and the alternative hypothesis (H_{a4}) was supported. Cohen's *d* was calculated at 0.62. This is a large effect size (Cohen, 1992). Thus, the intervention did not increase popularity amongst peers, in fact a large reduction in popularity was witnessed following intervention in School 2.

A paired samples *t*-test was performed to test the null hypothesis (H_{02}) that the pre-intervention sociometric scores (*M* = 85.14; *SD* = 21.676) were the same as those collected at post-intervention (*M* = 79.52; *SD* = 21.725) for School 1 (the second school to receive intervention). Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was satisfied as the skew and kurtosis levels were less than the maximum allowable levels for a *t*-test (i.e. skew and kurtosis < 2 (Ghasemi & Zahediasl, 2012), see Appendix N for exact levels). It was also noted that the correlation between the two conditions was estimated at *r* =.945, *p* = .000, suggesting the dependent samples *t*-test was appropriate in this case. The null hypothesis, that the means for this measure of peer popularity were equal, was rejected, *t* (28) = 4.188, *p* = .000, and the alternative hypothesis (H_{a4}) was supported. Thus, post-intervention, the number of positive ratings (a measure of peer popularity) fell significantly in School 1. Cohen's *d* was calculated at 0.26. This is small effect size. Thus, the intervention did not increase popularity amongst peers, in fact a small reduction in popularity was witnessed following intervention in School 1. This effect was evident in both groups and will be discussed in Chapter 6 of this dissertation.

Positive peer ratings for School 2 were also taken at Time 3 (or at 8 weeks following the intervention) and compared with those at Time 2. Because the number of positive peer ratings fell at Time 2 (*M* = 83.96; *SD* = 23.010), the increase in these at Time 3 (*M* = 85.58; *SD* = 22.792), cannot easily be interpreted as resulting from the effects of the intervention. Some other factors or random variation may account for this increase (which was not statistically significant). This will be discussed further in Chapter 6.

A paired samples *t*-test was conducted to evaluate the null hypothesis (H_{02}) that positive peer ratings for School 2 were no different at Time 1 (*M* = 98.38; *SD* = 22.988) and Time 3 (*M* = 85.58; *SD* = 22.792). This is across the whole period of the study. Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was satisfied as the skew and kurtosis levels were less than the maximum allowable levels for a *t*-test (i.e. skew and kurtosis < 2 (Ghasemi & Zahediasl, 2012), see Appendix N for exact levels). It was also noted that the correlation between the two conditions was estimated at *r* =.459, *p* = .021, suggesting the dependent samples *t*-test was appropriate in this case. The null hypothesis (H_{02}), that the means for this measure of peer popularity were equal, was rejected, *t* (24) = 3.898, *p* = .001, and the alternative hypothesis (H_{a4}) was supported. Thus, at follow-up compared to pre-intervention, the number of positive ratings (a measure of peer popularity), fell significantly in School 2. Cohen's *d* was calculated at 0.55. This is a large effect.

5.14.2 Analysis of Negative Peer Ratings Immediately Post Intervention

A paired samples *t*-test was performed to test the null hypothesis (H_{02}) that the pre-intervention sociometric scores (*M* = 14.04; *SD* = 7.977) were the same as those collected at post-intervention (*M* = 12.88; *SD* = 8.333) for School 2 (the first school to receive intervention). Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was satisfied as the skew and kurtosis levels were less than the maximum allowable levels for a *t*-test (i.e. skew and kurtosis < 2 (Ghasemi & Zahediasl, 2012), see Appendix N for exact levels). It was noted that the correlation between the two conditions was estimated at *r* =.744, *p* = .000, suggesting the dependent samples *t*-test was appropriate in this case. The null hypothesis, that the means for this measure of peer popularity were equal was supported, *t* (25) = 1.007, *p* = .324. Thus, post-intervention, the number of negative ratings, a measure of negative popularity (or antipathy), did not fall significantly, although the mean levels fell. Thus, the intervention did not decrease antithesis significantly between peers in School 2.

A paired samples *t*-test was performed to test the null hypothesis (H_{02}) that the pre-intervention sociometric scores (*M* = *39.00*; *SD* = 12.236) were the same as those collected at post-intervention (*M* = 12.472; *SD* = 11.472) for School 1 (the second school to receive intervention). Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was satisfied as the skew and kurtosis levels were less than the maximum allowable levels for a *t*-test (i.e. skew and kurtosis < 2 (Ghasemi & Zahediasl, 2012), see Appendix N for exact levels). It was noted that the correlation between the two conditions was estimated at *r* = -.599, *p* = .001, suggesting the paired samples *t*-test was appropriate in this case. The null hypothesis, that the means for this measure of peer negativity or antithesis were equal was rejected, *t* (28 = 6.708, *p* = .000. Thus, post-intervention, the number of negative ratings, a measure of peer antipathy fell and the alternative hypothesis (H_{a3}) was supported. Cohen's *d* was calculated at 2.226. This is a large effect size (Cohen, 1992). Thus, post intervention measures of negativity or antithesis between peers in School 1 reduced markedly. The pattern of negative ratings per pupil fluctuated from 10 at Time 1 to 39 at Time 2 and then back to 12 at Time 3 (i.e. immediately after intervention). Therefore, although one could claim negative peer ratings fell by a large amount following intervention, it is likely that this significant effect is due to some form of response bias, error in data collection, or significant social event at Time 2.

Although the mean number of negative peer ratings fell at follow-up eight weeks after intervention for School 2 (i.e. at Time 3), and was significant (t (25) = 4.45, p= .000), the fall in this measure immediately after the intervention at Time 2 did not reach significance and therefore the fall at Time 3 cannot be explained as a straightforward effect of the intervention. The possibility of a delayed or cumulative impact of the intervention on popularity is considered in the Discussion below.

Finally, a paired samples *t*-test was performed to test the null hypothesis (H_{02}) that the negative peer ratings for School 2 were the same at Time 1 (*M*= 14.04; *SD* = 7.977) and Time 3 (*M* at Time 3 = 10.46; *SD* = 7.539). This is across the whole period of the study. Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was satisfied as the skew and kurtosis levels were less than the maximum allowable levels for a *t*-test (i.e. skew and kurtosis < 2 (Ghasemi & Zahediasl, 2012), see Appendix N for exact levels). It was also noted that the correlation between the two conditions was estimated at *r* = .696, *p* = .001, suggesting the dependent samples *t*-test was appropriate in this case. The null hypothesis, that the means for this measure of peer popularity were equal, was

rejected, t (24) = 3.269, p = .003. Thus, at follow-up compared to pre-intervention, the number of negative ratings (a measure of peer antipathy), fell significantly in School 2. Cohen's *d* was calculated at .47. This is a moderate effect.

5.14.3 Analysis of changes in popularity levels

It was hypothesised that those lowest in popularity at the start of the study (i.e. those receiving the lowest number of positive peer ratings) might show a greater benefit from the intervention in terms of a greater increase in positive peer ratings than other students (H_{a4}). To test this hypothesis, the sample of participants was separated into three groups based on their total peer rating score before intervention (N = 56, M = 65.7). Those participants one standard deviation below and above the mean (SD = 9.1) were placed into different groups as illustrated in Table 15 below.

Table 15: Mean group differences in popularity levels and subsequent changes in popularity post intervention.

Group based on popularity	N	Mean popularity pre-intervention (T1)	Mean Difference in popularity post intervention (T2/T3)
Above average	11	84.6	-7.01
Average	33	65.9	-5.27
Below average	12	47.6	-8.81

Table 15 indicates that all three groups fell in levels of popularity following intervention, with the least popular group falling most. A one-way between subjects ANOVA was conducted to test the null hypothesis (H_{03}) that there would be no differences in popularity changes between groups. Analysis indicated that there were no significant differences between the three groups and the null hypothesis was supported: $p < .05$ level for the three conditions [$F(2,53) = 1.195$, $p = .311$]. No further post-hoc tests were therefore necessary. The hypothesis that less popular children would be affected more by the intervention was not proven.

5.15 Participant satisfaction with the workshops: 'Six Weeks of Kindness'

A thirteen item satisfaction scale was administered to participants one week after the intervention (see Appendix K2). An independent samples *t*-test was used to test the null hypothesis that the mean item score from participants in School 1 and School 2 were equal. Each school was compared on each question and School 1 did not differ to School 2 in their satisfaction ratings for any of the questions. In other words, the satisfaction ratings for each school were similar and allowed the data to be pooled to simplify reporting. Table 16 below details the pooled satisfaction ratings for all participants following the intervention (*N* = 56*).* The table indicates that participants rated the workshops very positively.

Table 14: Percentage of participants who rated each response on satisfaction scale

Questions	disagree	disagree a little	agree	agree a lot
1. I liked learning about kindness.	0	9	45	46
2. Learning about kindness was not much use.	68	31	0	1
3. I have thought more about being kind after the lessons.	0	7	60	32
4. I did more kind things because of the lessons.	0	14	48	38
5. I didn't learn much during the kindness lessons.	68	32	0	0
6. I would like to have more of these lessons.	0	14	37	49
7. The lessons have made the children in my class kinder.	2	18	55	25
8. Schools should not teach children about kindness.	85	15	0	0
9. I have learned how to be a better friend.	0	13	61	27
10. Being kind made me feel good.	0	6	50	44
11. Learning about kindness made some children unkind.	75	25	0	0
12. Other people have noticed that I have been kinder recently.	1	28	57	14
13. I felt happier as a person after the lessons.	1	11	38	50

5.16 Summary of Quantitative data

Analysis of the data provided at Time 1 indicated that the two groups were similar enough to be compared throughout the analysis. After intervention, School Two demonstrated significantly higher levels of positive affect, when compared to pre-intervention levels, though none of the other variables changed significantly. However, there were differences between School Two at this time and the control group (School One). Following intervention, School One demonstrated significantly higher levels of kindness as predicted. However, there were no differences between either group when compared. There were no consistent or enduring effects of the intervention at follow-up after intervention.

5.17 Overview of the interviews and thematic analysis

The teacher and a random selection of seven parents were interviewed from School 1. Due to snowy conditions on the assigned dates for data collection, followed by a school holiday, it was not possible to interview parents from School 2 within a reliable period of

time after completion of the intervention, and only the teacher from School 2 was interviewed. This reduces the scope of what can be inferred from the data, and the thematic analysis, and what can be claimed about the impact of the outcome. This is because the views of parents in School 2 were omitted, and their unique position in relation to the intervention was not sought. Ethically, this omission undermines the expectation that the research will be carried out with care to avoid errors, and provide a balanced approach to data collection and analysis. Nevertheless, the themes to emerge from the interviews provided useful information about the intervention. The recordings of these nine interviews comprised 66.5 minutes of interview time and were transcribed verbatim by the researcher into 6,099 written words. The transcription took place within one month of the interviews and the recordings were then deleted.

Since a very similar interview schedule had been used with parents and teachers, and because all the questions probed perceptions of how the intervention might have impacted on the children involved (albeit across home and school settings) the decision to code and interpret the data of parents and teachers as a single data set was made. The interview transcripts were coded by the researcher using coloured pens as outlined in Appendix O, and as described by Braun and Clarke (2006).

5.18 Analysis of closed questions in Interviews

The interviews contained a number of questions that required a closed 'yes/ no' response. The results of these closed questions are detailed below in Table 17 and 18.

Table 15: Closed question responses collated from parent interviews (*N* = 6)

Question	Yes	No
Did your child talk about the programme?	6	0
Did the programme have a positive impact on them?	4	2
Did it cause them to be kinder?	4	2
Did it improve how children play together?	3	3
Would you recommend it?	6	0

Table 16: Closed question responses collated from teacher interviews (*N* = 2)

Question	Yes	No
Did you notice a change in the children after the programme?	2	0
Did the programme have a positive impact on them?	2	0
Did it cause them to be kinder?	2	0
Did it improve how children play together?	1	1
Would you recommend it?	1	1

5.19 Main themes to emerge from parent and teacher semi-structured interviews

Seven themes emerged from the interviews. These are represented in Figure 8 below. Each of these themes is comprised of a number of sub-themes, described further in paragraphs 5.18.1 to 5.18.7.

Figure 8: Overarching themes to emerge from the thematic analysis

Table 19 below indicates which school each interviewed adult participant was connected to, and their role as either teacher or parent. Each participant has been assigned a code based on this information and this code will be used to identify the source of any quotations taken from interviews.

Table 17: Identity of adult interviewees and their and assigned code

Participant number	School	Role	Code
1	2	teacher	1.2.t
2	1	teacher	2.1.t
3	1	parent	3.1.p
4	1	parent	4.1.p
5	1	parent	5.1.p
6	1	parent	6.1.p
7	1	parent	7.1.p
8	1	parent	8.1.p
9	1	parent	9.1.p

5.19.1. Theme one: Why kindness should be taught in schools

All of those interviewed thought the workshops should be taught in schools, although one of the teachers and two of the parents identified a number of factors which might limit their desirability (see Figure 13 in Appendix P for the sub-themes, and Appendix Q for representative quotations). For example, one teacher stated the class should lack in social skills before being required to follow such a programme:

'If you really have got a class that are unkind to each other than this might be good.' (Teacher from School 1 (2.1.t).

A parent from the same school felt the workshops should be targeted to those who need them, rather than to the whole class:

'But I think that it should be channelled to children who particularly need it or are struggling with particular areas.' (Parent from school 1 (7.1.p)).

Participants identified five reasons why these workshops are needed in schools (see Appendix Q for a table of sub-themes and representative quotations). Whilst the responses of teachers seemed to be informed by practical examples supporting their beliefs, those of parents had the quality of presumption. For example, both teachers felt that kindness and the importance of altruism is lacking in some children's experience of family life, and they gave examples from the behaviour of particular children, and used this as a reason supporting the workshops:

'Some children don't know, don't get to learn at home … not everyone gets that kind family support around them. it makes me quite sad.' (Parent School 1(9.1.p)).

Parents gave reasons they supported the workshops based on convictions instead of examples e.g. that they would reduce bullying. Some parents seemed aware of this and said a number of times throughout the interviews that they lacked knowledge to fully answer some of the questions, and were thus forced to base their answers on assumptions and pre-existing views rather than direct evidence of the programme and any observed effects:

'He talked about it but I don't know what was said so it's hard for me to judge,' (Parent School 1(5.1.p)).

One of the sub-themes to emerge was that children need to learn how to interact and manage their emotions in school, and therefore the curriculum they follow needs an element of kindness education alongside the more traditional components of academic

learning. A related theme to emerge was that school requires close interaction and increased levels of cooperation, making kindness workshops for children especially necessary. A final sub-theme related to a parent perception that children are more likely to internalise and tolerate pro-social skills when they are presented by teachers than parents.

In summary, although most participants supported the belief that there are good reasons to hold such workshops in school, the teacher from School 1 felt that her class did not require the workshops and they should be targeted to those classes that need them. This point is discussed again in the Conclusion (see 6.10) and some of the reasons which might have provoked this response and this teacher's general resistance to the workshops.

5.19.2. Theme two: How kindness supports social and emotional development.

Participants identified a number of sub-themes relating to how they thought the intervention had improved children's social skills and pro-social behaviour and were able to give examples of these (see Figure 14 in Appendix P for sub-themes and Appendix Q for representative quotations).

Main theme: How kindness supports social and emotional development.		
Sub-themes	**Supporting quotation**	**Participant (and code)**
By establishing kind habits:	They particularly liked tasks where they had to help at home …	Teacher School 1 (2.1.t)
By developing emotional awareness:	Trying to get them to think about how someone might be feeling when they come to school that day …	Teacher School 2 (1.2.t)
By introducing a language of kindness:	Prompting …key words that were mentioned through that workshop ….like 'how do you think that person might be feeling' …supported them into taking a step back.	Teacher School 2 (1.2.t)
By encouraging self-reflection:	(It) triggered that emotion to help them think of 'Yeah I could help that person' …	Teacher School 2 (1.2.t)

Figure 9: Extract from Appendix Q: Sub-themes and quotations illustrating theme two.

It was felt that by practicing the skills at home and in school that this would establish pro-social behaviour and encourage skill generalisation. A number of responses referred to the explicit connection made in the workshops between feelings and behaviour. The teacher from School 2 felt this focus resulted in the prosocial skills and

kind behaviour skills taught in the workshops extending to wider situations including out of school:

'So you can see they are more aware of feelings and what they can be doing to help others.'

It was felt that the emphasis on talking about kindness provided children with a vocabulary which in turn would support and promote further cooperative behaviour, as well as an ability in students to reflect on the impact of their behaviour on others:

'They can reflect more and they are able to be a bit more mature,' (Teacher, School 2 (1.2.t).

5.19.3. Theme three: Why the workshops are effective.

This theme outlined the reasons that the workshops might lead to benefits for the children who have participated (see Figure 15 in Appendix P for sub-themes and Appendix Q for representative quotations). The teacher from School 2 felt that simply 'highlighting' the importance of kindness had an immediate and positive impact. She also felt that the skills were presented in a gentle and 'natural progression' that allowed complementary values and skills to be presented over the six weeks in a manner that encouraged concepts to be linked (see Figure 10 below).

Main theme: *Why the workshops are effective*

Sub-themes	Supporting quotation	Participant (and code)
They teach a progression of skills:	Because it was over six weeks it was a gentle progression … from 'can you do something that's kind?' to 'how does kindness make us feel?'	Teacher School 1 (2.1.t)
They help social facilitators:	So if you've got a couple of children… that are calm and collected… they make sure everyone is getting on…	Teacher School 2 (1.2.t)
They complement naturally developing skills:	Year 5 is that age where things kick in personally, emotionally, socially…	Teacher School 2 (1.2.t)
They provide a consistent set of class values:	When the whole class are taught it, they all take something on board and so learning it with your peers is the best way	Teacher School 2 (1.2.t)

Figure 10: Extract from Appendix Q: Sub-themes and quotations illustrating theme three.

Although it was acknowledged that not all children were receptive to the messages being presented in the workshops, it was felt that those who had already internalised the skills and perhaps were already inclined to be prosocial, were given support by the workshops to continue to do this and found it easier to behave pro-socially after the workshops. One teacher described a 'knock on' effect of empowering these children:

'*Well if it has affected the individuals who have understood it clearly, and they are helping the others, yes it would impact them as well because there's a knock on effect because they are having to share equipment, get on, help each other, work in a group environment' (*teacher in School 2 (1.2.t)).

5.19.4. Theme four: Reported benefits of the workshops

Whilst the previous theme related to the reasons that the workshops might have improved social behaviour, this theme captured statements where some benefit was reported and attributed to the workshops directly (see Figure 16, Appendix P for sub-themes and Appendix Q for representative quotations). These benefits included a reduction in conflict amongst pupils, described by the teacher in School 1 as follows:

'*They are less likely to try to get each other into trouble; they seem to playing nicer on the playground with fewer issues.'*

Both teachers and three of the parents mentioned improved relationships following participation in the workshops. Children were described as being more aware of the feelings or perspectives of others:

'I think he knows that children are more vulnerable in the class and he can be kinder to them maybe than he was before possibly,' (parent in School 1 (5.1.p).'

Children were also described as showing more respect and gratitude to each other following the workshops, and more examples were seen of children providing support to each other. The teacher from School 2 gave the following example:

'S*omeone that's got upset recently in their social circle they've been taking them under their wing by another child,'* (1.2.t).

Both teachers and four parents indicated their belief that children had been kinder due to the intervention, and quite a few examples of kind behaviour were described. These included kind acts to teachers (e.g. tidying the cloakroom) and family members (e.g. making a cup of tea for a parent). It also included children having a 'kind attitude' (e.g. to a parent). The teacher from School 1 felt that the intervention had not affected the

manner children played together and two parents were of the same opinion. The rest of the sample felt that children's play had improved following the workshops. A number of parents felt that the workshops had reduced bullying directly:

'One of the boys was being picked on in her class and she made sure she told the teacher and she did that kind thing of coming home and talking about it, (parent in School 1(8.1.p)).

However, neither teacher mentioned a link to bullying. Both teachers indicated some level of impact on children's ability to regulate their emotions and behaviour:

'When they are in a game scenario and getting competitive, it's not a hundred miles an hour anymore where they jump to conclusions and fall out over the rules which was a common thing before Christmas' (teacher School 2 (1.2.t).

Both teachers felt this improvement had been more evident in the behaviour of girls, who were described as more mature, and thus receptive to the information presented in the workshops:

*'With the girls it seems to have a much bigger impact, so beforehand I was having to deal with lots of issues with the girls and that seems not to be happening so much anymore' (*Teacher School 1(2.1.t)).

One of the teachers and one of the parents gave examples of how the workshops had particular benefits for children with social or behavioural difficulties, others interviewed did not mention this as a factor.

5.19.5. Theme five: The children's experience of the workshops

A number of the interview questions were designed to explore how satisfied the child participants were with the workshops (see Figure 17 in Appendix P for sub-themes and Appendix Q for representative quotations). Answers relating to children's satisfaction were categorised into two sub-themes: one positive and named 'enthusiasm and enjoyment', the other capturing negative statements about aspects of the workshops and named 'resistance to kindness.' Not all the children enjoyed the workshops and three parents suggested their children had reported some negativity toward the programme. This was contrary to the children's responses on a satisfaction scale (summarised in Table 16), which showed that 9% of the sample (or five children out of fifty-six) did not like the workshops. One parent suggested her daughter saw herself

and her friends as kind prior to the workshops, and therefore she resented being asked to learn about kindness. Another felt that her son had been targeted by other pupils, and the workshops had made him more aware of unkindness, and had therefore reinforced negative peer interactions in the class. Another parent pointed out the limitations of promoting prosocial behaviour in the following manner:

'But that's the thing, with all children they don't all get on with each other do they? Not everybody can get on with everybody,' (parent School 1 (5.1.p)).

One parent felt the workshops were unable to promote genuine kindness by prompting children to perform kind acts because they were motivated by the benefits to themselves (e.g. teacher praise), and another that their child felt under pressure to perform kind acts and that this was detrimental to their capacity for kindness (see Figure 16 for examples).

Main theme: Children's experiences of the workshops		
Sub-themes	**Supporting quotation**	**Participant (and code)**
Enthusiasm and enjoyment:	It certainly kept him engaged. I thought he was extremely enthusiastic coming home to do the tasks that had been set.	Parent School 1 (6.1.p)
	She loved the kindness lessons and told me everything that they had done	Parent School 1 8.1.p
Resistance to kindness:	She felt that she was being told, she does it (kind acts) anyway, so she didn't quite get her head round that.	Parent School 1 7.1.p
	She just felt it was more sort of wasting her time and that she could be doing something else.	Parent School 1 7.1.p

Figure 11: Extract from Appendix Q: Sub-themes and quotations illustrating theme five.

Three of the parents reported their children had enjoyed the workshops and been enthusiastic about carrying out kind acts as part of the workshops. One of the teachers felt the children in her class had 'loved' the workshops:

'*I felt it was a very positive experience. The children really enjoyed it. They openly said 'Yes, Mr X is coming in today,' they really enjoyed taking part*.' (teacher in School 2(1.2.t).

