Investigating the Efficacy of Universally Delivered Cognitive Behaviour Therapy in the Promotion of Emotional Literacy and Mental Wellbeing with Year 5 Pupils.

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Dedication

This thesis is dedicated to my late colleague and friend, Eric Page. He kept telling me to 'do' and to 'keep on becoming'. He gave me hope that what may seem like the impossible, just takes a little longer.

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1. Abstract

This study builds on existing research into the efficacy of universal Cognitive Behaviour Therapy (CBT) based programmes in schools in the promotion of Emotional Literacy and more broadly Mental Wellbeing.

Previous research in this area has focused on CBT interventions delivered to targeted groups. In this instance, the focus was on CBT based universal, whole class intervention. The specific CBT intervention utilised the 'Think Good Feel Good: A Cognitive Behaviour Therapy Workbook for Children and Young People' (TGFG) resource (Stallard, 2002). The researcher was also able to take the opportunity to evaluate the possible additional impact of conducting CBT based interventions in parallel with the Social and Emotional Aspects of Learning (SEAL) programme.

Initially, a pilot study was conducted with a single Year 5 child. The purpose of the pilot was to provide a guide as to the effectiveness of the resources to be used, to familiarise the researcher with those tools and principles of the study, and to provide meaningful feedback to aid in the fine tuning of the full research.

The main research study was conducted in two schools within the local authority in which the researcher was a practising Trainee Educational Psychologist. Participants consisted of 85 Year 5 pupils (aged between 9 and 10). Measures were recorded before and following intervention using the Southampton Emotional Literacy Resource (SELR) and the Strength and Difficulties Questionnaire (SDQ). Data were collected from teachers, parents and the children. A fixed design was employed, with participants placed in one of three groups:

- **Experimental group 1** - One class (n=25) received CBT intervention alongside the SEAL programme over a 6 week period. The CBT intervention consisted of two one hour long sessions per week and was delivered by the researcher, with support from the relevant class teachers

- **Experimental group 2** - A second class (n=31) received only the CBT based intervention, for the same period and delivered in the same manner as with experimental group 1
- **Control group 3** - A group of 29 Year 5 pupils were also part of the study but received no intervention.

Statistical analysis on the non-normally distributed dataset indicated that significant differences were found in some domains for experimental group 2 (CBT) compared to the control group (3). Further analysis indicated that these significant differences were as a result of positive change. Additionally, significant differences were found in some domains for experimental group 1 (SEAL + CBT) when compared with experimental group 2 (CBT alone). Further analysis indicated that these significant differences were as a result of negative change.

The researcher suggests that the present study tentatively contributes to the growing evidence base for the potential effectiveness of CBT based interventions delivered within a universal framework regarding the promotion of emotional literacy and mental wellbeing. Findings lend some support for the use of CBT based interventions (i.e. the Think Good Feel Good resource) as part of the standard curriculum for Year