The other teacher felt she could not recommend the workshops as they weren't needed for her particular class, which she described as kind and well-behaved and thus not requiring them:

'It's hard (to recommend the workshops) I don't think the children could change a great deal so for that reason possibly not,' (teacher School 1 (2.1.t).

This teacher's 'resistance' to the workshops is discussed again in the Conclusion. The self-report data provided by the children in her class at the start of the study did not show them to differ in levels of kindness or well-being to the other school, suggesting her resistance had other causes than the reason she gave when interviewed.

5.19.6. Theme six: Criticisms of the workshops

Some explicit criticisms of the workshops were voiced (see Figure 18, Appendix P for sub-themes and Appendix Q for representative quotations). One criticism was that the workshops caused children to be more aware of unkindness when it occurred, with an implication that the workshops may have reinforced hostility between children:

'It made him realise that that child isn't as kind as he thought,' (parent in School 1 (6.1.p).

Another criticism related to the belief that the workshops are unnecessary and a waste of time for children who are already kind, and two parents mentioned their own children not benefiting from the workshops because they already demonstrated kind behaviour in their daily interactions with others. The teacher in School 2 felt the workshops were useful for children with emotional difficulties, and one parent explicitly stated her hope that the workshops would improve her daughter's level of prosocial behaviour, but that this had not occurred because her difficulties were too pronounced to be affected by them (see Figure 12 below for quotation).

Main theme: Criticisms of the workshops		
Sub-themes	**Supporting quotation**	**Participant**
Increased awareness of unkindness:	One thing he did bring up was those who wasn't particularly kind to him in the class and he wasn't sure whether to put it down or not, I don't know whether he did.	Parent School 1 (5.1.p)
Kindness is not returned:	There's the other respect, about how other people are with him and you are always going to get it within class that someone is unkind to you and maybe you are unkind to them back.	Parent School 1 (5.1.p)

Limited impact for child who are already kind:	To be fair he's generally a kind person anyway so he generally does things to help anyway.	Parent School 1 (6.1.p)
No impact on children with SEMH difficulties:	We are experiencing different difficulties with A (child) so nothing has changed A so for her it didn't.	Parent School 1 (4.1.p)

Figure 12: Extract from Appendix Q: Sub-themes and quotations illustrating theme six.

Although some comments were made suggesting that the workshops were not effective for children with social and emotional difficulties, the teacher in School 2 felt they had been:

'I have a child (in my class) with ASD and a new person makes them anxious, and he doesn't respond well to new adults, and would not talk well about his feelings and all the things he would find really difficult. And he responded really well,' (1.2.t).

5.19.7. Theme Seven: Changes recommended to the workshops

The criticisms of the workshops in some cases led to suggestions for how they could be improved. The teacher in School 1 felt the workshops were too teacher directed and suggested children would benefit more from being allowed to practice social skills and interactions in the workshops:

'Perhaps the children could have done a few more activity things, but I know it was research so it was limited what they could do, but some of the sessions were a little too teacher led,' (2.1.t).

Teacher 2 reiterated this view and said:

'A*dding some sort of role play group work could add an aspect because you could see the children interacting and you could see where the difficulties lie,'* (1.2.t).

The strongest criticisms related to the Guess Who peer assessment technique. The teacher in School 1 and two parents mentioned the risk that the technique might have reinforced and even increased hostility amongst peers by asking children to rate those they 'stay away from' as follows:

'Having a class list and highlighting who is a good friend and who isn't I didn't think it was appropriate,' (2.1.t).

Some of the final recommendations were contradictory. The teacher in School 1 felt the workshops have a place if they are targeted to children who need them rather than being presented to whole classes:

'*It depends on the class, if you've got children struggling to be kind to each other it would be good.'*

One parent echoed this view:

'There are some different dynamics so that's positive, but I think it should be channelled more to certain children who need it more.'

Contrary to this, Teacher 2 felt it had been regrettable that one or two children had missed parts of each workshop due to other commitments such having to attend remedial lessons:

'If we could get everyone involved it's a shame that some had to miss it.'
This was an over-sight, and existing interventions had been allowed to continue with two children who might have benefitted from the workshops more than others, and is discussed again in the Conclusion.

In summary, the interviews generated a range of themes, and these were largely about positive aspects of the workshops. In addition some criticisms were voiced and some suggestions for changes to the workshops were made. The parent interviewees based their responses largely on pre-existing beliefs rather than on direct experience. Both teachers and most parents were able to name some benefits of the workshops, and most participants felt the workshops had made children kinder.

Chapter 6

6. Discussion

The findings from the self-report and interview data will be discussed in this chapter. The answers to the research questions and hypotheses are reviewed, and the findings as they relate to previous research are discussed. Finally, there is a discussion of the strengths and limitations of the current study, and the implications for EPs.

6.1. Overview

The purpose of the research was to examine whether the well-being and popularity of children improved following participation in a short school-based kindness and gratitude intervention. A mixed methods approach to the research was employed, to find out if the children, their parents and teachers were satisfied with the workshops and found them to be beneficial. The experimental findings suggested that the intervention did not lead to clear and unambiguous improvements in the well-being of the children who took part. Neither school demonstrated a consistent pattern of increase in more than a few isolated variables following intervention. Where a significant increase occurred, the effect was small.

The sociometric data, which set out to explore the impact of the intervention on friendships and popularity, was largely inconclusive. Whilst the number of negative ratings fell, which seemed to indicate a reduction in antipathy between children, so did the number of positive ratings, indicating that children became less popular. The small sample of interviews completed was largely positive in describing the workshops, and presented an opposing view to the experimental data. The skewed sample of parents (from only one school) and interviews with only two teachers limited the scope of the qualitative findings. The children themselves provided a high level of positive feedback about the workshops.

The discussion will consider the following three sources of data: the self-report data provided by children at Time 1-3, the self-report data provided by children in the first and last workshop, and the interview data provided by staff and parents two weeks after Time 3. Each research question and related findings will be considered in turn, in relation to the effects as they relate to the participants, the intervention and the nature of the measures used.

6.2. Subjective well-being

The self-report data indicated that the intervention had little impact on participants' levels of SWB over the eighteen-week duration of the study, when compared to the control group, or to the participants' own pre-intervention scores. Comparison between conditions after School 2 received the intervention found no significant differences between any of the measures taken: School 2 did not demonstrate significantly increased levels of positive emotion or well-being after intervention compared to School 1 (waiting list control). Of the seventeen variables compared, the mean scores for each variable were higher for School 2 on nine, and lower on eight of the measures (though none of these differences was significant when analysed). When scores on these variables were compared before and after intervention for School 2 (at Time 2), the participants demonstrated a small but significant increase in positive affect (e.g. higher ratings of feeling joy, excitement, and happiness). However, the intervention did not seem to cause increases in any of the other key variables (kindness, positive affect, or SWB). In other words, there was no consistent pattern of improvement for those in School 2 who received the intervention, not even at non-significant levels. The small changes in both directions in the mean scores were probably the result of random factors, unrelated to the intervention.

A similar picture occurred for School 1 after intervention (at Time 3). This group achieved higher mean scores on only six of the seventeen variables when compared to pre-intervention levels, though these increases were not statistically significant. Thus, analysis was unable to demonstrate any impact for the group receiving intervention, compared to levels of these variables before the intervention. Comparison between School 1 (immediately post-intervention) and School 2, found higher levels in one variable only, and this was for participants in School 2 (and not as predicted: for School 1, who had just completed the intervention). No other significant differences were noted between either school at this time point. SWB is generally conceived to have three elements: LS, NA and PA (Diener, 1984). The scales used in the current study, comprising sixty questions, found no consistent improvements in any of these three components of SWB. The results across the three time points of the study show remarkably little variation in measures of SWB, which suggests that the measures used demonstrated their test-retest reliability.

Two additional questions from the Satisfaction with Life Scale (SWLS-C) did show a consistent pattern of increase. These questions were administered immediately before and after intervention during the first and last workshop. Participants provided higher

ratings for both questions, with the question about well-being (but not happiness) achieving significantly higher levels after the intervention. Thus, post-intervention, satisfaction with life as measured by this single question was significantly higher in both schools, with a moderate effect size.

The possibility that this contradictory finding might be due to the time point that it was administered (i.e. at baseline and at the end of the final workshop) is worth further consideration. It may also have been the brevity of the questionnaire that led to this distinct pattern of results. SWB has large genetic component (Lykken & Tellegen, 1996), with a tendency towards hedonic adaptation, which predicts that happiness levels return to their 'set-point' after a happiness boosting activity (Lyubomirsky et al., 2005). This suggests that even if SWB is increased by an intervention, the timing of the measurement might be critical. It is possible that any raised levels of SWB experienced by participants in the current study may have returned to their set point by the time they were assessed, one week after the last workshop. This would occur if participants did not continue to practice the activities when the workshops were over. This tendency to return to normal levels of SWB would be faster if the intervention effects were small, and the fluctuation above set-point was minimal. Layous and Lyubomirsky (2014b) suggest this tendency to habituate following intervention is quite quick, if the activities are no longer performed:

'If the effort stops, so likely will the effect,' (p.487).

Following a meta-analysis, Curry et al. (2018) estimated the average effect size for a kindness intervention to be small to medium (d = .36). They also speculate the real effect size is smaller (d = .29), due to an increasing tendency for non-significant research results to go unreported (the 'file drawer problem,' (Rosenthal, 1979)). The effect size found for the SWLS-C used here was considerably higher for both schools (e.g. d = 0.72 for School 2). Contrary to the other rating scales used, this measure was completed with the researcher present, and thus, it is possible the effect is due to, or exaggerated, by some form of demand characteristic. This is a tendency to respond in a manner supporting the researcher's aims, or simply answering in a positive manner because the workshop that the children had just completed was pleasurable, a type of responding known as a halo effect (Nisbett & Wilson, 1977).

Other interventions of this type adopt techniques to ensure participants continue to perform the activities introduced to avoid hedonic adaptation. One method is for the group leaders (or teachers in this case) to prompt students to perform the activities

daily (Suldo, 2016). No information on whether this was done was sought by researcher, but the busy schedules of both teachers, and the resistance of one teacher to the intervention, make this unlikely. There is also known to be a person-activity fit (Lyubomirsky & Layous, 2013), which suggests that particular pro-social activities are suited to some individuals but not others, and the better the fit, the more likely the activity will be performed spontaneously in future. Some programmes make overt reference to this feature of PPIs, and encourage participants to reflect on, and recognise the activities they have an affinity with, thus increasing the chances that these will be performed in future. This was not part of the current intervention. Instead, participants were able to 'earn' rewards (e.g. stationary and stickers) to reinforce compliance with the intervention by completing acts of kindness/gratitude. Whilst this may have provided extrinsic motivation, research suggests that in some situations, the use of external reinforcers may result in a reduction in motivation to perform the activity when reinforcement is removed (Ryan & Deci, 2000).

In the next two sections, the features in previous research which intensify the impact of kindness/gratitude interventions on SWB are considered. Factors relating to either the intervention or the participant are considered, and the possibility that these factors might explain a lack of significant effects in the current study.

6.2.1. Intervention factors

A number of factors which relate to the intervention have been shown to moderate the hypothesised effects, their presence in the current study may explain its failure to demonstrate an impact on SWB.

6.2.1.1. Duration and frequency

The impressive findings of social emotional learning programmes seem to indicate longer programmes have better outcomes (Durlak et al., 2011). Sin and Lyubomirsky's meta-analysis (2009) found that PPIs of longer duration produced greater gains. It remains possible that the current study failed to result in discernible effects due to its duration (only six hours) or its frequency (once a week). The intervention studied in Suldo et al. (2014) achieved a significant improvement in life satisfaction for participants in a programme spread over ten weeks. When participants in the waiting list control group completed the same programme, the ten sessions were administered twice weekly, and even greater benefits accrued to participants. Thus, greater frequency might improve effects.

Owens and Patterson (2013) found no improvements in SWB or positive affect for participants following a gratitude intervention ('counting blessings') implemented daily for one week (i.e. high frequency with low duration). Whereas, Froh, Sefick, and Emmons (2008) found significant increases in SWB, school satisfaction and reductions in negative affect following a similar intervention carried out daily for fourteen days, this is substantially more exposure to the content of the workshops than the six hours of intervention in the current study. These examples seem to indicate that the current study might have achieved measurable effects if either the duration or frequency of the intervention were increased.

6.2.1.2. Group size/intensity

Sin and Lyubomirsky's meta-analysis (2009) found group size to be a key moderator for the effects of PPIs, with individual therapy producing the largest gains in SWB, and effects reducing as group size increased. Other similar interventions that have achieved significant effects have been administered to smaller groups, thus conferring greater intervention intensity. Suldo et al. (2015) conducted a pilot study over twelve weeks, and found a significant impact on a number of measures of SWB. However, their intervention was presented by two or three researchers in each session to only twelve students. It is thus possible that the intensity of the current intervention was too low to produce measurable increases in SWB using self-report measures.

6.2.1.3. Variety

Interventions that are low in variety (i.e. where the prosocial activity is repeated) tend to produce less of an increase in SWB (Sheldon et al., 2012). Those with greater variety are thought to be more effective because they slow down the tendency of the participant to adapt to the experiences. The current intervention was planned to include a new activity each week. However, there were no efforts to check which activities had been completed to ensure variety had been maximised. Pupils were also given a choice and were allowed to revert to previously covered activities if they preferred. Discussion with the children during the workshops suggested that most acts were completed at home, with parents as the recipients of the kind acts, raising the possibility that each act of kindness performed may have led to diminishing effects because the same activities were chosen by the children because of convenience, thus resulting in lower-variety and habituation. This effect is more likely for children who have less freedom to manage their movements beyond the home than adults.

6.2.1.4. Summary of intervention factors

In summary, that an increase in effect size would follow from increasing the duration, frequency or intensity of an intervention makes intuitive sense, and is supported by prior research. However, existing research has not established the minimum length, frequency or intensity required for an effective intervention. Comparison with previous studies suggests that the current study lacked in high enough levels of all three of these features, and this may explain its non-significant effects.

6.2.2. Participant Factors

A number of within-participant factors are known to moderate the effects of PPI. These will be discussed in turn.

6.2.2.1. Individual differences

Froh et al. (2009) demonstrated that children lower in positive affect at the start of a gratitude intervention were the only participants to demonstrate significant effects from the intervention. The authors suggested this was because those high in PA had reached an 'emotional ceiling' and remained resistant to the effects of intervention (i.e. they were happy enough). Suldo et al. (2014) screened participants to exclude those highest in SWB as a precaution against this, and found modest benefits in a kindness intervention. Layous and Lyubomirsky (2014b) speculate that people might need to be at a certain level of SWB to benefit from PPI, and indicate that those who are very low in SWB (who show symptoms of depression) do not benefit because they find the activities 'too challenging'. Layous and Lyubomirsky (2014b) also conclude that the research with adults suggests that those already high in PA may achieve the greatest benefits. Fredrickson's 'Broaden and Build' theory (2001), suggests that the benefits to SWB are mediated by increases in PA, and the theory predicts that those lower in SWB may not receive as great a boost by such activities.

At Time 1, each group in the current study differed in their levels of SWB . Using the SCHI (a school based measure of subjective well-being) participants had mean scores of 59.30 (School 1: *SD* = 13.225) and 88.23 (School 2: *SD* = 16.330) for SWB. For School Two, this is within one standard deviation of the mean for the sample on which this scale was standardised (*M* = 97.67 (*SD* = 12.64)), suggesting this group had average or close to average levels of SWB at baseline. Therefore, it seems unlikely that lower than average SWB can explain the lack of improvements to SWB found in School Two at the start of the study. However, School One began the study with lower than average levels of SWB. The results of this measure at Time 2 reached average

levels for School One (*M* = 89.80 (*SD* = 7.658)) and therefore it seems unlikely that individual differences for baseline levels of SWB were too low to prevent the intervention improving levels of SWB.

6.2.2.2. Effort

There is some indication that those who apply greater effort to positive activities, gain greater benefit from them. Lyubomirsky, Dickerhoof, Boehm, and Sheldon (2011) found that the degree of effort of those who wrote gratitude letters (when letters were rated by researchers), predicted increases in well-being. The reports of parents in the current study suggest that the effort level of participants varied: some children put a great deal of effort into their kindness activities, and others did not. With a large group, it less likely that those with low motivation are noticed and singled out for greater support to address resistance or lower motivation.

It is known that those who practice positive activities after a PPI is over continue to demonstrate sustained increases in SWB at follow-up two weeks after (Sheldon & Lyubomirsky, 2006). What it not known in the current study is how many children continued to use the exercises, with effort being a convincing explanation for the lack of post-intervention changes in SWB in the current study.

6.2.2.3. Summary of participant factors

Apart from baseline levels of SWB, the study failed to explore and control a number of participant factors which might limit intervention effects including the effort that individuals used when pursuing the kindness and gratitude activities. This is discussed further below in relation to implementation and intervention fidelity.

6.3. Satisfaction with school

There was no quantitative evidence that the intervention improved children's satisfaction with school specifically. The School Children's Happiness Index (SCHI) was used to measure happiness in school, and participant responses remained remarkably consistent across the three time points in both schools, with mean levels of school happiness fluctuating less than two points across the three time points of the study (from 88.12 to 89.80).

The My Life in School scale (MLIS) explores the frequency of positive and negative behaviours in school (e.g. it asks how often another child has smiled at, or tried to kick the participant). As such, these ratings provide a measure of whether children see their peers as behaving more pro-socially, and thus indirectly provides another way of

assessing satisfaction with school. There were no significant differences in response levels when group data from this scale was compared at any time point within or between each group.

It was predicted that the intervention would lead to improved prosocial behaviour and peer relationships at school. Thematic analysis of the qualitative data seemed to indicate that although kind behaviour did increase, much of it was directed to parents and family. If this is the case, the impact on children's experiences in school would be limited. It is possible it had a much greater impact out of school and on family members, though this was not measured. However, some impact was reported:

'I think he knows that children are more vulnerable in the class and he can be kinder to them maybe than he was before possibly,' (parent, School 1, (5.1.p).

Since increases in positive affect are hypothesised to mediate the benefits of PPI (Fredrickson, 2001), and because no such impact was evident following intervention, no additional benefits to variables such as satisfaction with school would be expected. In sum, these findings suggest that the intervention did not alter children's happiness or satisfaction with school, although there is no evidence that student levels of satisfaction with school were below average, or that the intervention reduced school satisfaction.

6.4. Prosocial behaviour (i.e. kindness and gratitude)

The claim that kindness and gratitude interventions boost happiness is based on a hypothesised psychophysiological mechanism involving a so called 'helper's high' induced following an act of prosocial behaviour (Binfet, 2015). Therefore, it is important for the internal validity of the current study to demonstrate that the intervention led to increased levels of kindness and gratitude in order to test this hypothesis. Two scales were used to act as a 'manipulation check' to demonstrate whether or not the intervention seemed to increase levels of prosocial behaviour, these were the Prosocial Behaviour Scale (PBS) and the School Kindness Scale (SKS). Comparison of these variables for School 1 before and after intervention did reveal a significant increase on one scale of nine items of the PBS. Participants rated themselves as higher on statements such as 'I often feel sorry for children who are sad.' There was also a significant increase in one sub-scale of the SKS, consisting of seven items. Cohen's *d* was calculated at 0.518. This is a moderate effect size (Cohen, 1992). Post-intervention, the mean scores for School 1 were higher on eleven of the seventeen variables that were compared, though only these two scores (PBS and SKS) were

statistically significant. This indicates some evidence that the intervention did increase levels of prosocial behaviour in School 1. No effect was found for these measures of prosocial behaviour for School 2.

As indicated above, the MLIS asked participants to rate the frequency of positive and negative behaviours in school (e.g. sharing), and thus, this scale could also be considered an indicator for prosocial behaviour. No significant differences were found in this measure post intervention, in either school.

The student ratings of the workshops demonstrated that post intervention, 91% agreed that they had thought more about being kind, with 96% agreeing that they had done more kind things. These ratings provide support for the prediction that the intervention would increase levels of kindness, and they are consistent with the self-report data for School 1, if not School 2. However, the predicted effect of improved levels of kindness on SWB was not found. Because the intervention did not raise levels of kindness in both schools, the study did not fully test the hypothesis that practicing prosocial behaviour improves SWB. Therefore, caution must be exercised before interpreting the results of the current study as disproving the claims and findings of previous research on the benefits of kindness and gratitude interventions. This is because of the factors outlined above relating to the intervention and its implementation with children.

The staff and parents described a number of types of kind acts they had witnessed children carrying out as a result of the workshops. This included: doing chores, tidying the classroom, making drinks for family members, visiting family, looking after siblings, washing up, helping with shopping, and befriending other children in their play. Both teachers gave the opinion that the intervention had led to more prosocial behaviour:

'*I asked the children if they feel that children in the class are being kinder and most, probably eighty percent put their hands up and agreed they were…on the whole they are being kinder to each other,' (*Teacher at School 1 interviewed after Time 3 (2.1.t).

Much of the kind behaviour described in interviews related to family members and domestic activity, and less was reported as taking place in school. Two parents mentioned a reduction in bullying, and one teacher mentioned a reduction in unkind comments between children. The children were described as being more aware of the need to be kind. In the words of one parent:

'I think he learned a lot from it. I think more so the fact the different ways that kindness can be shown,' (Parent from School 1 (6.1.p).

In summary, qualitative data indicated that the intervention led to increased levels of kindness, and this was supported by a significant increase in children's ratings of their prosocial behaviour, though in one school only. The intervention was predicted to increase prosocial behaviour (an independent variable), and thus increase SWB (a dependent variable). It did not do this. One possible reason might have been that the intervention did not induce high enough levels of prosocial behaviour. If the increase was not great enough, this would be reflected in negligible increases in SWB too small to be detected. This is likely a factor in the current study. Indeed, Froh et al. (2009) asked their participants (mean age 12.74) to write and deliver five gratitude letters over a two week period. They found no improvements in self-reported levels of gratitude and no increases in PA. Their intervention, like the current one, may have failed to demonstrate the key experimental effect (increases in SWB) because the intervention was unable to produce high enough levels of prosocial behaviour.

6.5. Popularity

Popularity and peer status become increasingly important to children as they mature, particularly between the ages of 10 and 14 years of age. An interview study showed that popular children were seen as prosocial, and unpopular children were perceived as isolated and anti-social by their peers (LaFontana & Cillessen, 2002). Newcomb, Bukowski and Pattee (1993) identified behavioural differences between popular children and those who are rejected. The former group are high on sociability, and low on aggression and withdrawal, whereas rejected children demonstrate the opposite pattern. Given this context, teaching children prosocial skills was predicted to improve their popularity, and levels of popularity were predicted to rise immediately after intervention. In fact, the intervention seemed to result in a fall in both positive peer ratings and negative peer ratings. Each of these effects and their potential causes are discussed below.

6.5.1. Positive peer ratings

Positive peer ratings fell in both schools immediately after intervention. In School 1, the fall was significant but small. In School 2, the fall was significant and large. This was unexpected given the findings of Layous et al. (2012), where increases in positive affect were found for a group receiving a kindness intervention, and a group simply asked to visit interesting places. Because only those in the kindness group experienced increases in positive peer ratings, the authors suggested the increase in popularity was mediated by increased levels of prosocial behaviour and increased levels of positive

affect. Although some evidence in the current study was found of increases in prosocial behaviour after intervention, this was in one school only, and positive affect did not increase in either school at significant levels. Research also suggests a wider set of influences at work determining the nature of peer relations. For example, Newcomb et al. (1993) indicate that peer popularity is based on an 'array' of social and cognitive competencies, including self-regulation and perspective taking skills, and these may require considerable intervention over time, to develop or improve to a level resulting in improved friendships.

The comments of two parents suggested the workshops might have increased the children's awareness of unkind behaviour:

'I just think it made him more aware of how other children are with people and said 'well that person isn't that kind because they don't actually do theirs' it just kind of opened his eyes to it a bit,' (Parent in School 1 (5.1.p)).

Though this was not mentioned as a factor by most parents, it is possible the intervention gave participants a less idealised view of the social context within their class, equipping them with the skills to make more sophisticated assessments of whether the actions of others were genuinely kind. If this were a factor, it might lead to a strengthening of existing social networks and friendships, whilst failing to create new and positive connections between pupils. If new individuals were not accepted into these established networks, there would be no change in the number of positive peer ratings. This potential effect of the intervention might have even led to the fall in positive peer ratings, if friendship groups increased their 'in-group identification' (Tajfel, Billig, Bundy, & Flament, 1971). However, this explanation does not seem feasible, given the benign nature of the intervention and the large fall witnessed in positive peer ratings.

The number of positive peer ratings for both schools fell significantly between Time 1 and Time 2 (with each child choosing on average to nominate 2.8 fewer peers). This trend points to some underlying factor. One explanation is response bias caused by the behaviour of the researcher. This is discussed further, as a likely explanation in paragraph 6.8 below (the strengths and limitations of the current research), with the possibility that the instructions and prompts provided to children influenced their responding systematically.

Hughes et al. (2001) demonstrated that positive teacher-student relationships in kindergarten predicted pupils' popularity with other children, as measured by

sociometric nominations the following year, and with a new teacher, when aggression and peer conflict were controlled for. This demonstrates that when children perceived that another child had a supportive relationship with their teacher, they were more likely to rate that student as likeable. These correlations were moderate to strong. This suggests that improving teacher-student relationships may promote peer acceptance, itself a powerful influence on the well-being of children (Holder & Coleman, 2009). However, it also demonstrates that peer relations exist in an established wider social system, not easily amenable to change by a brief intervention like the current one. Existing teacher-student relationships are one such social factor that are potentially resistant to change. This seems to be made more credible by the fact that one of the two teachers involved in the intervention showed poor engagement, and was unlikely to have used its potential to improve established relationships.

A number of interventions have been reported which have improved levels of peer popularity. Fotopoulou, Zafeiropoulos and Alegre (2019) used an emotional literacy programme in a Spanish school setting over the participants' third-grade year. By targeting various social competencies, they improved pupil popularity by 10%. Using a different approach, Capodieci, Rivetti and Cornoldi (2019) reported improvements in the popularity of children with Attention Deficit Hyperactivity Disorder (ADHD) following a cooperative learning programme. The approach requires students to be taught in small groups and provided rewards and feedback for demonstrating social skills, and increased levels of cooperation. Implementing this approach each day for two months, in twelve Italian primary school classrooms, led to improvements in the popularity of all students, but only the ADHD group experienced significant improvements. What these studies demonstrate is that even interventions focussed specifically on improving peer popularity and group cohesion, require considerable levels of intervention to produce effects. Given that the participants in the current study had been together in the same class for five years, established social groupings would have prevailed, and these are expected to be resistant to the influence of a six-week intervention, not specifically focussed on developing friendship skills.

In summary, there remains a possibility that the intervention reduced peer popularity and had a negative impact on friendships. This theme emerged during the parent interviews, and two parents felt the workshops might have drawn children's attention to unkind behaviour that had previously been unnoticed, thereby reducing acceptance and popularity between peers. There is no further evidence for this hypothesis, and it is unlikely that increased awareness of the need for kindness might reduce friendly

behaviour between children. The most likely explanation for the changes in sociometric ratings of popularity, is some form of response bias or measurement error discussed further in paragraph 6.8.

6.5.2. Negative peer ratings

As well as being more socially skilled, popular children are more skilled at managing negative emotions such as anger and frustration. In contrast, children who are disliked by peers are more likely to act in aggressive, impulsive and withdrawn ways (Bierman, 2004). Negative peer ratings were measured in the current study to explore whether the intervention led to a reduction in antipathy between peers, with this hypothesised effect mediated by an increase in empathy related skills following intervention. This effect is thought to operate by causing a greater self-awareness of, and thus reduction in, negative behaviour directed at peers (Sandage & Worthington, 2010). Over the period of the study, negative peer ratings fell in both schools immediately after intervention. A large variation in negative peer ratings for School 1 before intervention suggests some form of measurement error (discussed below in 6.8). In School 2, the mean number of negative peer ratings fell throughout the period of the study (from 14.04 at Time 1, to 12.88 at Time 2 and finally to 10.46 at Time 3). The fall at follow-up of eight weeks after the intervention was significant. However, since the intervention failed to lead to a significant fall at Time 2, the fall at Time 3 is not easily explainable as an effect of the intervention, unless there is a delayed or cumulative impact. If this were so, and there was a real and gradual reduction in antipathy, an associated increase in positive ratings would be expected, although this was not the case. This phenomena is predicted by ‘balance theory’, which assumes positive and negative peer-ties are co-dependent, and partly explained by the observation that friends tend to agree on who they dislike (Rambaran, Dijkstra, Munniksma, & Cillessen, 2015). The current study design did not allow for measurement of School 1 at follow-up, and therefore the possibility of a delayed or cumulative impact was not fully explored for this group. It is difficult to interpret the fall in antipathy found in School 2, because the improvements predicted in popularity are hypothesised to result from an increase in prosocial behaviour, and increased positive affect. Neither of these effects were noted for School 2, suggesting instead that some form of random variation or measurement error caused the finding.

6.5.3. Impact on the least popular participants

Rejected peers have more frequent difficulties with emotional regulation (Hubbard & Coie, 1994), and sociometric status has been linked directly to specific social

competencies, including role-taking ability, and help giving behaviour (Gottman, Gonso, & Rasmussen, 1975). The dominant conceptualisation of those children low in popularity has focussed on their deficits, which are thought to contribute to rejection (Bierman, 2004). It was hypothesised that those lowest in popularity at the start of the study might show greater benefits from the intervention and increase most in popularity. Pooling the data from both schools, twelve students were identified as having below average levels of popularity. The change in their number of positive peer ratings after intervention was calculated. There were no statistically significant differences between groups based on popularity level, leading to the conclusion that popularity level was not a moderating variable in this study. The hypothesis that unpopular children might benefit most from a kindness and gratitude intervention is based on an optimistic belief that unpopular individuals have the capacity to learn and then apply the prosocial skills taught in a relatively brief and class-wide intervention. However, research suggests that the status of children nominated as unpopular is resistant to change and remains stable over many years (Cillessen, Bukowski, *&* Haselager, 2000*).* Furthermore, recent research is beginning to acknowledge the important social contextual factors (i.e. biases) that reinforce low-acceptance, and which may explain why interventions for this group tend to improve their social behaviour, but not necessarily their sociometric status (Mikami, Lerner, & Lun, 2010). Finally, the small number of participants in each comparison group (defined by popularity level), makes it unlikely that small differences such as those reported would achieve significance.

A number of themes in the interview data gave support to the idea that the workshops might have had more of an impact on children lower in popularity. It was felt by two participants that the workshops would compensate for a lack of kind behaviour in some children's family lives. One of the teachers felt that the focus on other people's feelings would help those who hadn't been taught how to empathise by their parents, and those who were often in conflict with other children:

'You know we have some children who find it hard to socialise with others and so their immediate reaction might be anger or frustration, and saying things like 'how do you think that person might be feeling or do you think that's a kind thing to do,' using this sort of vocabulary it definitely supported them,' (teacher in School 2 (1.2.t).

This teacher felt the workshops were useful for popular, and unpopular children, but in different ways. Those with social difficulties were encouraged to develop empathy skills. Whereas, the general focus on kindness to others, facilitated those with good

social skills to use them more widely, to support the inclusion of children who were not as popular:

'Those children…that don't find things difficult socially might …think of someone that's got upset recently in their social circle, they've been taking them under their wing,' (teacher in School 2 (1.2.t).

6.6. Did participants enjoy and value the intervention?

The information collected using a feedback survey ('Six Weeks of Kindness'), comprising thirteen questions, was extremely positive in both schools. 91% of the sample said they liked the lessons, with only 9% disagreeing with this statement. 84% agreed they would like more of these lessons, and 95% disagreed with the statement suggesting the lessons were not of 'much use.' The lowest ratings came from the question: 'Other people have noticed that I have been kinder recently,' with a sizable proportion of the sample (24%) disagreeing. Of the fifty-six children who took part, only five children indicated that they did not like learning about kindness, only eight indicated that they would not like more workshops, and only nineteen indicated that others would not have noticed them behaving in a kinder fashion. Only nine said they had not felt happier after taking part in the workshops.

91% felt that being kind made them feel good, providing some support for one of the hypotheses of the current study: that prosocial actions increase subjective well-being. It is interesting to question why these ratings seem to disagree with the comprehensive self-report data provided by the same participants. The simplest explanation is that they felt and believed the intervention had an impact on their happiness and well-being, when it had not. It is also possible that the self-report measures that were used were unable to detect the effects predicted by the intervention because they do not assess what they claim to. However, these measures were chosen because they have demonstrated their validity in previous research. Thus, for example, the PANAS was used to measure positive affect in Froh et al. (2009) and the PBS was used to measure prosocial behaviour in Layous et al. (2012). It is also possible that these measures were simply not sensitive enough to identify or capture the subtle differences in thinking and behaviour that might have resulted from the intervention. Issues relevant to this interpretation are discussed below in relation to the research design in section 6.8.

Why might these satisfaction ratings differ so markedly from the other data provided by pupils? The self-reports of children as young as five have demonstrable validity when they are making judgements about something within their own experience (Varni,

Limbers, & Burwinkle, 2007). This type of rating scale is used frequently to determine the value of health care interventions, and can be linked with increased patient engagement (O'Brien, Petrie, & Raeburn, 1992). However, there is evidence to suggest that adult patients lack the technical expertise to make judgements about the effectiveness of their medical care, and instead reflect on the personal qualities of their physicians as proxy indicators of effectiveness (Schoenfelder, 2012). In a similar manner, the high satisfaction ratings found in the current study, though giving valuable insight into the experience of the workshops for these children, should not be understood as the primary indicator of intervention impact and quality, because these ratings will have been unduly influenced by their participation.

This is because a large part of the educational component of the workshops outlined the connection between prosocial behaviour and increases in positive affect, and this was reinforced through video presentations, group discussions and celebrations of individual kind acts performed by students. Therefore, it is reasonable to expect participants to have accepted some of the messages of the intervention (e.g. that kindness makes you happy), even if the intervention caused no discernible level of impact on the SWB of participants. The findings of this survey seem to suggest they enjoyed the workshops and believed the central premise of them.

The themes and comments from the interviews were largely positive. Of the seven parents interviewed, all recommended the workshops, with four of the seven indicating that the workshops had a positive impact on their children. Although both teachers said the workshops had a positive impact and led to kinder behaviour, only one teacher recommended them, the other did not. This teacher believed the workshops might be necessary for children who demonstrate lower levels of cooperation and prosocial behaviour, but that this had been unnecessary in her own class, because of high residual levels of kindness, illustrated below:

'It depends on the class, if you've got children struggling to be kind to each other it would be good,' (teacher from School 1 (2.1.t).

However, this teacher's class did not differ in levels of kindness from the group in School 2 at the start of the study (as measured by the SKS and PBS). Their mean score for the PBS of 20.6 at Time 1 was actually slightly lower than that found in the sample on which the scale was standardised (M = 24.57, SD = 3.62, N = 815 (Caprara & Pastorelli, 1993)). Indeed, kindness in School 1 was one of the few variables to increase significantly after intervention. Therefore, the teacher's assertion above is

repudiated by some of the findings of the study: the children in School 1 were not objectively high in kindness, and the intervention improved levels of self-reported kindness in this group. Her resistance to the intervention and its impact on the results will be discussed further in 6.8. Earlier research (Otake et al., 2006) also refutes this view, and instead suggests that happy people became even kinder, happier and more grateful following a simple kindness intervention.

Resistance to the workshops was expressed by one of the teachers and two parents (from the same school as the teacher), because the acts promoted weren't by definition 'genuine' or altruistic, and because some children were already kind, and therefore were considered to be wasting learning time because they did not need to be taught kindness:

'She was more cross from a negative impact, because she felt she didn't need the kindness because she is always kind, and that she was being told that she had to be kind,' (parent School 1 (7.1.p)).

The two teachers held very disparate views of the intervention, and because of this it is difficult to draw conclusions from the data they provide. The second teacher and most parents valued the intervention in a number of respects. Captured in an overarching theme called 'How kindness supports social and emotional development', interviewees described the value of the workshops as able to: enrich children lacking in prosocial role models, counteract bullying, and equip children with the skills needed to make school easier. It was felt this was achieved by increasing children's awareness of the needs and feelings of others, and thus increasing their empathy. Most of these comments were made by the teacher from School 2, who was as enthusiastic about the intervention:

'I think it's very good to bring together a class that maybe doesn't get on, maybe it will help them to open their eyes to say 'hang on, and maybe I shouldn't be treating people like this,'' (teacher School 2 (1.2.t)).

A number of comments captured the enthusiasm of participants for the workshops. One parent described her daughter's response to them in the following manner:

'She loved the kindness lessons and told me everything that they had done, and came home every evening after they had done it, and pretty much told me what they had done and how much she liked it,' (parent School 1 (8.1.p)).

The benefits described included improved relationships, more respect for the feelings of others, more social support provided by children to each other, more kind acts, and improved levels of self-regulation:

'*When they are in a game scenario and getting competitive and its not a hundred miles an hour anymore where they jump to conclusions and fall out over the rules which was a common thing before Christmas*,' (teacher School 2 (1.2.t)).

In summary, the children, parents and teachers valued the workshops a great deal, and felt they had improved levels of kindness, and had a positive impact on prosocial behaviour. This was in contradiction to the quantitative self-report data of participants. Those interviewed valued the impact on relationships and self-regulation skills, and also provided some useful feedback for future programmes. For example, the need to include more active and collaborative learning, and holding 'refresher' sessions throughout the year. The use of negative peer ratings was rightly criticised as having the potential to cause distress and hostility amongst children, and the usefulness of the workshops for whole classes was questioned by one of the teachers. Although they valued and enjoyed the workshops, and felt they had an impact, this view was primed by participation in the workshops and acceptance of the central message by participants: that kindness makes you happier.

6.7. Did the effects persist?

Since School 2 completed the workshops at Time 2, the research design allowed for further analysis of any follow-up experimental effects at Time 3 i.e. 8 weeks after the intervention, but for School 2 only. There were no significant effects immediately post-intervention, however, ten of the seventeen variables compared at Time 2 and then again at Time 3 increased (though at non-significant levels). This indicates a possibility that any effects of the intervention might be incremental, accumulating and growing gradually through the period of study and after the intervention. This might happen if the teacher in School 2 continued to use and reinforce techniques presented in the workshops. However, when variables for School 2 were compared across the whole period of the study (Time 1 and Time 3), only one sub-scale of three questions showed a significant increase. Thus, there were no immediate effects on participants post-intervention, and there were no gradual increases over time and evident at follow-up.

6.8. Strengths and limitations of the current research

The failure of this study to substantiate the widely reported benefits of kindness and gratitude interventions, forces consideration of the possible limitations that might account for these findings, alongside some of the strengths of the current study.

6.8.1. Intervention fidelity and quality

Intervention fidelity is the extent to which an intervention is delivered as intended, and is thus a critical requirement in any study of intervention effects (Murphy & Gutman, 2012). Although based on similar interventions, the current study did not systematically control for intervention implementation, beyond the design of having one person to deliver the same intervention twice, using the same detailed lesson plans and same resources. It is also important to control how the intervention is received. This includes ensuring the intervention content is understood by participants, that they have learned the skills presented, and feel confident to apply the activities taught. There were no procedures in the current study to check whether these implementation factors operated as intended. Intervention enactment is the degree that a participant carries out the activity. Controlling enactment is important because the effectiveness of the intervention cannot be assessed without adequate enactment (Borrelli, 2011). No measures were taken to control or assess enactment in the current study, although they were planned at the design stage (teachers were to discuss and monitor prosocial acts each day). These measures were abandoned because they were unpopular with staff.

A number of key variables in kindness research relate to enactment, and each may serve to moderate the effects of an intervention and the magnitude of these effects in different ways. For example, research suggests that costly giving has a greater impact on well-being (Aknin et al., 2012b), and that giving to a family member has more impact than giving to a stranger (Aknin et al., 2015). Well-being rises in the giver in relation to the number of kind acts performed (Rowland & Curry, 2018), and acts of kindness and gratitude performed in school, would be expected to have a different impact on peer relations to those performed at home (Layous et al., 2012). These factors were not monitored or measured, so that any variation in the type of prosocial behaviour carried out, to whom, and how frequently remains unknown in the current study. Whether or not enough acts were implemented to induce the hypothesised effect is also unknown. Because of these factors, the current study is unable to prove whether the failure to

demonstrate a relationship between kindness and SWB is due to the intervention, or its implementation, or both.

Participants were not asked directly whether they had actually carried out the prosocial behaviours expected in the workshops, because of the risk of a social desirability bias in the data (i.e. that they would be tempted to lie about their prosocial behaviour). In future, implementation compliance could be monitored through the third party reports of teachers, or parents each week during the research period.

Much of the interview data from parents and staff, and the self-report data from pupils, indicated that the kindness and gratitude intervention was enjoyable and popular with children. It incorporated a focus on practical activity (e.g. giving), a psycho-educational element (e.g. animations and stories about how gratitude makes us feel) and motivational elements (e.g. the children sharing their progress and receiving praise), whilst preserving a parsimonious level of intervention (i.e. six hours).

Nevertheless, some changes to the intervention were recommended by those involved, including more opportunities for active learning, and to practice the social skills and prosocial behaviour techniques discussed in the workshops. Kolb's (1984) model of experiential learning supports this suggestion, and outlines concrete experience and active experimentation as two stages in learning an activity that supports the internalisation of new skills.

6.8.2. Teacher factors

Jennings and Greenberg (2009) indicate that the social and emotional competencies of teachers vary widely, and that those with the highest competences are best placed to implement effective social and emotional curriculums, achieve supportive relationships with their classes, and design lessons that build on student strengths. This variability in the personal skills of teachers supports the need for interventions which foster positive student relationships, and social competence. It also indicates that research on the effectiveness of school based PPIs needs to control for the personal skills of the teacher, to reliably measure the effectiveness of these interventions. This factor was not considered when the study was designed, however, the marked difference in attitudes of the two teachers to the workshops suggests this is a key factor in mediating the effects of such interventions. In the current study, one teacher was enthusiastic about the intervention and planned activities outside of the sessions that might have had an impact on its effects (e.g. displays, discussion time), whereas the other was very busy and chose not to participate actively during the workshop sessions or

between the sessions. This teachers responses were more critical when interviewed, and there was evidence to suggest that her resistance to the workshops formed part of a wider attitude of dissatisfaction relating to her role within School 1. These variations in teacher characteristics need to be controlled in future research, by matching teachers by levels of enthusiasm, levels of social competence and by providing training which outlines the experimental expectations for their participation.

6.8.3. Research design

The research design of the current study had a number of weaknesses. The participants were not randomly assigned to conditions because of a number of practical constraints, and due to the naturalistic setting for the study. This quasi-experimental design did not allow participant differences to be matched, or balanced across conditions to minimise any differences in each group. However, the remarkable level of similarity between the data provided by each group, and the stability of much of the self-report data, suggests the measures used performed reliably.

The teachers were present during the workshops and one of them worked closely with the researcher during the workshops as a joint presenter. This aimed to improve how information was presented to the children, and maximise pupil engagement. However, this investment in the workshops may have caused expectancy effects, biasing the teachers to make positive appraisals, and exposing them to demand characteristics (Orne, 1962). Attempts were made to mitigate this by having a second researcher collect the data and conduct the interviews, and by excluding the author who led the workshops from these data gathering sessions. The very positive satisfaction survey results from children and the extremely positive interview responses of one of the teachers, suggests further measures should have been taken to reduce the influence of these factors on the data collected.

Not only this, the children were presented with a wide array of information reinforcing the benefits of prosocial behaviour. In other words, the key participants knew the aims of the research, and were thus exposed to response bias, in a design where they were also required to provide data about the effectiveness of the intervention.

In common with previous research, the current study incorporated a repeated measures design. The design also allowed for a waiting list rather than a ‘no intervention’ (or neutral) control. This is an improvement on past research designs because it allowed expectancy effects to be controlled, with some evidence that these may have exaggerated the impact of PPIs in some of the studies reviewed in Chapter 2

of this dissertation (e.g. Froh et al., 2009). The current study also increased the number of participants substantially compared to earlier multi-target interventions (e.g. Suldo et al., 2015).

Mixed methods research allows a range of research questions to be explored that neither quantitative nor qualitative methods alone can answer (Tashakkori & Creswell, 2007). The quantitative data aimed to provide evidence for the effectiveness of the intervention, and in a limited way whether participants were satisfied with their participation in the intervention. In other words, whether the intervention achieved the hypothesised effects. The interviews allowed those involved to speculate on, and give opinions about aspects of the workshops they valued and felt needed to be changed. In this way, mixed methods research allows for a wider field of enquiry and greater depth (Wisdom & Creswell, 2013). The use of mixed methods answered more effectively the question: should educational psychologists be actively promoting this type of intervention? The answer to this question is that the children enjoyed the intervention and felt it had an impact, but that in its current form the intervention did not increase self-reported ratings of well-being, and only improved kindness in one school. A number of revisions to the format of the intervention are advised.

6.8.4. Sample size

Sample size is a key factor in determining the power of a study to reveal significant effects and avoid type two errors (i.e. a 'false negative', or failure to recognise a real effect). In two identical studies, the one with a larger sample size may achieve statistical significance, even if the smaller one does not, because of its greater statistical power or sensitivity (Clark-Carter, 2009). This indicates a possibility that the effects in the current study were simply not large enough to be detected given the sample size. Clark-Carter (2009) indicates that to achieve a small effect of size of d = 0.2, at a power level of 0.8, requires a minimum of 150 participants (0.8 is the level recommended by Cohen (2013) to ensure there is an 80% chance of detecting an effect, by ensuring the probability of a type two error is four times lower than a type one error). Thus, it is possible that this type of intervention simply does not have a large enough effect size to be detected by the current small-scale study. Thus, Haworth et al. (2016) demonstrated a significant effect from an online kindness and gratitude study even though the effect was small, because they had a large sample of 750 teenage participants.

6.8.5. Self-report measures and their use

Diener, Suh, Lucas and Smith (1999) provide evidence to support the reliability of self-report measures of SWB. However, there are questions about the use of such measures. Whilst a person might know how they have felt over the last month or year, there is an element of cognitive and affective appraisal required, and these sorts of judgements about the recent and the more enduring aspects of our lives are not always at the forefront of our conscious awareness (Veenhoven, 2012). The reliability of this type of data also rests on an assumption that children of this age have the introspective qualities to reliably perform these forms of appraisal (Veenman & Spaans, 2005). In one study, the correlation between the answers to the same question about happiness separated by a week was as low as 0.6, and this measure of reliability fell when the period between the questions was extended (Veenhoven, 2012). As well as this, the choices between responses on a survey (e.g. *sometimes, often, frequently*) are ambiguous, and given the global nature of the appraisals being made, subtle differences in how the survey questions are asked (or by whom, or when) may cause a degree of variation in the response style of the participant (Veenhoven, 2012). This inherent ambiguity, and this potential for variation in reporting, requires strict and consistent administration practices to ensure these threats to reliability are managed (Fan et al., 2006). Because the data was gathered across three time points, and with children, who relied on adults to explain some of the language used in the scales, more effort should have been taken to control the manner in which the surveys were presented and explained, in an attempt to reduce random variation and administration bias.

Sociometric status is an accepted method for studying peer acceptance in children (Gest,et al., 2001). Peer nomination scores taken in elementary school are known to be stable and correlate well with other reports of pupil behaviour and relations (Wasik, 1987). However, it is possible that the large variations in some of the sociometric data can be explained by variability in administration. Due to an over-sight, no training was provided to the teaching staff, or the researcher, to ensure they responded in a standard manner to a variety of questions they were asked about completing the questionnaires by participants. Discussion with the second researcher who led these sessions, suggests children requested and were given frequent guidance on how to nominate peers in response to phrases such as '*children who are kind',* and if this guidance changed over the three sessions, this would confound the results. Use of a written manual is a recognised method for ensuring consistent administration practices (Gearing et al., 2011).

The use of negative peer ratings was criticised during interviews because of the risk that the technique might increase antipathy between peers, however, this was not evident in the data, which suggested a fall in antipathy in one school.

Though other techniques for measuring happiness (such as experience sampling) may be able to detect more subtle fluctuations in mood and well-being, they have their own disadvantages e.g. they make greater demands on the participants time (Dolan, 2014). In summary, the issues with reliability identified in the data, along with low statistical power, and small sample size, together may explain the failure of this study to replicate the effects found in other similar interventions with children and adults.

6.8.6. The interviews and thematic analysis

Although a mixed methods design was chosen, the qualitative element was small, and a number of weaknesses with this element of the research were noted. Only a small number of parents were interviewed, and the sample came from only one of the two participating schools. This undermines any attempt to claim the data they have provided is representative. Nevertheless, their viewpoints have value and gave a number of insights regarding the intervention. The use of the same interview schedule with parents and teachers required parents to comment on details of the programme they were unlikely to have known about, and therefore some of the parental responses were based on supposition. The interviews with parents were short (less than ten minutes each) and reflected their lack of direct knowledge. In future research this weakness could be overcome by increasing the number of parents interviewed. Although only two teachers took part, and this limited who could be interviewed, other members of the staff, such as senior managers and teaching assistants could have been interviewed and asked to comment on how the workshops affected the children's behaviour. The decision not to interview the child participants seems justified, because their exposure to the intervention and its content would inevitably bias the information they would provide.

Thematic analysis using the method described by Braun and Clarke (2006) required that data was treated in a rigorous manner. This entailed various readings of the raw data, to establish and extract basic elements, which could then be grouped into categories, which were used to form larger sub-themes and themes.

Although a latent approach to thematic analysis was attempted, this proved difficult, because there was only one person interviewed from School 2, and so deeper themes which could be compared across schools were hard to define.

Whilst the intervention was planned to be very similar across both schools, the disparity in the views of each teacher suggests that factors not related to the intervention guided some of their perceptions. These might include the teacher's attitude to kindness (O'Connor, 2008), their pedagogy (Krane, Ness, Holter-Sorensen, Karlsson, & Binder, 2017), or their view of the causes of pupil behaviour, and their own role in this (Binfet & Passmore, 2017). Although interviews with the teachers gave information not accessible by other methods, their involvement in the delivery of the workshops reduced the validity of this data. To remedy this, they could be exempted from the workshops in future research. Triangulation of participant perceptions with other data sources offers a balanced view, which allows the weaknesses in the interview data to be supported by the more generalisable content of the self-report measures.

6.9. Discussion Summary

The self-report data failed to demonstrate that the intervention caused improvements in participant well-being or popularity. As well as having no impact on global SWB, the intervention failed to improve specific aspects of SWB, including school based happiness and positive affect. Many of the kind acts that children performed were at home, and these would not be expected to improve either school based SWB, or peer relationships. Although the level of kindness increased to a significant level in School 1, no effects were found for School 2, although both teachers reported witnessing more kind behaviour. This suggests the intervention did not induce high enough levels of kindness, and certainly, not the degree required to cause an increase in SWB. Because of this failure to induce the experimental effect (i.e. increased prosocial behaviour) in both schools, the study has failed to either refute or confirm the hypothesis that kindness and gratitude interventions lead to improvements in well-being.

Although peer popularity seemed to fall over the period of study, it is more likely this resulted from a failure to control how measures were administered, and it is unlikely that the intervention caused any adverse effects on the children involved. On the contrary, the qualitative data suggested the staff and students involved found many benefits from participating, notwithstanding some criticisms. Their perceptions suggest this type of intervention has the potential to promote and confer a variety of positive social and emotional benefits upon students, if further work is done to improve the intervention and its implementation.

Raised levels of prosocial behaviour and positive affect are both thought to be required to improve peer popularity (Layous et al., 2012), and these were not demonstrated in

the current study. However, pupil friendships exist within a wider social context, and are governed by a wider set of variables (e.g. teacher-student relationships, pupil social biases) not targeted for change in the current intervention. Further research is required before concluding the effect of increased pupil popularity demonstrated by Layous et al. (2012) is a genuine effect of kindness and gratitude interventions, particularly as the effect has never been reported elsewhere in the literature, and because social contextual factors have received growing importance in explaining peer acceptance (Mikami et al., 2010).

Because the quantitative and qualitative findings differ so much in the current study, the researcher was forced to consider which should take prominence. Whilst both sources of data provide useful insight into the effects of the intervention, the questionnaire data provides the most valid method for measuring the impact of this type of intervention on the SWB of participants, because it is less influenced by response bias, and can be gathered from all participants over several different time points. Nevertheless, these measures are likely to be insensitive to small effects and require great care to ensure confounds are not introduced by administration error.

Although the evidence for the efficacy of this type of intervention with children remains limited, the current study has outlined a number of factors which may have led to the lack of effects. In this respect, kindness and gratitude interventions continue to offer the potential to improve the well-being of children and young people in schools, although much more research with this group is required.

6.10. Conclusions

There continue to be on-going concerns about the mental health and well-being of the child and youth school population of the U.K. with as many as one in ten CYP thought to have a diagnosable mental health condition (see the Government's Green Paper: Transforming Children and Young Peoples Mental Health Provision, 2017). Given this context, is kindness the cure, and can it improve mental health and well-being? As a low cost and brief intervention, that might have utility for particular at risk groups of students, whilst also being of benefit universally, its promise is appealing.

The current study represents one of the few empirical studies to examine a kindness and gratitude based intervention with primary aged children in the U.K. Three null hypotheses (and their alternatives) were tested (see page 72). Firstly, whether or not the intervention was able to increase participant levels of SWB. This effect is thought to be mediated by an increase in positive affect, leading to reinforcement of future

prosocial behaviour, and consequent improvements in social and friendship behaviour in accordance with the Broaden and Build theory (Fredrickson, 2001).Secondly, whether or not increases in SWB were accompanied by an increase in peer popularity, and finally, whether or not those low in popularity experienced greater effects of the intervention. The study did not find quantitative evidence of an increase in SWB, or popularity for children who took part in a kindness and gratitude intervention. Analysis of a wide variety of self-report measures of SWB, prosocial thinking, and positive affect failed to reveal a consistent pattern of improvement following intervention. The study was unable to substantiate the findings of previous research that prosocial activities improve student peer relations (e.g. Layous et al., 2012), or SWB (Suldo et al., 2014). However, a number of limitations in the current study suggest caution before refuting the research hypotheses. These limiting factors included the low frequency and duration of the intervention, with the possibility that effects were diluted by group size (i.e. low intensity). The possibility of low-compliance with the intervention, low levels of effort, and a lack of variety in the activities chosen may have further reduced the impact of the intervention. Notwithstanding these limitations, the current research suggests that kindness and gratitude interventions may have the potential to improve social and emotional functioning, and possibly lead to higher levels of well-being among students, though brief, whole class interventions are unlikely to result in substantial effects. The study found no evidence that this type of brief intervention is able to improve popularity levels of children.

6.10.1. Directions for future research

A number of questions arise as a result of this study, which are worthy of further research.

1. Prior research seems to suggest that pre-intervention happiness levels might moderate the link with SWB (Otake et al., 2006), with a concern this type of intervention may suffer from a ceiling effect in participants with higher levels of SWB. Research could usefully test this type of intervention with CYP with lower than average levels of SWB.
2. It is important to know whether this type of intervention has particular benefits with specific groups within the population of CYP. Research suggests gender might be a moderating factor for gratitude interventions (Froh, Yurkewicz, & Kashdan, 2009), and this warrants further study with various types of intervention. Other moderating variables which research indicates might moderate the effects of kindness or

gratitude interventions include individual differences in empathy (Kristeller & Johnson, 2005), and Theory of Mind (Emmons & Shelton (2002), to name but two.

3. Although no particular effects were noted for students low in popularity, the efficacy of kindness and gratitude interventions with this group using a targeted small group intervention (rather than a universal whole class intervention) could be explored.
4. It is possible that a similar intervention might demonstrate improvements to participant SWB if the duration and frequency of the intervention were increased.
5. With the ready availability of smart-phones and tablets, event sampling (Dolan, 2014), throughout the course of such an intervention, both at school and with the assistance of parents at home, might allow a more sensitive measure of SWB to be used: one that is suited to capturing the short-term fluctuations of the effects being explored. This would allow the short-term benefits of performing a kind act to be assessed directly.
6. Teachers with good social emotional skills are known to foster supportive relationships with their students and foster prosocial behaviour (Jennings & Greenberg, 2009). Future research needs to ensure the social emotional skills of the teacher are controlled for in any study, since these may exert a large influence on student emotions and behaviour.
7. The importance of having interventions which teachers can use to improve student well-being is acknowledged in recent government initiatives, and therefore the efficacy of this type of intervention led by teachers rather than external researchers could be explored.

6.10.2. Implications for Educational Psychology

This study sought evidence for the efficacy of a positive psychology intervention in a school setting, with limited success. EPs hoping to broaden the range of interventions they offer, should be wary before concluding that positive psychology interventions, including those which promote kindness and gratitude, are able to improve levels of well-being when presented to whole classes. The current study indicates that EPs need to ensure not only the efficacy of interventions, but also be aware of the implementation factors required to ensure effectiveness. In the current study, measures to ensure greater compliance with the prosocial activities were needed, and methods to ensure a range of activities were tried across both home and school settings.

Furthermore, whilst larger scale studies are able to demonstrate effects with relatively modest time commitments, the current research suggests that prosocial skills have to be firmly embedded within children's behaviour to exert psychologically beneficial effects. Although the prospect of short lived interventions are attractive to EPs and schools alike, EPs should continue to promote longer running, and cyclical social and emotional learning programmes, which run for a number of years.

Pupil subjective well-being exists within a social context, and the effects of PPI are dependent on a complex network of ecological factors within children's lives. Teachers are a key element of this context. The motivation and compliance of teachers needs to be assured before embarking on this type of time intensive intervention within schools, with the possibility that poor teacher commitment is able to undermine the impact of such interventions. Conversely, positive teacher engagement promises to ensure the activities presented become internalised and practiced routinely. This generalization of the techniques learned is required to avoid hedonic adaptation. As such, EPs need to be aware of personal and organizational factors which might mitigate against the success of this type of programme.

The possibility that prosocial and positive activities improve subjective well-being continues to be an area worthy of further research and EP interest. As professionals with a role in supporting the well-being and mental health of CYP, EPs need to be aware of which types of activities have the greatest impact, how these activities can be implemented to greatest effect, and the risks to effective implementation. The Anna Karenina principal (Tolstoy, 1980) suggests that all happy families are alike, whereas each unhappy family is unhappy in its own way. The current study demonstrates that this principal may apply to kindness and gratitude interventions: when the work they provide benefits, and when they do not, there may be many possible reasons.

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8. Appendices

Appendix A: Table of studies reviewed: children and young people

(For detailed references of the measures used and effect sizes please refer to the descriptions of each study in the literature review).

Giving and Sharing Studies						
Pre-schoolers' generosity increases with understanding of the affective benefits of sharing.						
Study 1	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Paulus and Moore (2017).	N = 64 Age: 3-6 months Mean age = 60 months 48% male. Germany	Tested individually to find out if young children anticipate that generosity will increase their level of happiness. Anticipation stage: 'Pretend how you would feel if you gave this balloon to Maria.' A resource allocation task: costly and non-costly sharing of stickers with another child (in a picture).	3 conditions: - Self: Child imagines giving something of their own. - Other: child has to rate how another child might feel if they shared. - Control: children are asked to think about themselves and their emotions but not in relation to giving.	Facial affective scale used to by children indicate how they might feel (e.g. after giving)	Pre-schoolers believe sharing will make them happier ($p = 0.25$). And that this is correlated with whether they chose to give: the more positive they predicted feeling, the more they gave ($p = 0.001$).	Authors claim that pre-schoolers understand the relationship between generosity and anticipated happiness and this predicts how much they will choose to give. No effect of age on giving. The child had to pretend to be in a sharing situation to get a measure of how they predicted they would feel- surely a difficult thing to do and an effect that would alter with age? Authors didn't measure happiness so can't say whether giving was reinforcing in the first place.

Giving leads to happiness in young children.						
Study 2	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Aknin, Hamlin and Dunn (2012).	N = 20 (10 additional participants excluded). Mean age: 22 months. 50% male. Canada	Tested individually to find out if giving treats to a puppet causes happiness in young children.	Warm up phase. Children give puppets treats and they mime eating them. Testing phase: experimenter asks child to give puppet a treat that has been found or from the child's own bowl.	Child's face is rated for happiness at each phase and ratings compared. Enthusiasm of each puppet rated to rule out happiness levels caused by variations in how puppets acted. No correlation found.	Children appear happier when giving treats to a puppet than receiving them (d = 0.88). Costly giving makes them happiest of all (d = 1.35). Large effect sizes: R = 0.46-1.35. No differences due to gender. Authors conclude evidence that giving is rewarding and caused by a 'warm glow effect'.	Costly giving was when children gave away treats given to them Standard giving was when the children gave away treats that were not their own i.e. 'found' by researcher. Rests on assumption that children believe the puppets are alive and really eating the treats.

Prosocial behaviour leads to happiness in a small-scale rural society.						
Study 3	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Aknin, Broesch, Hamlin and Vondervoort (2015)	N = 20 Mean age not given, range 2 years 4 months to 4 years 8 months. 70% male. Vanautu (small non-industrialised island in Pacific).	A replication of Aknin, Hamlin and Dunn (2012) aiming to show a cross-cultural effect that giving leads to happiness across cultures. Experiment conducted in local language.	Each child is their own control. Puppets are unknown on the island.	Child's face is rated for happiness (i.e. emotional expression) at each phase and ratings compared. 4 coders, 1 indigenous to island.	Children displayed more happiness when giving candy than receiving it themselves (d=.83). Children displayed happiness when the giving was non-costly i.e. not their own candy than when receiving candy (d = .46). Costly giving was most rewarding (i.e. children displayed more happiness) than non-costly giving (d = .30).	Authors claim 'warm glow' is experienced when giving by children from diverse populations i.e. it is a universal feature of human development. Puppets do not exist in Vanautu i.e. this undermines the attempt to replicate a study done with Western infants and results cannot be generalised across groups. Infants could look happy because of the novel spectacle of the puppet.

Motivation Counts: Autonomous But Not Obligated Sharing Promotes Happiness in Pre-schoolers.						
Study 4	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Wu, Zhang, Guo and Gros-Louis (2017).	N = 139 Mean ages: N = 51 three year olds (mean 41.8 months) N = 88 five year olds (mean age 64.4 months). Three kindergartens in China	Children invited to keep or share stickers by putting them in an envelope for themselves or for an absent recipient to keep.	2 conditions: - Autonomous sharing: recipient did not help with a puzzle task i.e. had not earned a reward - Obligated sharing: recipient and participant jointly earned reward completing a puzzle. (Recipients not present). Randomly assigned to condition.	Emotional experience of children is coded by raters for happiness	5 year olds share more if obligated (i.e. influenced by merit based social norms; p = 0.002). No difference across conditions for 3 year olds (p = 0.0240) i.e. they were not aware of the social expectations at this age. When sharing autonomous participants were happier sharing than keeping stickers (i.e. costly giving leads to happiness) but not when obligated (p = 0.018).	Authors claim the affective benefits of giving for children depend on their motivations: whether conforming to social norms or whether responding altruistically.

Gratitude Studies						
Positive psychological interventions for children: A comparison of gratitude and best possible selves approaches.						
Study 5	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Owens and Patterson (2013).	N = 62 Age: 5-11 Mean age: 7.35 48% male After school clubs/summer camps in U.S	Think about your day draw a picture of something you are thankful of (gratitude condition). or 'Imagine your future as best as it can be and draw a picture (Best possible selves condition). Duration: 1 week, daily.	3 conditions: • Best possible selves • Gratitude • Control: draw a neutral picture. Pre and post measures within-subjects.	Self-esteem scale (PCSC). Life satisfaction scale (BMLSS) Positive and negative emotions scale (PANAS). Pictures were coded by raters. No measures of gratitude were taken before intervention.	No significant effects of interventions on affect, or life-satisfaction. Gratitude condition did not affect any of the variables i.e. participants were no higher in subjective well-being after intervention Self-esteem increased only in the best possible selves condition n2 =.12, p = 0.029) Content of pictures indicated that content related to gratitude and best possible selves was expressed.	Prompt to induce gratitude was focussed on experience of gratitude in the current day rather than general feelings of gratitude

Counting blessings in early adolescents: An experimental study of gratitude and subjective well-being.						
Study 6	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Froh, Sefick, and Emmons (2008).	N = 221 Mean age = 12.17 years. 49.8 % males. U.S.A	Participants asked to 'count their blessings' each day for 2 weeks. 'Think back over the past day and write down 5 things you are grateful for.' Control condition: no treatment. Hassles condition: asked to list up to 5 'hassles' that occurred in their life that day.	3 conditions: - Gratitude N = 76 - Hassles N = 80 - Control N = 65 Quasi experimental (assigned by class to each condition). Pre and post measures within-subjects. A replication with children of Emmon and McCullogh (2003).	Life satisfaction (BMLSS). Well-being scale (adapted from Emmons and McCullough, 2003). A reactions to aid question. A daily question asking whether they had engaged in prosocial behaviour. Dispositional gratitude was not measured.	Post intervention: Gratitude condition scored significantly higher than the hassles condition on well-being (p=0.01). School satisfaction significantly higher in gratitude condition than other two. Significantly less negative affect in the gratitude condition compared to other two (p = 0.01). Control condition significantly higher in LS than hassles. Small to medium effect sizes overall.	The very first study to explore gratitude and wellbeing in a child/adolescent sample. Context specific/demand characteristics of the setting i.e. sat in classrooms primed by classroom cues and may have counted school related blessings only. Study did not measure dispositional gratitude therefore can't rule this out as a moderating variable (higher in one condition at pre-test). Study took place in a single school, participants may have discussed study across conditions.

Who benefits the most from a gratitude intervention in children and adolescents?						
Study 7	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Froh, Kashdan, Ozimkowski and Miller (2009).	N = 89 Mean age: 12.74 (range from 8 to 19 years in grades 3, 8, 12). 49.4% males	Gratitude letter and visit: For 5 days over 2 weeks participants were asked to spend 15 minutes thinking of people they were grateful to but had never thanked, and then write a letter. Once written they were instructed to deliver the letter. Control condition were asked to think and write about what they had done the previous day.	2 conditions: - Gratitude and control. Participants randomly assigned to each condition. Pre and post measures within-participants.	Gratitude (GAC). Affect (PANAS) Follow up one month after intervention.	No significant main effects of condition ($p = 0.46$): gratitude did not increase in either condition ($p = 0.12$). Found support for PA as a moderator of effects on well-being (those low in gratitude report greater increases) at a significant level ($p = 0.01$) No incremental benefits over time.	Authors question whether there is an emotional ceiling to gratitude interventions, whereby those over a certain level of PA do not benefit from gratitude interventions. Authors report limited impact of gratitude in younger participants. 100% of participants said they completed letters but 0% of grade 8 and 12 returned parental letters confirming this.

Nice thinking! An educational intervention that teaches children to think gratefully.						
Study 8	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Froh et al. (2014).	N = 122 8-10 years Mean age 9.03 years 48.4 %males 6 classes U.S.A	Children were taught a curriculum described as the 'social cognitive perceptions that illicit gratitude' or 'benefit appraisals'. Five lessons over one week. 30 minutes daily. After intervention children were given choice to write a card of thanks.	Two conditions: - Benefit appraisal - Emotionally neutral 'attention control' condition. Teacher in each condition were kept blind to hypotheses -Quasi experimental design Pre and post-test measures within-participants.	3 vignettes created to measure perceptions underlying gratitude. Gratitude adjective checklist (GAC) How many chose to write a thankyou card?	Significantly stronger benefit appraisals at post-test compared to controls ($p < 0.05$, $n2 = 0.06$). Gratitude condition reported feeling significantly more gratitude post intervention ($P < 0.05$, $n2 = 0.04$). Benefit appraisals and GAC measures did not change significantly in control group over time. More children in the intervention group chose to write a thank you card (43.5% compared to 25%).	Intervention had small effect sizes. Authors claim that cognitive aspect of gratitude i.e. benefit appraisals can be strengthened, but is this the same as emotionally experienced gratitude? First study to have a behavioural measure of gratitude

Study 9	Participants	Intervention	Design	Measure	Results	Notes
Froh et al. (2014) Second study (reported in same journal article).	N = 82 Mean age: 9.5 years	Same intervention and control as in study 1 i.e. Benefit appraisal curriculum, but staged over 5 weeks. 30 minutes once a week.	Two conditions: - Benefit appraisal - Emotionally neutral 'attention control' condition. Teacher in each condition were kept blind to hypotheses -Quasi experimental design Within participants design with pre and post measures, plus follow up data collection at 7, 12 and 20 weeks.	Benefit appraisal vignettes. Gratitude (GAC). Affect (PANAS). Life satisfaction (BMLSS).	Significantly greater benefit appraisals in treatment compared to control at 12 weeks ($p = 0.01$, $d = 0.53$) and 20 weeks ($p = .001$, $d = 0.74$). Significantly greater levels of gratitude in treatment group at 12 weeks ($p = 0.04$, $d = 0.41$) and 20 weeks ($p = 0.02$, $d = 0.48$). Positive affect increased significantly in treatment group but not control $p = 0.04$, $d = 0.40$).	Authors report that the increase in benefit appraisal for the treatment effect was 'close to a large effect.' Increases in gratitude were significant but small. A medium effect on positive affect was noted. No effect on life satisfaction or negative affect was noted. Impact on gratitude persisted at least to 20 weeks. The authors claim to have demonstrated that gratitude can be induced in an age range when this faculty was thought to be under-development. All work was in one school and participants could have ascertained which condition they were in by talking with peers, this may have affected their motivation and expectations differently in each condition.

Multi-target interventions						
Increasing middle school students' life satisfaction: Efficacy of a positive psychology group intervention.						
Study 10	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Suldo, Savage and Mercer (2014).	N= 55. Mean age 11.43 years. 6th grade and beginning middle school. U.S.A	A 'wellness intervention' incorporating gratitude, kindness, character strengths, optimistic thinking. Intervention presented in 5 small groups of 7 participants. 10 sessions. Intervention led by psychologists and manualised to ensure fidelity.	Waiting list control. 2 conditions: - Immediate intervention - Waiting list for intervention 1 year later. Within-participants measures at 3 time points (pre, post and follow-up).	A screening process, only those lower on a measure of life-satisfaction were included (N= 335). Life-satisfaction (SLSS). Affect (PANAS). Psychopathology (CBC).	A matching of participants procedure led to reduction in sample size to 40 for data analysis. Life-satisfaction increased for the intervention group ($p = 0.046$, $N^2 = 0.02$). Positive affect did not change post intervention ($p = 0.878$) but did significantly at follow-up for control group only ($p = 0.04$, $N^2 = 0.02$). Negative affect reduced to significant degree for both groups. Psychopathology symptoms unchanged in both groups.	Moderate increase in life-satisfaction, however waiting list control also improved in LS by follow-up. No changes in symptoms of psychopathology after intervention. Authors claim there exists a ceiling effect with those higher in well-being experiencing little benefit from intervention. Intervention in small groups at high intensity cannot be generalised to whole class presentation.

Stability and change in genetic and environmental influences on well-being in response to an intervention.						
Study 11	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Haworth et al. (2016).	750 twins (167 mono-zygotic, and 208 di-zygotic pairs). Mean age=16.5 years 41.85% male. U.K	10 week online study. Kindness and gratitude tasks completed online over a period of 3 weeks. Control activities: 'Visit three places and describe a room in your home'. Active activities: 'Perform 3 acts of kindness and deliver a gratitude letter.	Each twin was their own control completing a three week period of control, followed by a three week period of intervention. 1 online task completed per week. Within participants pre and post measures with follow-up measures 3 weeks after intervention.	Happiness (SHS) Well-being (BMLSS) Short Mood and Feeling Questionnaire (SMFQ) State-trait Anxiety Questionnaire (STAI).	Small mean effect sizes for boosts in mental health (y20 = 0.07, p = 0.003), and well-being (y20 = 0.07, p = 0.001) after intervention which continued until follow-up. Identical twin correlations were greater for the changes.	This is a universal intervention embedded in a twin study and therefore the authors claim they have demonstrated a genetic component to how individuals respond to a PPI. Both twins in a house were doing the activity and could not be blind to what was being done.

Kindness						
Kindness counts: Prompting prosocial behaviour in preadolescents boosts peer acceptance and well-being.						
Study 12	**Participants**	**Intervention**	**Design**	**Measure**	**Results**	**Notes**
Layous et al. (2012).	N= 415 Mean age 10.6 years	A 4 week kindness intervention, 1 hour each week. Intervention group were instructed to carry out 3 kind acts. Control group were instructed to visit 3 places each week.	2 conditions: intervention and control. Within-participants design with pre and post measures.	Well-being and life satisfaction (SWLSS). Happiness (SCHS). Affect (PANAS). Socio-metric ratings of peer acceptance or popularity and liking.	Both conditions showed significant increase in positive affect ($y00 = 0.15$, $p < 0.001$). Intervention group showed significant improvements in pupil popularity/friendships ($y00 = 0.68$, $p = 0.02$). Changes across both groups in LS, happiness and PA were marginal but not significant.	The control condition is not neutral and therefore cannot be used as a comparison for any increases or effects attributed to intervention. Although the authors claim increases in popularity in pupils were caused by the intervention, there were no expected increases in the other measures. These are hypothesised to drive the increases in friendships and pro-social behaviour, so the effect cannot be explained.

Appendix B: Lesson plan for the six intervention workshops

Lesson Plans	Resources
Workshop 1: Kindness Introduction **Seating:** Make sure children are sat in mixed ability groups, and varied groups, each week students will have an opportunity to circulate. **Ground rules:** explain that we are going to be doing a lot of talking and listening to each other. 2 key ground rules: **No put downs** (e.g. don't criticise or 'put down' other people's ideas), **Listen when others are talking.** Kindness Stamps: for listening (see self-inking stamp off Amazon). How have I felt in the last few days (complete sheet 1) a questionnaire (The bicycle sheet) as a baseline measure. Attached also is a blank sociometric scale if you wish to check pupil popularity before and after ('Children I play with'). Kindness Video: Johnny Brownlee (Search YouTube) After: what was kind about what he did? Definition of Kindness discuss? (sheet 5) Science of Kindness video from YouTube: 2 minutes Science of Giving video (then stop before promotions after 1.44 minutes). Happiness: what is happiness and what determines how happy we are)? Discussion activity. Read 'Each Kindness' book and then in pairs children to think of some acts of kindness they have done…feedback Planning acts of Kindness (sheet 3 and 4) • Activity: In your group complete kindness planning sheet, feedback some of the ideas	Give each group a kindness card, add their names, each time they are caught following the ground rules give them a 'stamp'. At the end of the programme rewards can be given. Give out group cards Copies of sheet 1 YouTube YouTube 1 copy sheet 5 enlarged to A3 Script sheet: What is happiness?

Remind children there will be some small rewards if they carry out the three acts. Also let them know if they want to carry it on for the rest of the week and tell their teacher every day and complete a kindness diary. Kindness Song on YouTube (or 'You've got a friend in me') (NB. Mindfulness meditation was not done first week due to time constraints). Read 'Each Kindness' book	Each Kindness story Copies of sheets 2 and sheet 3 and sheet 4 Kindness Words on screen for song.
Workshop 2 Kindness in school **Activities** Mindfulness: Explain that sometimes we don't feel like being kind or helpful because we are worried about something in the future or angry about something in the past. Mindfulness practice is one way of training our mind to be under our control and of keeping us relaxed and alert. Warn the children they may want to open their eyes and that they may keep feeling itches or noises that distract them, but that their job is to keep listening to your words and trying to do what you say. Use the word attention and explain how they must focus their attention like the light of a torch on what they are asked to do. After the mindfulness ask for some feedback and explain any common difficulties. Kindness Oscars: ask children to report back what they have done since last week/read out any kindness sheets that children returned. Each time try to draw out the empathy the child showed in choosing the act, as well as its impact on the receiver…how did they know it was appreciated…and what was the impact on them? Give out Oscars and a round of applause. Some children will pretend or say they have done kind things but not returned their diaries. Because of doubt I did not reward those who did	Mindfulness 'Body Scan' script and a do not disturb for 10 minutes sign on the door. Copies of Oscars trimmed;

not return diaries. This is your choice. (I used small rewards of stationary or sweets each week, you can use whatever fits with school policy). Story: Kindness is Cooler Mrs Ruler: mention making a display or keeping a kindness scrap book using hearts to display each act. Emphasise and draw a distinction between family and school acts of kindness. YouTube: Act of kindness awesome video (5 minutes 45 seconds-man in orange vest) show for inspiration, groups encouraged to recall 5 kind acts for points/stamps. Planning acts of Kindness. In pairs, discuss with a partner one or two acts you would like to do, it can be the same as someone else's- feedback, spend a long time on this feedback. Planning sheet 'Acts of kindness': complete sheets and emphasise including school acts and kind acts to peers. If time : Video: One act of kindness that changed this homeless man's life Check everyone has at least one act of kindness ready to do, emphasise we are aiming for five (they did five in the story). Book: 'A sick day for Amos McGee.'	A scrap book or display to put them in. Stationary gifts/ other rewards Kindness is cooler Mrs ruler book, or show the YouTube video with sound down as the book is read to allow pictures to be visible to all. YouTube
Workshop 3 Kindness and gratitude **Activities** Before the mindfulness ask for some feedback on what children find difficult (fidgeting, thinking and daydreaming, opening eyes) and reinforce ignoring distractions and teacher looking for children who are able to ignore these impulses.	Mindfulness Body Scan script in appendix 1. And a do not disturb for

Mindfulness: Explain that sometimes we don't feel like being kind or helpful because we are worried about something in the future or angry about something in the past. Mindfulness practice is one way of training our mind to be under our control and keeping us relaxed and alert. Towards the end of mindfulness think of someone who has done something nice to you that you feel grateful for. Kindness Oscars: ask children to report back what they have done since last week/read out any that brought back sheets. Reward everyone who has returned a sheet. Explain the meaning of the word GRATITUDE. (Children won't know what this means).Then preface the 'Story that moved this entire middle school to tears' (search on You tube). Stop after 3:51 seconds. Preface the clip by saying he is a wrestler whose life went wrong and he started drinking and taking drugs and the clip shows at the end that he is very grateful to his mum for believing in and helping him . **NB Do not use this clip if anyone has experienced a recent bereavement.** YouTube: The Gratitude Experiment 5 minutes Reinforce the two elements- gratitude diary and expressing gratitude (saying thank you) also explain gratitude- Teacher show a kindness letter (e.g. to John the post man) A gratitude visit and letter: three minutes talk with a partner: think of someone you would like to say thanks to, explain to your partner why…feedback. Five minutes: Children draft a short kindness letter for a gratitude visit - include a picture. (Need to write up in neat another time). Feedback and share gratitude letters.	10 minutes sign on the door. Copies of Oscars trimmed; A scrap book or display to put them in. Stationary gifts YouTube Example of gratitude letter

Let children decide: whether they wish to complete a gratitude diary, (give out gratitude diary and explain as in the video), or kindness diary or the special 'Kindness in School' diary Give out kindness diaries for kind acts…..(no planning sheet this week) Google: Being Grateful/saying Thank You: BBC Radio 4 play an audio clip where someone says thank you e.g. Taken Ill on the train, Locked in a Park/Runaway Caravan and Lost Child. Read Book: 'Have you filled a bucket today?'	
Workshop 4 Kindness and compliments Activities Mindfulness: and keeping us relaxed and alert. **Introduce the loving kindness script.** After the mindfulness ask for some feedback and explain any common difficulties. Kindness Oscars: give out at least 10 and give loud applause and a reward for each one. Write all the kindness in school examples on the flip chart and point out whether it was an example of kindness in school to a child, adult or the school itself. Emphasise kindness to pets and the environment is also okay. YouTube: Elephant and Giraffe give compliments (1 minute). Learn how to give a compliment…with Heidi Klum (Sesame Street), watch first two minutes or so. Giving compliments: have a few sentence starters written large on A4 paper with a marker as follows: Invite children to finish the compliments, they can stand and hold them: You are…….(e.g. 'awesome, cool, a great friend'). You have……(e.g. 'a great sense of humour etc.'). I'm glad you……	Mindfulness Body Scan script in appendix 1. And a do not disturb for 10 minutes sign on the door. YouTube

I wanted to say thanks because…….	Sentence starters
I loved the way you…..	
Then get some volunteers to role play these to the class.	
Then get everyone to do it in pairs.	
Then get some to show and reward good examples.	
Explain the compliment game: In a minute you will have to write a compliment to someone in this room. If you can, write it to someone you don't always talk to. The best compliments are about something someone has done or said, not just about their clothes or appearance. You can either: give it to your teacher to deliver in secret (then it will be anonymous) or hand deliver it yourself. Teacher Model the process (e.g. 'You explain things so that everyone understands.' And she delivers it to class TA)	
Give out kindness diary for the week and explain the back sheet which is the compliments diary.	
Video: Jonny finds Mike (preface by explaining the story context: Jonny was depressed and really embarrassed at feeling so awful and having received a diagnosis of mental illness. One day on the way to work on a wet Monday morning he decided to jump from a bridge into the River Thames to end his life. Although many people saw him, Mike stopped and spoke with him and eventually persuaded him not to jump. For several years Jonny looked for Mike on TV putting adverts out and this is the film of when they met.	A5 paper 1 each Give out sheets
Book: 'Somewhere Today'	
Workshop 5 Compassion Activities Loving kindness meditation: (see script in last week's notes).	

Oscars: read out returned compliments diaries or kindness diaries- complete Oscars certificate. Play ‘Compassion a definition’ video: stop the video at each sentence and discuss. Now play ‘1st graders act of kindness’ and ask look out to see if you can see some compassion (or for girls instead of two boys: ‘Act of compassion violates school policy’- similar story). Discuss the film. How did it demonstrate compassion and kindness? Kindness Quiz with a partner: about 1st grader video (remind of names (Zak was ill, Vincent was his friend or Kamryn (shaved head) and Delaney (ill with cancer). 1. Who had a problem (what was it)? 2. Who understood and saw they had a problem? 3. What did he do about it? 4. If you see someone who is hurt and suffering and you help what is it called? And who showed it in the film? 5. Write down 1 act of compassion you have seen in your life (for a stamp). Homework preparation: either: plan a gratitude visit and write a letter (A5 paper), or plan five acts of kindness you will complete on one day. Or complete a gratitude diary. Watch Unsung Hero on YouTube. Book ‘The Three Questions’ by John J Muth.	YouTube A5 paper Examples of gratitude diary Sheet with example of five kind acts
Workshop 6 Kindness Revision. Mindfulness: emphasise being in the moment so that you can notice what you hear what you see what you feel and importantly the feelings of others. Revise the usual script of the body scan and blend in aspects of the loving mindfulness script.	.

Oscars and Celebrations: the rewards should only be for written homework or special spoken contributions, the high reward rate given does tend to force some children to make things up. Revision: recap on the key concepts covered: 1. Kindness and Johnny Brownlee and his brother Alistair: we have to give something up to be kind and that is an opportunity to see others happy, this leads us to be happy. 2. Happiness: our brains are designed to feel a boost when we give, it's the helpers high because we see happiness in others it creates it on ourselves. 3. Gratitude: feeling grateful teaches what we have and not to get scared or worried about what we don't have. Telling someone we are grateful makes them happy. 4. Giving compliments: a way of showing someone you have noticed them and are grateful for their presence. How are compliments connected to happiness? 5. Compassion is noticing that someone is suffering or hurt and feeling you need to help because you care about their situation: refer to the Zac and Vincent video, (or girls version Kamryn and Delaney) how do we know Vincent felt compassion for Zac? (Because he cut his hair too and wanted to feel like Zac, and didn't want him to stand out). 6. Mindfulness: learning to pay attention to here and now is a useful skill that helps us notice the world around us, the important people and their feelings and our positive experiences rather than our worries. Watch A very happy brain' YouTube. Stop it three times to draw out some of the key points (how emotional pain is as real as physical pain). Group Quiz: A3 paper, one person scribes all collaborate….award bonus points for groups working well and for good art work. Quiz: 1.What is a kindness bucket, explain in a sentence and draw one. 2. Which teacher with a funny name started a kindness project.	Sheet 1 YouTube Prepared quiz Quiz prizes Certificates

3. If you see someone hurting, what does your brain feel (pain or hurt). 4. True or false: unkind words can affect the brain as much as physical attack (a kick or a punch). 5. True or false: helping others makes you happier. 6. Write an example of a compliment give bonuses for quality. 7. Describe a real or video example of compassion and say why it shows compassion. 8. List 5 kind things your group has done. 9. Discuss what your group has learned about kindness- draw a picture as a group (give points out of 10 for this question) and share the answers to the last question especially. 10. How have I felt in the last week (complete sheet 1- the bicycle sheet) a questionnaire. As a whole class give points for groups that get ready and complete the questions and hand the sheets in. Group prize awarded to winners Certificates and applause. Story: The Frog who was in love with the Moon.	

Appendix C: Mindfulness script used in the workshops

BODY SCAN Mindfulness meditation

1) Sit comfortably at your table with eyes closed (put head down if you wish). Let your feet sit flat on the floor and legs and your arms relax and fall to the sides. Settle yourself in a comfort-able position, and listen, what can you hear around you. Maybe the noise in the corridor, or in another class, maybe a rustle, or a cough, or others breathing

2) Start by taking two or three gentle, large breaths. Pay attention to how that feels. Your belly rises and falls. Air moves in and out of your body. If you like, place a hand on your belly and feel it move with each breath.

3) Now we're going to pay attention to the other parts of the body. Start with your feet. They might feel warm or cold, wet or dry, relaxed or restless. It's also okay if you feel nothing at all. If you can, relax your feet now. If that's hard to do, that's fine. Take a moment and notice how that feels too.

4) For these few minutes, let yourself be still. There's nothing to do. Pay attention as best you can. You might feel a blanket or socks on your feet, or you might feel them pressing against the bed or the floor. When your mind gets busy, gently bring your attention back to your feet again.

5) Now move your attention to your lower legs, noticing whatever is there. Do they feel heavy, light, warm, cold, or something else? Let go of frustration and trying to do anything. Just do your best and give yourself a few moments of rest.

Next, move your attention next to your knees and relax them. Feel the front, back, and sides of your knees.

6) After a few more breaths, move your attention to your upper legs. Whatever you feel, or don't feel, is fine. Notice your legs and let them relax. If you feel restless or wiggly, that's okay too. That happens.

7) Now move your attention to your belly. It always moves when you breathe, rising and falling, like waves on the sea. You might feel something on the inside, like full or hungry. You might notice the touch of your clothing or a blanket. You might even feel emotions in your belly, like happy or sad or upset.

If you feel that it's hard to focus, that's normal. Gently practice coming back again and again to how your chest feels when you breathe. Your mind is like a torch and you can shine it like a light on wherever you want. Sometimes our thoughts are like buses, they come into our mind noisily and disturb us, and that's fine, just let the people get off and the bus drive away, and shine the torch on what we are doing now. Right here in this moment.

8) Next, bring your attention to your chest. Notice it rising and falling as you breathe. If you feel that it's hard to focus, that's normal. Gently practice coming back again and again to how your chest feels when you breathe.

9) Now turn your attention to your hands. There is no need to move them or do anything with them. They may be touching the bed, or the floor, or somewhere on your body. Relax them if you can, and if not, simply paying attention to your hands for another moment.

10) Move your attention up into your arms. Maybe notice if you can find a moment of stillness inside you, like the pause at the end of each breath.

11) Next, move your attention around to your back. How does it feel against the bed or the floor? Notice how it rocks with each breath. When your mind gets busy or angry or scared, you can always come back to how your body feels in this way for a moment.

12) Now move attention to your neck and shoulders, letting go and relaxing them. If your mind wanders, that's fine. No one can pay attention all the time. Just keep returning to noticing your body whenever you find yourself thinking of something else.

13) And now feel your face and head. What expression do you have right now? What would it feel like to smile? What else do you notice in your face, your head, and in your mind?
14) Finally, spend a few moments, paying attention to your whole body. If it is easier, continue to pay attention to your breath. If it's time for sleep, let that happen, remaining still and continuing to pay attention to your breath or feelings in your body. And if it's time to wake up, open your eyes and sit for a few moments before deciding when to move again.
15) Now think back to this morning. How you felt when you woke up, who you saw and some feelings you had. Was anyone kind to you, or made you laugh? Think about them now and wish them well in your mind, smile at them.
16) We will hear the bell and gradually open your eyes as I count from 5 down to 1, and come back into the room.

Appendix D: Children's stories and films used in the workshops

Books:

Cuyler, M. (2007). *Kindness is Cooler, Mrs. Ruler*. Simon and Schuster.

Muth, J. (2002). *The three questions*. Scholastic Inc., Chicago.

McCloud, C. (2016). *Have you filled a bucket today? A guide to daily happiness for kids*. Bucket Fillers.

Stead, P. C., Stead, E. E., & De Vries, D. (2010). *A sick day for Amos McGee*. New York, NY: Roaring Brook.

Thomas, S. M. (1998). *Somewhere today: A book of peace*. Albert Whitman and Company.

Woodson, J. (2012). *Each kindness*. Nancy Paulsen Books.

Films:

Johnny Brownlee

https://www.youtube.com/watch?v=liCRrheKIOI

Science of Kindness

https://www.youtube.com/watch?v=FA1qgXovaxU

Science of giving

https://www.youtube.com/watch?v=2sOE_PcnePE

'You've got a friend in me'

https://youtu.be/XHFy3YWpRx8

Act of kindness awesome video

https://youtu.be/vahi77oOsK4

One act of kindness that changed this homeless man's life

https://www.youtube.com/watch?v=rYw_7HZeWK4

Story that moved this entire middle school to tears

https://www.youtube.com/watch?v=Li7vpzLA9uw

The Gratitude Experiment

https://www.youtube.com/watch?v=U5lZBjWDR_c

Elephant and Giraffe give compliments

https://www.youtube.com/watch?v=iMTJhNgMolw

Learn how to give a compliment…with Heidi Klum

https://www.youtube.com/watch?v=OOryAGXqXBI

1st graders act of kindness

https://www.youtube.com/watch?v=qYAHRW9ApRQ

Unsung hero

https://www.youtube.com/watch?v=uaWA2GbcnJU

Appendix E: Semi-structured Interview Schedules

Teacher Interview

Semi-structured interview questions for the class teacher

Thank you for agreeing to take part in this interview about the kindness intervention.

This research hopes to find out whether teaching about kindness makes children kinder, happier and have more positive friendships, and whether this sort of education is of benefit to all schools.

This interview will be recorded. The audio file will be password protected and encrypted, your name will not be used or connected with the file. The interview will be transcribed so that it can be analysed as part of the research and then stored in a password protected computer file. These measures will ensure the information is stored confidentially until it is transcribed and then it will be completely anonymous. You are asked not to use the names of any children during this interview. You are reminded that you do not have to answer any of the questions and that you can withdraw your participation at any time. You are also free to request that the recording is erased up until the point it is transcribed, and so anonymised.

Below is a list of example items for discussion that are based on the research questions. It is important to note that these items are indicative only, will not be read as questions and are to act as prompts to explore the main research questions. These prompts are subject to change based on research supervision and the particular experiences of participants.

Semi-structured interview questions

1. Have you noticed a change in any children who took part in the kindness curriculum?
2. What changes did you notice?
3. Has the curriculum affected any of the children in particular, if so how?
4. If any, what sort of kind acts did the children perform?
5. Do you think the curriculum affected the children's relationships and behaviour outside of the class? (e.g. at home, at playtimes)?
6. Did the curriculum affect any of the children's friendships or how they played together?
7. What do you think some of the advantages and disadvantages are of the curriculum?
8. Would you change it in any way?
9. Would you recommend this type of programme to other teachers and why?
10. Which aspects of the curriculum (if any) will you continue to use?
11. Would you like to add any additional comments?

Parent/Carer Interview

Semi-structured interview questions for the Parent

Thank you for agreeing to take part in this interview about the kindness intervention that your child took part in at school.

This research hopes to find out whether teaching about kindness makes children kinder, happier and have more positive friendships, and whether this sort of education is of benefit to all schools.

This interview will be recorded. The audio file will be password protected and encrypted. Your name will not be used or connected with the file. The interview will be transcribed so that it can be analysed as part of the research and then stored in a password protected computer file. These measures will ensure the information is stored confidentially until it is transcribed and then it will be completely anonymous. You are asked not to use the names of any children during this interview. You are reminded that you do not have to answer any of the questions and that you can withdraw your participation at any time. You are also free to request that the recording is erased up until the point it is transcribed, and so anonymised.

Below is a list of example items for discussion that are based on the research questions. It is important to note that these items are indicative only, will not be read as questions and are to act as prompts to explore the main research questions. These prompts are subject to change based on research supervision and the particular experiences of participants.

Semi-structured interview questions

1. Did your child tell you about the kindness lessons? What did they say?
2. Do you think the lessons on kindness had any effect on your child? If yes, what changes did you notice?
3. Did you notice your child carrying out any kind acts as a result of the lessons? Please give some examples.
4. Has your child talked about kindness differently since taking part in the lessons?
5. Have you noticed your child performing any kind acts? Please give some examples?
6. Did the lessons affect your child's friendships or how they play with other children?
7. What do you think some of the advantages and disadvantages are of learning about kindness?
8. Would you recommend this type of programme to other parents and schools and why?

Appendix F: Stages in thematic analysis (as described in Braun and Clarke, 2006).

1. **Transcription:**

Researcher listened to the recordings, gained an overview of their content and then transcribed the recordings verbatim into text.

2. **Familiarisation with the dataset**

The recordings and the transcripts were reviewed together. The researcher then read the transcripts, making notes of recurring ideas and possible themes.

3. **Generating initial codes**

The initial segments of meaningful text were distinguished using high-lighter pens. Initial codes were hand written into the margins of the printed transcripts. These codes were re-read, modified and written again into an alphabetical list. The list of codes was checked against the transcript with further modifications to the codes made. For example, it became useful to combine, delete, rename and split codes. The most pertinent codes remained. The list of codes was referred to when a particular segment of text was ambiguous in relation to coding.

4. **Searching for themes from initial codes**

Sections of text were then collated under the heading of each code and reviewed. At this stage the code names were adjusted and some of these codes were then grouped to become broader themes.

5. **Refining and naming themes**

Codes were grouped along with related text and gradually combined together to form loose over-arching themes. The text within each theme was re-examined to locate possible sub-themes. Gradually duplication was avoided and overlapping content was separated into distinct themes. Thematic networks were mapped using diagrams and labels. Themes and their sub-themes were named.

6. **Interpreting and summarising the themes and their links**

Quotations were identified to illustrate each sub-theme and these along with the themes and research questions were described in the results section. Finally, the themes were analysed in relation to the other research findings and research questions one by one.

Appendix G: Ethical Considerations

1. Consent and participant information arrangements

Gatekeeper information and consent forms requiring a signature were provided to those whose consent was required as follows:

- Initial gatekeeper consent was sought from the head teacher of each school participating in the intervention, informing them of the necessary details about the study and seeking their consent. They were told that the aim of the research project is to investigate whether the kindness and gratitude intervention has any impact on children's well-being and popularity, and to evaluate its effectiveness. When the head teacher consented to join the study the researcher then approached the class teachers.

- The class teachers of the two targeted classes were shown the same information about the study and the details of what their participation would entail. They were invited to participate in the study and provide written consent.

- Following this, the class teachers were asked to hand out information and consent forms to children for them to deliver to their parents, at the same time as explaining the general purpose and procedure of the study to the children: that it aims to find out whether participating in a six-week kindness and gratitude curriculum would increase the pupil's levels of kindness, gratitude and happiness. The researcher was not present at this discussion so that children did not feel under pressure to participate. Parents were given the opportunity to participate in a short follow up interview (described above in Appendix E) which they were asked to provide additional consent for. The information letter also let parents know that they were invited to attend an after-school meeting with the researcher to explain the aims of the research further.

- If, and only once the children had returned their signed consent forms from parents:

The class teacher sought the consent of pupils. They were asked if they would like to take part in the study and told it would consist of them completing some questionnaires before and after the six-week intervention. They were told that they had a choice, and that if they chose not to consent that they will be allowed to join a parallel class for the three separate forty minute data collection sessions to complete activities set by their teacher instead of participating. The teacher emphasised that it was entirely the choice of the child whether or not they took part, and that whatever choice they made that they will not be in trouble and would not displease their teacher or the researcher. To reduce

pressure on children, they were asked to indicate whether or not they will participate in writing by ticking ‘yes’ or ‘no’ on a written form. This form was then folded and placed in a sealed box by the child themselves so that their choice remained concealed.

2. Debriefing

At the end of the study, pupils, their parents/carers, and school staff were given debriefing forms (see Appendix I) to explain the full aims of the study again. Because the teacher participated in both the research study and the intervention, they were be asked to conduct debriefing with the child participants, which required them reading the form and answering any of the children’s questions in the company and with the help of the researcher. The debriefing form reminded the children of the research aims, and that the general findings of the research would be explained to them once the research is complete. It also reminded them of the confidentiality of their answers and their right to withdraw their information even after it had been collected. The debrief forms (Appendix I) were delivered to parents/carers by the children with a signed reply slip for the teacher to ensure the letter was received. The letter offered an opportunity for any parent to attend an after-school meeting (with the date and location of the meeting on the form) if they required further information or had any further questions. This allowed parents who may have had literacy difficulties to receive debriefing verbally and in person with the researcher. However, no one attended this appointment.

3. Confidentiality and Anonymity of Pupil Data

Measures were in place to ensure the questionnaire data collected from the children could not be linked to them by name as follows. Each child was instead allotted a participant number. Prior to data collection, the class teacher was asked to prepare a numbered class list which was kept securely by them for the duration of the study. The questionnaire booklets were then numbered, and given to each pupil as indicated on the numbered class list. This process was repeated for the post-intervention questionnaires allowing pre and post measures to be linked to each individual pupil participant confidentially. The numbered questionnaires were collected by the researcher and stored securely in a locked cupboard. It is important to note that these questionnaires were never kept with the numbered class list, and this list was destroyed once all the questionnaire data had been collected. At this point, the data became anonymous, and could not be linked to the identity of any particular child.

Participant numbers continued to be used through the process of analysing and writing up the findings of the research. In line with the University Data Protection Guidelines, the data will be stored safely and securely for a period of 5 years and will then be destroyed.

4. Confidentiality and Anonymity of Adult Data

The audio recordings of interviews with teachers and parents were done using a password protected iPad that also offers data protection i.e. encryption. Only the researcher and second researcher had access to the passcodes for the iPad used in the study. Participant interviews were simply numbered. The identity of teacher or parent was not be stated on the audio recording. This ensured the information provided in interviews was confidential. Each audio recording was transcribed within two weeks of recording, at which point it became anonymous, and the transcriptions were stored in a password protected file on a computer to ensure it remained secure. This ensured that all interview data was confidential until it was made anonymous. The information provided by the adults interviewed in this study cannot be traced back to the individuals providing the information. Interviewees were asked not to mention children by name at the start of the interview, and where they did the names were omitted from transcription.

5. The Right to Withdraw

Participants were free to omit any data/refrain from answering any questions when completing the questionnaires or interviews and were informed of this right in their information and consent letter, and reminded of this right again prior to participating. They were told that if they chose to withdraw their data from the project entirely then they would not be penalised or asked to provide a reason. Child participants were advised that if they wished to withdraw their data that they would be able to do so from the time it was provided up until the final data collection when information was fully anonymised. Adult participants were advised that they could withdraw their data up until the point the interviews had been transcribed. From these times on, the questionnaires and audio recordings could only be identified by number, and were no longer linked to an individual. It should be noted that the researcher offered to provide general feedback regarding the pooled data after the study, but would not able to

comment on information provided by individuals. This fact was included in the participation information letter.

6. Debriefing

Children, their parents/carers and school staff participating in the study were given debriefing forms (see Appendix I) which remind them of the aims of the study. The debrief forms also reminded participants of the confidentiality and anonymity of their answers and their right to withdraw. It informed them how the findings of the study would be shared once completed. The British Psychological Society Code of Ethics and Conduct (2009, updated 2018) was adhered to in order to ensure safe and ethical practice whilst carrying out the research. The pupils, their parents/carers, and school staff were given contact details for staff at the University, in case any pupils or their carers wished to make a complaint about any aspect of the study.

Appendix H: Information and Consent Forms

Gatekeeper information form

(For the head teacher of each participating school)

Dear ……..(head teacher),

I am an Educational Psychologist working for ……..The Local Authority. As part of my doctoral studies at Cardiff University I will be conducting some research that investigates whether there is evidence to show that a school based kindness intervention improves children's wellbeing, popularity and prosocial (i.e. kind) behaviour. You have already agreed to this intervention taking place in your school and the pupils involved will learn about gratitude, thinking about others and supporting their own wellbeing.

I would like your permission for the children in the Year 5 class in your school to participate in this study to help evaluate the impact of the kindness intervention. I hope the study will contribute to a growing body of knowledge about the beneficial impact of social and emotional learning in schools.

If you give permission, informed consent will be requested from each parent of a Year 5 child and from the children themselves. Only those giving informed consent will be able to participate. I hope to collect data before and after the intervention and at one other point. I also want to interview the class teacher and 4 parents, all with informed consent. Interviews will last approximately 45 minutes and will be completed at a time convenient to all concerned. For your information, I hope to use a second researcher, who is an Educational Psychologist who works for the Local Authority, to collect the data from the pupils, teachers and parents. The data will be anonymised and then stored safely and securely for a period of 5 years and will then be destroyed.

This is needed to avoid any bias that might arise because I will have been involved in presenting the intervention. Each participant will be provided with their own information and consent forms explaining the study.

What will happen if you agree to the research?

The information provided by pupils, parents and teachers will be used as part of a doctoral research project in educational psychology for Cardiff University. The research findings may be published wider than this but they will always be in an anonymous form. A summary of the findings from the research project will be available to all those involved in the research when it is completed.

If you would like to ask any more questions about this research, please feel free to contact me or my supervisor using the email addresses below. I hope to be able to answer any questions you may have. If you give your permission for me to recruit pupils to be involved in this study, please sign and return the consent form attached. Thank you for taking the time to read about this study.

Yours Sincerely,

Kamran Khan.

(Educational Psychologist &Doctoral Student at Cardiff University).

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Gatekeeper consent form

I understand that my participation in this project will involve giving permission for the researcher to recruit a sample of pupils from a Year 5 class in my school to take part in the research described in the information letter.

The pupils involved will be required to complete a questionnaire pack with the help of their teacher, teaching assistant and a researcher that will take approximately 1 hour to complete. This information will be collected again on two more occasions.

The information will be collected by XXXX (who will act as a second researcher in this study, and is also employed as an educational psychologist by the Local Authority).

I understand that I am free to ask any questions at any time. I am free to discuss my concerns with either the researcher or his university supervisor.

I understand that the information provided by those participating will be held confidentially until the study is complete. The information will then be anonymised so that it cannot be linked to them individually. I understand that this information may be retained indefinitely (although audio recordings will be erased once transcribed).

I also understand that at the end of the study I will be provided with additional information and feedback about the purpose and outcomes of the study.

I, _____(NAME) consent to participate in the study conducted by Kamran Khan, School of Psychology, Cardiff University with the supervision of Andrea Higgins.

Signed:

Date:

Class teacher Information and Consent Form

Class teacher information form

Dear ……..(class teacher),

I am an Educational Psychologist working for ……..The Local Authority. As part of my doctoral studies at Cardiff University I will be conducting some research that investigates whether there is evidence to show that a school based kindness intervention improves children's wellbeing, popularity and prosocial (i.e. kind) behaviour. Your head teacher has already agreed to this intervention taking place in your school, and the pupils involved will learn about gratitude, thinking about others and supporting their own wellbeing.
I would like you to participate in this study and give your permission to be interviewed about the kindness intervention in order to evaluate its impact. I hope the study will contribute to a growing body of knowledge about the beneficial impact of social and emotional learning in schools.

I will also be asking the pupils in your class and their parents/carers if they would like to take part, as well as the teaching assistant that works with your class. The pupils who take part will be asked to complete a questionnaire pack about their feelings about themselves, other pupils and school.

Informed consent will be requested from each parent and from the children themselves. Only those giving informed consent will be able to participate. I hope to collect data before and after the intervention and at one other point. I also want to interview 4 parents, all with informed consent. Interviews will last approximately 45 minutes and will be completed at a time convenient to all concerned. For your information, I hope to use a second researcher, who is an Educational Psychologist who works for the Local Authority, to collect the data from pupils, teachers and parents. This is needed to avoid any bias that might arise because I will have been involved in presenting the intervention.

Each participant will be provided with their own information and consent forms explaining the study. The information provided by participants will not have their name attached to it, and care will be taken to ensure of the information is kept securely and confidentially. This information cannot be traced to a specific individual other than by the researcher. When all the information has been collected, it will be made anonymous. If you agree to take part, you will be free to withdraw your involvement at any time. Your interview will be recorded and then typed. You also have the right to withdraw the information that you have provided until the point it is filed anonymously by number on a computer. The data will be stored safely and securely for a period of 5 years and will then be destroyed.

What will happen if you agree to the research?

The information provided by pupils, parents and teachers will be used as part of a doctoral research project in educational psychology for Cardiff University. The research findings may be published wider than this but they will always be in an anonymous form. A summary of the findings from the research project will be available to all those involved in the research when it is completed.
If you would like to ask any more questions about this research, please feel free to contact me or my supervisor using the email addresses below. I hope to be able to answer any questions you may have. If you agree to take part in this study please sign and return the consent form attached. Thank you for taking the time to read about this study.

Yours Sincerely,

Kamran Khan.
(Educational Psychologist &Doctoral Student at Cardiff University).

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Class teacher consent form

I understand that my participation in this project will involve me helping pupils in my class complete a questionnaire pack with the support of the class teaching assistant and a researcher who will lead the session. This will take approximately 1 hour to complete. This information will be collected again on two more occasions once the kindness intervention has taken place.

I understand that I will be interviewed about the intervention and that this will take approximately 45 minutes, and that this interview will be recorded.

The information will be collected by XXXX (who will act as a second researcher in this study, and is also employed as an educational psychologist by the Local Authority).

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason. I can also withdraw the information I have provided until the point it is transcribed and so cannot be linked back to me.

I understand that I am free to ask any questions at any time. I am free to discuss my concerns with either the researcher or Andrea Higgins [university supervisor].

I understand that the information that I provide will be held confidentially until the study is complete. It will then be anonymised so that it cannot be linked to me individually. I understand that this information may be retained indefinitely (although audio recordings will be erased once transcribed).

I also understand that at the end of the study I will be provided with additional information and feedback about the purpose and outcomes of the study.

I, _____(NAME) consent to participate in the study conducted by Kamran Khan, School of Psychology, Cardiff University with the supervision of Andrea Higgins.

Signed:

Date:

Parent/Carer Information and Consent Form

Parent/carer information form

Dear Parent/carer,

I am an Educational Psychologist working for the Local Authority. As part of my studies at Cardiff University I plan to carry out some research in your child's school. I want to find out whether teaching children about kindness and thinking about others, encourages them do kind things, and improves their happiness and friendships. A series of lessons on kindness is already planned to take place in your child's class in the summer, for one hour a week over six weeks. I would like permission for your child to be part of an evaluation of these lessons.

If you agree that your child can take part, I will also ask their permission to join in the study. Those children with consent will be asked to complete some questionnaires on their feelings about themselves, other children and school. I intend to collect this information before the series of kindness lessons begins, once they are over and at one other point. Each time will take about one hour, and will be done in class with the children's teacher helping.

I will also be asking a sample of six parents to be interviewed about the kindness lessons and their effects, if any, on children. These interviews will last no more than 45 minutes. I intend to use a second researcher, who is an Educational Psychologist who works for the Local Authority to collect the information from parents/carers and children. This is needed to avoid any bias that might arise because I will have been involved in presenting the lessons. The study is about teaching children social and emotional skills in schools.

Each person taking part will be provided with their own information and consent forms explaining the study. The information provided by participants will not have their name attached to it, and care will be taken to ensure of the information is kept securely and confidentially. This information cannot be traced to a specific individual other than by the researcher. When all the information has been collected, it will be made anonymous. If you agree to take part, or for your child to take part, you are free to leave the study at any time. Your child also has this right and will be told this. If you or your child provides any information, this too can be returned to you up until the point it is stored on a computer anonymously, in a numbered file. Each participant will be provided with their own information and consent forms explaining the study. The data will be stored safely and securely for a period of 5 years and will then be destroyed.

What will happen if you agree to the research?

The information provided by pupils, parents and teachers will be used as part of a doctoral research project in educational psychology for Cardiff University. The research findings may be published wider than this but they will always be in an anonymous

form. A summary of the findings from the research project will be available to all those involved in the research when it is completed.

If you would like to ask any more questions about this research, please feel free to contact me or my supervisor using the email addresses below. I will answer any questions to the best of my ability. If you consent to participate in this study, please sign and return the consent form attached.

Finally, if you consent for your child to take part, and are happy to be contacted by the researcher after the lessons have finished to be interviewed, please indicate 'yes' to this question on the consent form and write down your phone number. A random sample of 4 parents/carers will be interviewed. These interviews will be recorded and typed but the information will be stored confidentially and securely until made anonymous. Your phone number will not be seen or used by anyone else but the researchers.
Thank you for taking the time to read about this study.

Yours Sincerely,

Kamran Khan.

(Educational Psychologist &Doctoral Student at Cardiff University).

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Parent/Carer consent form

I understand that if I consent for my child to participate in this study that they will be asked to complete a questionnaire pack to evaluate the lessons on kindness. The children taking part will be together as a class but will work separately with the support of teaching staff, and a researcher who will lead the session. This will take approximately 1 hour to complete. This information will be collected again on two more occasions.
I understand that if I agree, I could be interviewed about the lessons and any impact it may have had on my child. This will take no more than 45 minutes, and this interview will be recorded.

The information will be collected by a second researcher (who is employed as an educational psychologist by the Local Authority).

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason. I can also withdraw the information that I have provided or that my child has provided. I can do this up until the point the information has been filed anonymously by number on a computer. After this, it cannot be linked to me.
I understand that I am free to ask any questions at any time. I am free to discuss my concerns with the researcher or his university supervisor.

I understand that the information that I provide will be held confidentially until the study is complete. It will then be anonymised so that it cannot be linked to me individually. I understand that this information may be retained indefinitely (although audio recordings will be erased once transcribed).

I also understand that at the end of the study I will be provided with additional information and feedback about the purpose and outcomes of the study.

I, _____(NAME) consent to my child

_____(CHILD's NAME) participating in the study conducted by Kamran Khan, School of Psychology, Cardiff University with the supervision of Andrea Higgins.

I give permission for a researcher to contact me by telephone sometime after the programme to arrange a short interview

Yes No

(If yes, my telephone number is……)

Signed:

Date:

Pupil Information and Consent Form
(This document has a Flesch Reading Ease score of 83.7, with a Flesch-Kincaid Grade level of 4.2).

Kindness Study Information Sheet

You have been asked to take part in a research study about Kindness.

About the Study:

- It will take place in your classroom with your teacher there.
- The researcher's name is……..
- They will ask you and all the other children taking part to answer some questionnaires.
- These will take less than an hour to finish.
- The researcher will come back again and ask you to answer the same questions two more times.
- The questions are about the work you will be doing on kindness.
- The questions will also ask you about your feelings and friendships.
- You will be given time to ask questions to the researcher if you want to.
- This research is about kindness and children.

Important things to remember:

- It is voluntary to take part (you don't have to).
- You will not get in any trouble for not taking part.
- Everything you say or write will be kept private unless it is something harmful to you or other people.
- You will not be asked to put your name on the answers you give, and you will not be named in the finished study.
- You can decide not to answer questions you are not happy with.
- You can stop taking part without giving a reason.
- You can stop your information being used. Just tell a teacher.
- If you do not want to take part tick the 'no' box.
- You can ask questions about the research at any time. Your teacher can help with this.
- If you want to complain about the research please go to a teacher.

Pupil Consent Form

PRIVATE INFORMATION

Kindness Research

I understand that:

- Taking part is voluntary and I do not have to if choose not to.
- I do not have to answer questions if I do not want to.
- I may stop taking part in the study at any time without giving a reason.
- I do not have to take part. I can tick the 'no' box.
- I understand that I can ask questions about the research at any time.
- I understand that the information I give will be kept private unless it is harmful to me or someone else.

Name: _____ **Date:**_____

Tick one:

☐ Yes. I would like to take part in the study about kindness.

☐ No. I do not wish to take part.

Please fold up this paper and put it in the box.

Appendix I: Debrief forms for Gatekeeper, Class Teachers and Parents

Kindness Curriculum Study

Thank you for participating in this study of a kindness intervention in school. The children took part in this set of six lessons about kindness in the summer term of 2017. The study aims to find out whether the children who took part in the intervention showed any positive results and thus whether this sort of education might be beneficial in other schools. In particular, the study explored whether the children were happier, kinder and had more positive friendships as a result of the intervention. The children were asked to complete a book of questionnaires before and after the intervention, and at one other time point during the study. Their teachers and some of their parents were also interviewed.

All of those participating are reminded of their right to withdraw their participation or information. The pupils taking part were given a number so that their information cannot be directly connected to them by name. Once all the information has been gathered, the numbered class list will be destroyed and at this point all the pupil information will become anonymous. The information will be stored securely in Cardiff University for five years and then destroyed. Each interview has been recorded and these files will be password protected until transcribed. At this point all information will be made anonymous and then cannot be traced back to anyone.

It should be noted that the researcher may be able to provide general feedback regarding the pooled data, but will be not be able to comment on the information provided by individuals. Once the study is complete, nobody reading about the study, apart from the researchers and participants will know who took part in the study.

What will happen now?

The information provided by pupils, parents and teachers will be used as part of a doctoral research project in educational psychology for Cardiff University. The research findings may be published wider than this but they will always be in an anonymous form. A summary of the findings from the research project will be available to all those involved in the research when it is completed.

If you would like to ask any more questions about this research, please feel free to contact me or my supervisor using the email addresses below. I will endeavour to answer any questions to the best of my ability. Thank you for taking the time to take part in this study.

Yours Sincerely,

Kamran Khan.

(Educational Psychologist &Doctoral Student at Cardiff University).

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Secretary of the Ethics Committee
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Debrief Form for Pupils

(This document has a Flesch Reading Ease score of 80.7, with a Flesch-Kincaid Grade level of 5.2).

Study about the Kindness lessons

Thank you for taking part in this study. I wanted to find out whether the lessons you had on kindness made the children in your class happier and kinder. I also wanted to know if it improved friendships. I also wanted to know whether learning about kindness would be good for children in other schools.

The children who took part had to answer some questions in a book they were given. They had to do this before the lessons about kindness. The also had to do after the lessons. The teachers and some of the parents also answered some questions. Their answers will show whether the lessons helped in any way.

The people who took part had a number instead of using their name. This means the information can never be linked to the person who gave it. It is anonymous. The information that everybody gave me will be kept safely. It will be kept safely for five years and then destroyed.

What will happen now?

The information that you gave me will be used as part of my project for Cardiff University. Once it is finished, you will also be able to ask your teacher what the study found out. The research findings may be published wider than this but they will always be in an anonymous form (and no one who took part will be named). You can also ask your teacher if you want me to come back and tell you more about the project.

If you would like to ask any more questions, please ask your teacher to send me or my supervisor an email. Thank you for taking part in this study.

Yours Sincerely,

Kamran Khan.

(Educational Psychologist &Doctoral Student at Cardiff University).

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Appendix J: Participant questionnaire booklet

The Kindness Study

Pupil Number [ ] School: ……

Thank you for helping us finds out more about kindness and how children feel about themselves. By taking part in our study you will help us discover more about how children think and what they want to learn.

Please remember …Just be honest and write what is true for you. Because we are interested in what you think THERE ARE NO RIGHT OR WRONG ANSWERS.

What you write in this book will not be seen by your teacher, head teacher or school friends. The researchers will be the only person to see your book. The information will then be used by the researcher to find out how pupils feel about themselves. Remember that **no one** at school apart from the researchers (not even your parents) will ever see your answers.
So please be honest and tell us about yourself.

Thank you for your help and cooperation!

Blank sheet

Firstly, tell us about yourself…and remember not to look at other children's answers. We are interested in ***your*** answers.

1. Boy or girl……
2. Date of birth……and age……
3. Is English your first language……
4. How well do you read (please tick):
   - Only a little ☐
   - Okay ☐
   - Well ☐
5. For fun and practice:

Which of the following is most like me: (please circle)

Likes/dislikes	Not at all	A little	Some-times, like me	Really like me	Always Like me
I prefer staying at home than going out with friends.	1	2	3	4	5
I worry about making people unhappy	1	2	3	4	5

I am tidy	1	2	3	4	5

The Positive and Negative Affect Scale

(None of the questionnaire titles were used in the participant booklets)

How have you been feeling this week?

(The emotion words are to be read out loud to pupils, who are invited to ask for further explanation of any words they did not understand. The researcher will then elaborate and explain these words).

Let us know how often you have felt like this during the past week.

	Not at all	A little	Sometimes	Often	All the time
Interested	**1**	**2**	**3**	**4**	**5**
Sad	**1**	**2**	**3**	**4**	**5**
Alert	**1**	**2**	**3**	**4**	**5**
Frightened	**1**	**2**	**3**	**4**	**5**
Excited	**1**	**2**	**3**	**4**	**5**
Ashamed	**1**	**2**	**3**	**4**	**5**
Happy	**1**	**2**	**3**	**4**	**5**
Upset	**1**	**2**	**3**	**4**	**5**
Strong	**1**	**2**	**3**	**4**	**5**
Nervous	**1**	**2**	**3**	**4**	**5**
Energetic	**1**	**2**	**3**	**4**	**5**
Guilty	**1**	**2**	**3**	**4**	**5**
Calm	**1**	**2**	**3**	**4**	**5**
Scared	**1**	**2**	**3**	**4**	**5**
Cheerful	**1**	**2**	**3**	**4**	**5**

Miserable	**1**	**2**	**3**	**4**	**5**
Active	**1**	**2**	**3**	**4**	**5**
Jittery	**1**	**2**	**3**	**4**	**5**
Proud	**1**	**2**	**3**	**4**	**5**
Afraid	**1**	**2**	**3**	**4**	**5**
Joyful	**1**	**2**	**3**	**4**	**5**
Lonely	**1**	**2**	**3**	**4**	**5**
Fearless	**1**	**2**	**3**	**4**	**5**
Mad	**1**	**2**	**3**	**4**	**5**
Delighted	**1**	**2**	**3**	**4**	**5**
Disgusted	**1**	**2**	**3**	**4**	**5**
Daring	**1**	**2**	**3**	**4**	**5**
Blue/Down	**1**	**2**	**3**	**4**	**5**
Lively	**1**	**2**	**3**	**4**	**5**
Gloomy	**1**	**2**	**3**	**4**	**5**

Thoughts and Feelings

These sentences describe some of the ways that children might feel about others. For each sentence, show how well it describes you by circling the number that describes **how true** it is for you. Read the question carefully and answer as honestly as you can. **Thank You.**

Thoughts and Feelings	Not at all like me	A little like me	Sometimes like me	A lot like me	Always like me
1. I often feel sorry for people who don't have the things I have.	**1**	**2**	**3**	**4**	**5**
2. It's easy for me to understand why other people do the things they do.	**1**	**2**	**3**	**4**	**5**
3. Sometimes I feel very sorry for other people when they are having problems.	**1**	**2**	**3**	**4**	**5**
4. When I see someone being picked on, I feel sorry for them.	**1**	**2**	**3**	**4**	**5**
5. Sometimes I try to understand my friends better by imagining how they think about things.	**1**	**2**	**3**	**4**	**5**
6. Even when I am mad at someone, I try to understand how they feel.	**1**	**2**	**3**	**4**	**5**
7. I often feel sorry for other children who are sad or in trouble.	**1**	**2**	**3**	**4**	**5**
8. I try to understand how other kids feel before I decide what to say to them.	**1**	**2**	**3**	**4**	**5**
9. When I see someone being treated mean it bothers me.	**1**	**2**	**3**	**4**	**5**

10. Even when I know I am right, I listen to what other people think.	**1**	**2**	**3**	**4**	**5**
11. I often have strong feelings about things that happen around me.	**1**	**2**	**3**	**4**	**5**
12. Before I say anything bad about anyone, I try to imagine how I would feel if I were that person	**1**	**2**	**3**	**4**	**5**
13. I am a person who cares about the feelings of others.	**1**	**2**	**3**	**4**	**5**
14. There are different ways to think about a disagreement and I try to look at all of them.	**1**	**2**	**3**	**4**	**5**

Kindness in School Questionnaire

"HOW OFTEN DO YOU TRY TO….."

For each sentence, show how well it describes you by circling the number that describes HOW TRUE is about you. Please read each sentence carefully. **THANK YOU.**

How Often….	Not at all	A little	Sometimes	often	All the time
1. How often do you try to cheer someone up when something has gone wrong?	**1**	**2**	**3**	**4**	**5**
2. How often do you try to share what you've learned with your class mates?	**1**	**2**	**3**	**4**	**5**
3. How often do you try to keep promises you've made to other kids?	**1**	**2**	**3**	**4**	**5**
4. How often do you try to keep secrets that others have told you?	**1**	**2**	**3**	**4**	**5**
5. How often do you try to do what your teacher asks you to?	**1**	**2**	**3**	**4**	**5**
6. How often do you try to be nice to kids when somethings bad happens to them?	**1**	**2**	**3**	**4**	**5**
7. How often do you try to help other kids when they have a problem?	**1**	**2**	**3**	**4**	**5**

8. How often do you try to help your classmates learn new things?	**1**	**2**	**3**	**4**	**5**
9. How often do you try to think about how your behaviour will affect other kids?	**1**	**2**	**3**	**4**	**5**
10. How often do you try to do the things you've told other kids you would do?	**1**	**2**	**3**	**4**	**5**
11. How often do you try to be quiet when others are trying to work?	**1**	**2**	**3**	**4**	**5**
12. How often do you try to keep working even when you're tired?	**1**	**2**	**3**	**4**	**5**
13. How often do you try to keep working even when other kids are messing around?	**1**	**2**	**3**	**4**	**5**
14. How often do you try to help your friends solve a problem that you have already worked out?	**1**	**2**	**3**	**4**	**5**

My Life in School Checklist

During the last two weeks another child has….

Please circle how often these things have happened to you in school in the last two weeks.

Another child…	Not at all	Only once	More than once
1. Has called me names.	**1**	**2**	**3**
2. Said something nice to me.	**1**	**2**	**3**
3. Was nasty about my family	**1**	**2**	**3**
4. Tried to kick me.	**1**	**2**	**3**
5. Was very nice to me.	**1**	**2**	**3**
6. Was unkind because I am different.	**1**	**2**	**3**
7. Gave me something.	**1**	**2**	**3**
8. Said they would hurt me.	**1**	**2**	**3**
9. Tried to frighten me.	**1**	**2**	**3**
10. Lent me something.	**1**	**2**	**3**
11. Stopped me playing a game.	**1**	**2**	**3**
12. Was unkind about something I did.	**1**	**2**	**3**
13. Told me a joke.	**1**	**2**	**3**
14. Smiled at me.	**1**	**2**	**3**

15. Tried to get me into trouble.	**1**	**2**	**3**
16. Helped me carry something.	**1**	**2**	**3**
17. Helped me with my work.	**1**	**2**	**3**
18. Made me do something I did not want to do.			
19. Talked with me about things I like.	**1**	**2**	**3**
20. Took something off me.	**1**	**2**	**3**
21. Played a game with me.	**1**	**2**	**3**

SCHI (School Children's Happiness Scale)

The following instructions will be read aloud to children and were used when the following inventory was standardised:

*Below these boxes [year group and gender], there are some things you might have **thought or felt during the last week in school**.*
*Look at the first one, (point) "During the last week in school, I had lots of energy". You might think "**I agree**" if it's right about you (point out on form), or "**I disagree**" (point out on form), if it's not. Then choose if you "**Agree, a lot**" (point out on form) or "**Agree, a little**" (point out on form and pause).*
*Or you might "**Disagree, a little**" (point out on form), or "**Disagree, a lot**" (point out on form). After I read each one aloud, **Tick the one box** that fits you best on each of the statements. Read out each statement starting with …*
"Number … During the last week in school … [reads statement]"

School Children's Happiness Scale

During this last week in school:

	I agree		**I disagree**	
	A lot	**A little**	**A little**	**A lot**
1. I had lots of energy	**1**	**2**	**3**	**4**
2. I was nervous	**1**	**2**	**3**	**4**
3. I wanted to come to school.	**1**	**2**	**3**	**4**
4. I was cross	**1**	**2**	**3**	**4**
5. I was sad	**1**	**2**	**3**	**4**
6. I felt relaxed	**1**	**2**	**3**	**4**
7. I felt ill	**1**	**2**	**3**	**4**
8. I felt that school was a safe place	**1**	**2**	**3**	**4**
9. I concentrated	**1**	**2**	**3**	**4**
10. I felt sick	**1**	**2**	**3**	**4**

11. I felt positive	**1**	**2**	**3**	**4**
12. I felt angry	**1**	**2**	**3**	**4**
13. I wanted to cry	**1**	**2**	**3**	**4**
14. I got on well with everyone	**1**	**2**	**3**	**4**
15. I was in a bad mood	**1**	**2**	**3**	**4**
16. I enjoyed myself	**1**	**2**	**3**	**4**
17. I was tired	**1**	**2**	**3**	**4**
18. I felt calm	**1**	**2**	**3**	**4**
19. I was interested in working	**1**	**2**	**3**	**4**
20. I felt sorry for myself	**1**	**2**	**3**	**4**
21. I felt good	**1**	**2**	**3**	**4**
22. I was confused	**1**	**2**	**3**	**4**
23. I was confident	**1**	**2**	**3**	**4**
24. I felt upset	**1**	**2**	**3**	**4**
25. I wanted to give up	**1**	**2**	**3**	**4**
26. I felt wide awake	**1**	**2**	**3**	**4**
27. I had headaches	**1**	**2**	**3**	**4**
28. I worked well	**1**	**2**	**3**	**4**
29. I was frightened	**1**	**2**	**3**	**4**
30. I liked being with other people	**1**	**2**	**3**	**4**

The Beck Youth Inventory- Self-concept scale

Here is a list of things that happen to people and that people think or feel. Circle one of the numbers for each question (never sometimes, often always) that tells about you best. There are no right or wrong answers.

THANK YOU.

	Never	Some times	Often	Always
1. I work hard	**1**	**2**	**3**	**4**
2. I feel strong	**1**	**2**	**3**	**4**
3. I like myself	**1**	**2**	**3**	**4**
4. People want to be with me	**1**	**2**	**3**	**4**
5. I am just as good as other kids	**1**	**2**	**3**	**4**
6. I feel normal	**1**	**2**	**3**	**4**
7. I am a good person	**1**	**2**	**3**	**4**
8. I do things well	**1**	**2**	**3**	**4**
9. I can do things without help	**1**	**2**	**3**	**4**
10. I feel smart	**1**	**2**	**3**	**4**
11. People think I am good at things.	**1**	**2**	**3**	**4**
12. I am kind to others	**1**	**2**	**3**	**4**
13. I feel like a nice person	**1**	**2**	**3**	**4**
14. I am good at telling jokes	**1**	**2**	**3**	**4**
15. I am good at remembering things	**1**	**2**	**3**	**4**
16. I tell the truth	**1**	**2**	**3**	**4**
17. I feel proud of the things I do	**1**	**2**	**3**	**4**
18. I am a good thinker	**1**	**2**	**3**	**4**
19. I like my body	**1**	**2**	**3**	**4**
20. I am happy to be me	**1**	**2**	**3**	**4**

The following two sheets were photocopied onto tracing paper and included in the pupil booklet. The class teacher prepared a master sheet with the class list duplicated into 4 columns. This acted as a master sheet for children to use in their ratings. Each pupil was given a copy, and they placed this under their sociometric answer sheet. Then they were asked to circle the number on their tracing paper sheet that corresponded to the name of the child on the master sheet. The class teacher collected in and retain these master sheets for subsequent data gathering sessions and thus were never kept alongside the children's answers. The booklets only showed the numbers and not the names of the children they provided a sociometric rating for.

The Guess Who? Peer Sociometric Survey

Friendships in your class

On the next pages, there are some lists of the other children in your class. You may tick your own name if the statement is true of you.

We would like to find out how you feel about them and how they behave. Remember, you can be honest because your answers are private.

Start at the top of each box and work down, thinking carefully. Tick those names that the statement is true of.

Children who share		Children I like to play with		Children who help you if you have a problem		Children who are kind
1		1		1		1
2		2		2		2
3		3		3		3
4		4		4		4
5		5		5		5
6		6		6		6
7		7		7		7
8		8		8		8
9		9		9		9
10		10		10		10
11		11		11		11
12		12		12		12
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16		16		16		16
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23		23		23		23
24		24		24		24
25		25		25		25
26		26		26		26
27		27		27		27
28		28		28		28
29		29		29		29
30		30		30		30

Children I stay away from.			Children who understand my point of view		Children who do things they shouldn't
1			1		1
2			2		2
3			3		3
4			4		4
5			5		5
6			6		6
7			7		7
8			8		8
9			9		9
10			10		10
11			11		11
12			12		12
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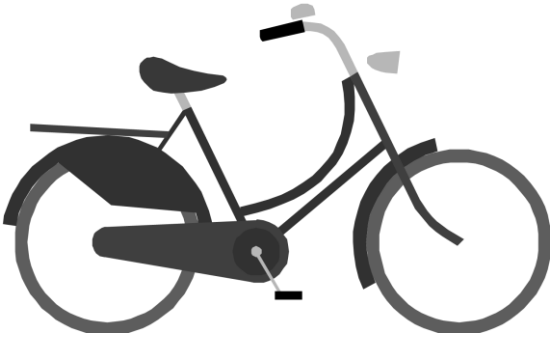
22			22		22
23			23		23
24			24		24
25			25		25
26			26		26
27			27		27
28			28		28
29			29		29
30			30		30

(NB. School Two were given a list of numbered participants starting at 31 up to 56)

Appendix K: Supplementary questionnaires

K1:The Satisfaction with Life Scale for Children (SWLS-C).



Directions: For each item below, tick the point on the scale that describes how you have felt in the last 7 days.

Question	Disagree a great deal					Agree a great deal
I have felt happy during the last week	1	2	3	4	5	6
I have been satisfied with my life in last week	1	2	3	4	5	6

K2: 6 weeks of Kindness

For each sentence, show how well it describes your feelings about the kindness classes you had. Do this by circling the number that describes your feelings best. Please read each sentence carefully. **THANK YOU.**	I disagree	I disagree a little	I agree	I agree a lot
1. I liked learning about kindness.	**1**	**2**	**3**	**4**
2. Learning about kindness was not much use.	**1**	**2**	**3**	**4**
3. I have thought more about being kind after the lessons.	**1**	**2**	**3**	**4**
4. I did more kind things because of the lessons.	**1**	**2**	**3**	**4**
5. I didn't learn much during the kindness lessons.	**1**	**2**	**3**	**4**
6. I would like to have more of these lessons.	**1**	**2**	**3**	**4**
7. The lessons have made the children in my class kinder.	**1**	**2**	**3**	**4**
8. Schools should not teach children about kindness.	**1**	**2**	**3**	**4**
9. I have learned how to be a better friend.	**1**	**2**	**3**	**4**
10. Being kind made me feel good.	**1**	**2**	**3**	**4**
11. Learning about kindness made some children unkind.	**1**	**2**	**3**	**4**
12. Other people have noticed that I have been kinder recently.	**1**	**2**	**3**	**4**
13. I felt happier as a person after the lessons.	**1**	**2**	**3**	**4**

Appendix L: Questionnaire item analysis: identifying sub-scales

Name of Scale	Construct being measured	Number of sub-scales (and code)	Items forming each scale	Items deleted from the scale:
PANAS	Positive and negative affect.	4 (PanFac1-4)	Sub-scale 1: 4,6,8,12,14,16,18,20, 22, 26, 28, and 30. Subscale 2: 2, 11, 17, 19, 27. Sub-scale 3: 3, 5, 7, 10, 13, 21. Sub-scale 4: 1, 9, 23.	15, 24, 25, 29.
PBS	Prosocial thinking	2 (TfFac1-2)	Sub-scale 1: 2,6,7,8,9,10,12,13,14. Subscale 2:1, 3, 4,5,11.	n/a
SKI	Self-rated kindness	4 (KiqFac1-4)	Sub-scale 1: 1,5,6,7,11,12,13. Subscale 2: 3, 4, 10. Sub-scale 3: 2, 8, 14. Sub-scale 4: 9.	n/a
MLIS	Frequencies of positive and negative behaviour	5 MLFac1-5)	Sub-scale 1: 1, 4, 8, 14, and 15. Subscale 2: 10, 19, 21. Sub-scale 3: 7, 13, 16, 17. Sub-scale 4: 5, 12, 20. Sub-scale 5: 3, 9, 11, 18.	2, 6
SCHI	Self-rated happiness/well-being	0 (Shi-tot)	n/a	n/a
BYISC	Self-esteem	0 (Sc-tot)	n/a	n/a

Appendix M: Questionnaire Measures of Normality: Skewness and Kurtosis

School 1 Time 1

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
PANAS1	30	-1.521	.427	1.437	.833
PANAS2	30	-.477	.427	.212	.833
PANAS3	30	.204	.427	1.113	.833
PANAS4	30	.017	.427	.183	.833
PBS1	30	-.147	.427	-.445	.833
PBS2	30	-.055	.427	-.426	.833
SKS1	30	-.582	.427	.505	.833
SKS2	30	-.527	.427	-.364	.833
SKS3	30	.139	.427	-.522	.833
SKS4	30	-.269	.427	-.285	.833
MLIS1	30	-.281	.427	-.897	.833
MLIS2	30	-.615	.427	.333	.833
MLIS3	30	-.484	.427	-.720	.833
MLIS4	30	-.032	.427	-1.327	.833
MLIS5	30	-.334	.427	-1.002	.833
SCHI	30	1.100	.427	2.013	.833
BYI-SC	30	-.899	.427	.803	.833

School 2 at Time 1

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
PANAS1	26	-1.111	.456	2.364	.887
PANAS2	26	-1.666	.456	3.589	.887
PANAS3	26	-1.831	.456	4.302	.887
PANAS4	26	-.888	.456	.571	.887
PBS1	26	-.749	.456	.146	.887
PBS2	26	-.512	.456	.570	.887
SKS1	26	-.600	.456	-.924	.887
SKS2	26	-.167	.456	-.527	.887
SKS3	26	-.431	.456	.743	.887
SKS4	26	-.590	.456	-.641	.887
MLIS1	26	-.860	.456	-.369	.887
MLIS2	26	-.568	.456	-.185	.887
MLIS3	26	.008	.456	-1.352	.887
MLIS4	26	-.345	.456	-1.131	.887
MLIS5	26	-.947	.456	-.114	.887
SCHI	26	-.682	.456	1.114	.887
BYI-SC	26	-1.068	.456	1.210	.887

School 1 at Time 2

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
PANAS1	30	-2.038	.427	5.306	.833
PANAS2	30	.202	.427	-.601	.833
PANAS3	30	-.809	.427	.757	.833
PANAS4	30	.213	.427	-.426	.833
PBS1	30	.049	.427	3.099	.833
PBS2	30	.068	.427	-.245	.833
SKS1	30	.376	.427	-.220	.833
SKS2	30	-1.142	.427	1.070	.833
SKS3	30	-.078	.427	.125	.833
SKS4	30	.000	.427	-.620	.833
MLIS1	30	-.588	.427	-.795	.833
MLIS2	30	-.988	.427	1.412	.833
MLIS3	30	-.373	.427	-.652	.833
MLIS4	30	-.920	.427	.533	.833
MLIS5	30	-1.088	.427	.821	.833
SCHI	30	.301	.427	-.781	.833
BYI-SC	30	.889	.427	2.416	.833

School 2 at Time 2

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
PANAS1	26	-1.230	.456	2.115	.887
PANAS2	26	-1.179	.456	2.538	.887
PANAS3	26	-.783	.456	.711	.887
PANAS4	26	-.364	.456	-.138	.887
PBS1	26	-.397	.456	-.194	.887
PBS2	26	.178	.456	-.664	.887
SKS1	26	-.598	.456	.297	.887
SKS2	26	-.698	.456	-.178	.887
SKS3	26	-.881	.456	1.084	.887
SKS4	26	-.075	.456	.282	.887
MLIS1	26	-.526	.456	-1.019	.887
MLIS2	26	-.890	.456	1.200	.887
MLIS3	26	.292	.456	-.911	.887
MLIS4	26	-.379	.456	-.994	.887
MLIS5	26	-.626	.456	.052	.887
SCHI	26	-.577	.456	1.760	.887
BYI-SC	26	-1.120	.456	3.102	.887

School 1 at Time 3

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
PANAS1	30	-1.004	.427	1.961	.833
PANAS2	30	-.264	.427	-.583	.833
PANAS3	30	-.093	.427	.838	.833
PANAS4	30	-.365	.427	-.259	.833
PBS1	30	.386	.427	.414	.833
PBS2	30	-.053	.427	.675	.833
SKS1	30	-1.027	.427	.954	.833
SKS2	30	-.221	.427	.237	.833
SKS3	30	-.424	.427	.704	.833
SKS4	30	-.046	.427	-.484	.833
MLIS1	30	-.687	.427	-.324	.833
MLIS2	30	-1.073	.427	1.355	.833
MLIS3	30	.021	.427	-.668	.833
MLIS4	30	-.549	.427	-.689	.833
MLIS5	30	-.896	.427	.712	.833
SCHI	30	-.470	.427	-.167	.833
BYI-SC	30	-.252	.427	.304	.833

School 2 at Time 3

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
PANAS1	26	.351	.456	-.549	.887
PANAS2	26	-.368	.456	.176	.887
PANAS3	26	-.079	.456	-.700	.887
PANAS4	26	-1.125	.456	1.657	.887
PBS1	26	-.403	.456	-.288	.887
PBS2	26	-.386	.456	.643	.887
SKS1	26	.138	.456	-.128	.887
SKS2	26	-.981	.456	1.804	.887
SKS3	26	-.674	.456	1.699	.887
SKS4	26	-.331	.456	-.036	.887
MLIS1	26	-.303	.456	-.871	.887
MLIS2	26	-1.219	.456	.502	.887
MLIS3	26	-.708	.456	.453	.887
MLIS4	26	-.126	.456	-.647	.887
MLIS5	26	-.467	.456	.273	.887
SCHI	26	-.085	.456	-.514	.887
BYI-SC	26	-.216	.456	2.810	.887

Appendix N: Guess Who Peer Assessment Measures of Normality:

Skewness and Kurtosis

School	Time	Scale	N	Skewness	Standard Error	Kurtosis	Standard Error
1	1	Negative	30	1.185	.434	-.138	.845
1	1	Positive	30	-.994	.434	1.083	.845
2	1	Negative	26	.903	.464	-.390	.902
2	1	Positive	26	-.057	.464	.130	.902
1	2	Negative	30	-1.535	.434	1.065	.845
1	2	Positive	30	-1.908	.434	1.316	.845
2	2	Negative	30	.064	.456	-.924	.887
2	2	Positive	30	-1.100	.456	.560	.887
1	3	Negative	26	1.064	.427	-.247	.833
1	3	Positive	26	-1.678	.427	1.565	.833
2	3	Negative	30	.435	.456	-.130	.887
2	3	Positive	30	-1.276	.456	1.141	.887

Appendix O: Coding interviews (questions were omitted from transcription)

The Coding Process: Transcript marked with preliminary codes

Teacher 2

Yes actually, the children were generally more aware of their actions of helping others in the classroom environment, like they may offer to help a child who is struggling with something because it's the deed of doing something for someone else that I think it has just been highlighted through you know how can you help someone, what does kindness mean and looking at acts that might help others so I might have someone who is struggling on a question being helped by another child who has finished and I'll have children who are keen on doing things for me so tidying up the cloak room and stacking chairs at the end of the day so yeah generally they are all offering to do that sort of thing so generally you can see they are more aware of things that they can be doing to help others and acts of kindness.

With the majority of people are more I think it just it needed sometimes with everyday life the children are told what they need to do for school and so on but taking a step back and just highlighting how you could make people feel by offering to do things and they are aware that we praise them for kindness and were giving them notice because we have envelopes on the door on the classroom where they can put in tasks they have completed at home and in school as an act of kindness and after a certain amount of time we'll read them out and they can be anonymous or put their names on and I think they feel a bit of pride on doing that as well and they definitely like sharing what they have done and we've carried that on. Mr x has come in and left so as a general point yes they are offering to do things for each other and for myself but also they are still now and again putting these tasks in an envelope to be shared with the class.

Some behavioural needs in my classroom and I think with some prompting and with key words that were mentioned through that workshop, you know we have some children who find it hard to socialise with others and so their immediate reaction might be anger or frustration and things like 'how do you think that person might be feeling or do you think that's a kind thing to do, using this sort of vocabulary it definitely supported them into taking a step back and in another way those children that generally plod on with the everyday life of school that don't find things difficult socially might then mmm not just think of what they are doing but think of someone that's got upset recently in their social circle they've been taking them under their wing by another child after coming back to school from Christmas and just supporting each other and I think by using the vocabulary about how do you think they might be feeling, and can you do anything that might make them feel any better.

(So there's a lot of thinking and dialogue going on…)

those the dialogue and workshops and progression of skills from can you do something that's kind, to how does kindness make us feel, gratitude, so they are understanding more about everything that was linked and the repetition and constant dialogue and repeating helped them remember what we studied and triggered that emotion to help them think of yeah I could help that person so yeah I think that constant dialogue helped them reflect on that.

Yesterday to me asked would you like me to clear the cloakroom miss, someone its not his job and he offered. We had another last week who was struggling with her group of friends and another girl had said do you want to play with me and I heard that and he had seen that he was visibly upset and asked him to join in.

Yes its difficult for me and I am on duty once a week and because of the nature of one child I have a one to one with him at playtime so I do find out what happens outside. Before Christmas that child was involved with lots of squabbles with a larger group of children who could not get on with the rules of the game and minimal things but they would be constantly arguing and that's not happening at its quiet at the moment and I was going to say he still has the same difficulties but its not affecting the rest of the group because I am not having to deal with a whole group of boys it might well have had an effect on the group as a whole or that individual because they seem to be more amicable when they are in a game scenario and getting competitive and its not 100 miles an hour anymore where they jump to conclusions and fall out over the rules which was a common thing before Christmas, so it doesn't seem to be happening as much at the moment

(Do you think the curriculum has affected their friendships and how they have played together)

For some children not the girls in a way because they seem a little more mature at this age and they seem to take on the emotions that are affected…and when we were talking about how kindness affect the hormones they were more interested in the information given and they are more able to process and understand and say for example if the girls were to fall out or have an argument which …there was one yesterday…you can calmly talk to them and say what sort of feelings do you think that person will be feeling and you know they can reflect more and they are able to be a bit more mature about …right if I do that act and that persons going to feel this rather than worry about the game situation so I think for specific children yes and you can notice it more with the girls because they are able to I don't know it is difficult to explain…because they understand the repercussions more than the boys in my class. But as I said we had large groups of boys that would fall out and it would roll on day

Appendix P: Thematic maps of interview sub-themes

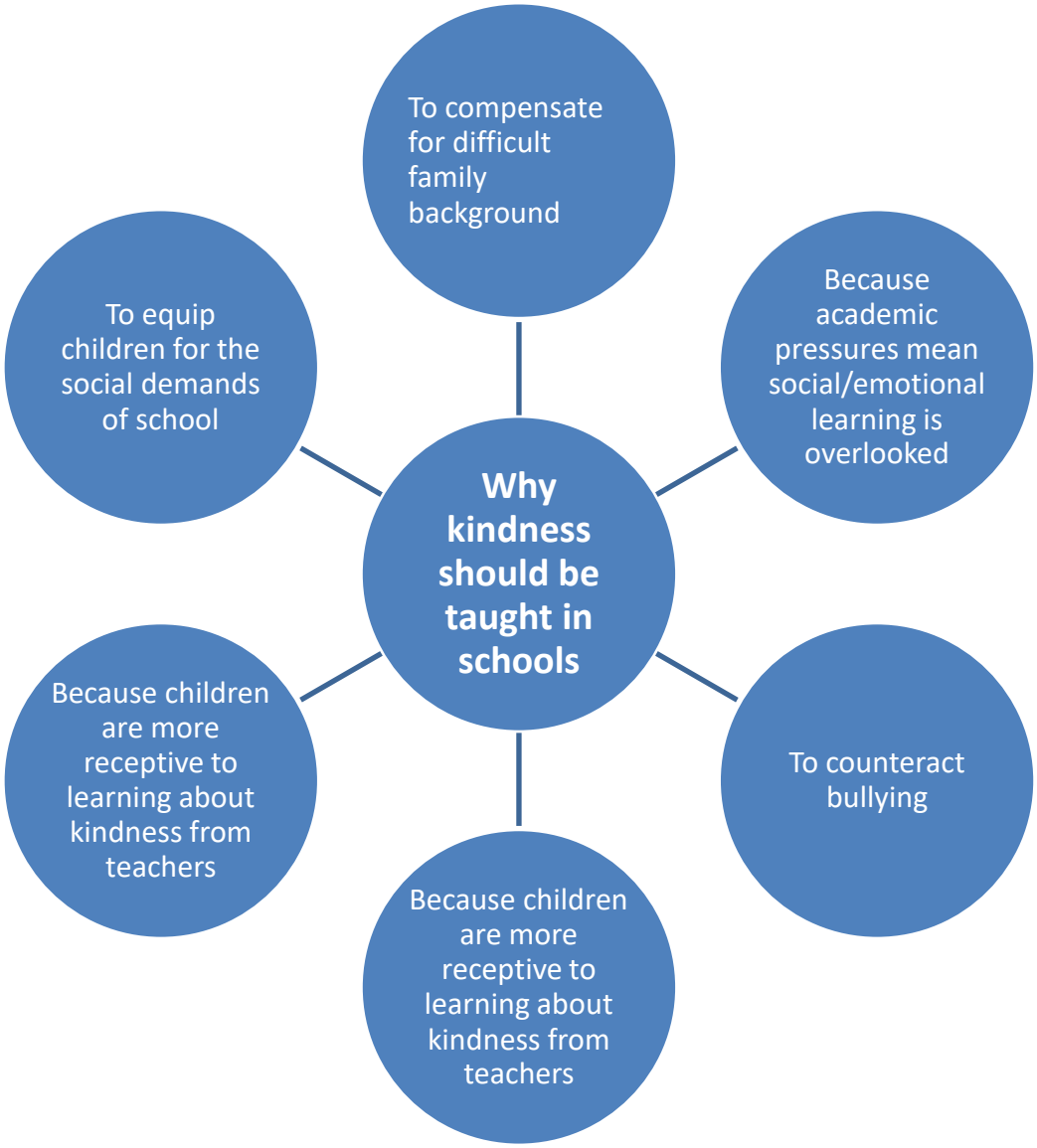


Figure 13: Thematic map of the sub-themes within the theme of Why Kindness Should be Taught in Schools.

Figure 14: Thematic map of the sub-themes within the theme of How the Workshops Support Social and Emotional Development

Figure 15: Thematic map of the sub-themes within the theme of Why the Workshops are Effective

Figure 16: Thematic map of the sub-themes within the theme of Reported Benefits of the workshops

Figure 17: Thematic map of the sub-themes within the theme of Children's Experiences of the Workshops

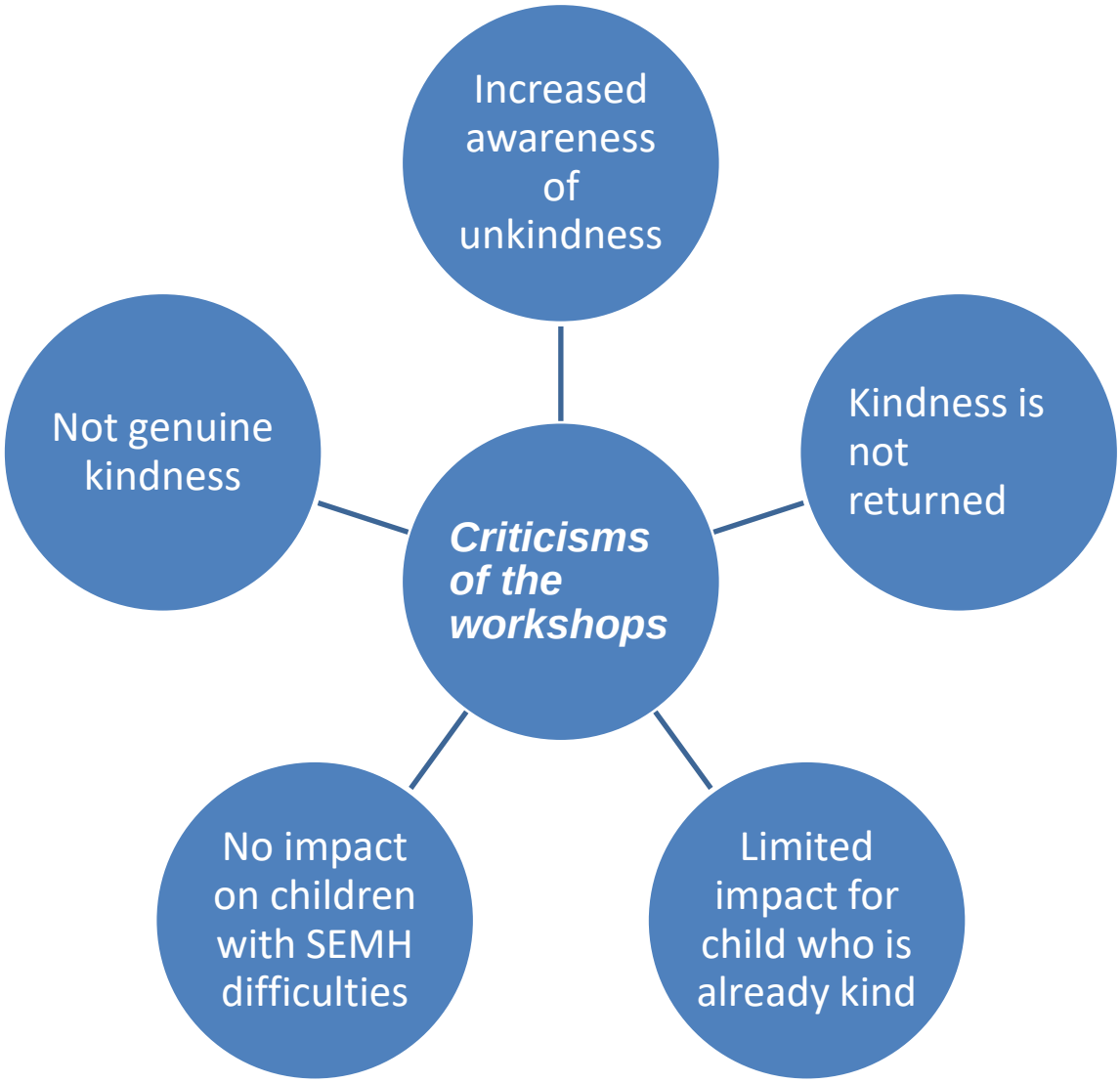


Figure 18: Thematic map of the sub-themes within the theme of Criticisms of the Workshops

Figure 19: Thematic map of the sub-themes within the theme of Changes Recommended to the Workshops

Appendix Q: Sub-themes and supporting quotations from interviews

Main Theme 1: Why kindness should be taught in schools

Sub-themes	Example Quotations	Participant code
To compensate for difficult family background:	Obviously learning about being kind, some children don't know don't get to learn at home and all children get different at home and learning about it is an advantage because not everyone gets that kind family support around them it makes me quite sad. It helps children realise it is out there people are kind and not everyone is nasty.	9.1.p
To counteract bullying:	One of the big advantages is that maybe it will help combat bullying. Obviously that's a big issue in a lot of schools.	6.1.p
Because children are more receptive to learning about kindness from teachers:	Probably would (help) because it is good for the children to understand and I think they will take it better from a third party. So you can say at home be kind to your sister but if they tell you to do it at school they take it on better if there's a teacher talking to them they absorb it more whereas at home they think it is just mum nagging.	4.1.p
To equip children for the social demands of school:	Yeah I would (recommend it) because it teaches kids the value of being kind in school because they need to get along with each other in school and if they don't it affects their future…they are having to share equipment, get on help each other work in a group environment and our group environments change quite fluidly so you might have a different group of children working with each other compared to a massive group and that changes daily.	3.1.p
Because academic pressures mean that social and emotional learning is overlooked:	I definitely feel with the curriculum as it is the National Curriculum is very fast paced and we ask a lot of the children and sometimes talking about the social emotional side of what the children might be feeling I don't think we have enough time for that and that's a national thing. Academic pressures…those sorts of skills aren't practiced enough because of those heavy academic pressures.	1.2.t

Main theme 2: How kindness supports social and emotional development.		
By establishing kind habits:	They particularly liked tasks where they had to help at home and probably doing that once or twice would spur them on to continue to do that.	2.1.t
By developing emotional awareness:	Trying to get them to think about how someone might be feeling when they come to school that day and giving them some space and we talked about that kind of thing and being kind is also respecting how someone might be feeling that day.	1.2.t
By introducing a language of kindness:	With some prompting and with key words that were mentioned through that workshop ….like 'how do you think that person might be feeling or do you think that's a kind thing to do, using this sort of vocabulary it definitely supported them into taking a step back.	1.2.t
By encouraging self-reflection**:**	(It) triggered that emotion to help them think of 'Yeah I could help that person' so yeah I think that constant dialogue helped them reflect on that.	1.2.t
Main theme 3: Why the workshops are effective.		
They teach a progression of skills:	I don't think one session would have necessarily would have had a massive change but because it was over six weeks it was a gentle progression of those. The dialogue and workshops and progression of skills from 'can you do something that's kind?' to 'how does kindness make us feel?' And gratitude, so they are understanding more.	1.2.t
They help social facilitators:	So if you've got a couple of children in group scenarios that are calm and collected because they need to act a certain way to make sure everyone is getting on then it does help the group work .	1.2.t
They complement naturally developing skills:	It is a really good thing because at that age especially Year 5 is that age where things kick in personally emotionally socially so yes it's a good thing.	1.2.t
They provide a consistent set of class values:	Yes I would because all of her class and they are quite a tricky class because they are all quite, there is a lot of characters and it helps when there is people like that and there can potentially be issues like bullying and when the whole class are taught it they all take something on board and so learning it	1.2.t

	with your peers is the best way of learning a skills for life.	
The 'knock-on effect':	Well if it has affected the individuals who have understood it clearly and they are helping the others yes it would impact them as well because there's a knock on effect because they are having to share equipment, get on, help each other work in a group environment.	1.2.t
Highlighted the importance of kindness:	The deed of doing something for someone else that I think it has just been highlighted through you know how can you help someone, what does kindness mean and looking at acts that might help others…so generally you can see they are more aware of things that they can be doing to help others and acts of kindness.	1.2.t
Main theme 4: Reported benefits the workshops		
Reduced Conflict:	Before Christmas that child was involved with lots of squabbles with a larger group of children who could not get on with the rules of the game and minimal things, but they would be constantly arguing and that's not happening and it's quiet at the moment.	1.2.t
Improved relationships:	I think he knows that children are more vulnerable in the class and he can be kinder to them maybe than he was before possibly. Those children that generally plod on with the everyday life of school that don't find things difficult socially might then mmm not just think of what they are doing but think of someone that's got upset recently in their social circle and they've been taking them under their wing.	5.1.p 1.2.t
Increased kindness:	I think that's really important and I think that aspect of it really was able to get through to the children that it's important to be nice to others and think before we do things and that whole way of thinking I asked the children if they feel that children in the class are being kinder and most, probably 80% put their hands up and agreed they were.	1.2.t
Reduced bullying:	Yes recommend it because he really enjoyed those six weeks I felt he got a lot out of it and especially from a bullying point of view. It helps when there is people like that and there can potentially be issues like bullying.	4.1.p 8.1.p
Increased cooperation:	They seem to be more amicable when they are in a game.	1.2.t

	Kind children help others.	4.1.p
	If they can process it enough to know how to get on with others then it does help others around them who haven't quite grasped the idea of it yet.	1.2.t
Improved self-regulation:	You know we have some children who find it hard to socialise with others and so their immediate reaction might be anger or frustration and things like 'how do you think that person might be feeling or do you think that's a kind thing to do, using this sort of vocabulary it definitely supported them into taking a step back.	1.2.t
Greater impact for children with SEMH difficulties:	I have a child with ASD and a new person makes them anxious and he doesn't respond well to new adults and would not talk well about his feelings and all the things he would find really difficult. And he responded really well.	1.2.t
	I think he thinks a little bit more about how he is in school with others because I moved schools because he had a few social and personal issues.	5.1.p
Main Theme 5: The children's experience of the workshops		
Enthusiasm and enjoyment:	It certainly kept him engaged. I thought he was extremely enthusiastic coming home to do the tasks that had been set.	6.1.p
	She loved the kindness lessons and told me everything that they had done and came home every evening after they had done it and pretty much told me what they had done and how much she liked it.	8.1.p
Resistance to kindness:	She felt that she was being told, she does it anyway so she didn't quite get her head round that.	7.1.p
	She was more just 'I'm kind my friends are kind why do I have to be kind and she just felt it was more sort of wasting her time and that she could be doing something else.	7.1.p
Main Theme 6: Criticisms of the workshops		
Increased awareness of unkindness:	One thing he did bring up was those who wasn't particularly kind to him in the class and he wasn't sure whether to put it down or not I don't know whether he did.	5.1.p
	I just think it made him more aware of how other children are with people and said 'well that person isn't that kind because they don't actually do theirs' it just kind of opened his eyes to it a bit.	

Kindness is not returned:	She felt it was a little bit like she was having to tell them to be kind.	6.1.p
Limited impact for child who are already kind:	To be fair he's generally a kind person anyway so he generally does things to help anyway.	6.1.p
No impact on children with SEMH difficulties:	We are experiencing different difficulties with A (child) so nothing has changed A so for her it didn't.	4.1.p
Not genuine kindness:	On the whole I would like her to do things at home without being asked to do it, and do it because she wanted to be kind to them. She didn't really agree with planning to be kind, she feels it is something that should come naturally.	4.1.p 7.1.p

Main theme 7: Changes recommended to the workshops

Targeted to those that need them:	If you really have got a class that are unkind to each other than this might be good. But I think that it should be channelled to children who particularly need it or are struggling with particular areas.	2.1.t 7.1.p
Do not conceal identity of researcher:	X (child) didn't know it was being done by an educational psychologist so for him it was just an exercise that they did over a number of weeks.	5.1.p
Greater Intensity needed:	It definitely needs repetition…once a week isn't enough maybe you would see more progression if it was done more intensively.	1.2.t
Negative peer rating technique reinforced hostility:	Having a class list and highlighting who is a good friend and who isn't, I didn't think it was appropriate.	2.1.t
Workshops too teacher directed:	Perhaps it was a lot of teacher talk as opposed to children doing activities so maybe more things for the children to do.	2.1.t
Teach more social skills:	Possibly adding some sort of role play group work could add an aspect because you could see the children interacting and you could see where the difficulties lie.	1.2.t

Whole class focus needed:	The disadvantages are the way our timetable works: some children missed sessions due to interventions for SEN needs and we can't avoid and if you miss one thing it has an effect on the next session.	1.2.t

Appendix R: Programming code used to run statistical analysis in R studio (statistical analysis software) for polychoric correlations.

> library(corrplot)

(Allows graphs to be plotted).

> library(psych)

(Allows statistical analysis techniques to be performed).

> cor.mat = psych::polychoric(name of data file inserted)$rho

(Allows a polychoric correlation matrix to be calculated).

summary (cor.mat)

(Allows polychoric correlation matrix to be displayed)

> pca = princomp(cor = TRUE, covmat = cor.mat)

(Allows principal components analysis to be run).

> screeplot(pca)

(Allows a scree plot to be shown for factor inspection).

> summary (pca)

(Allows a summary of the pca to be shown).

>factanal (covmat = cor.mat, factors = 12, n.obs = 56)

(Allows a factor analysis to be performed on the data once the number of factors and participants is specified).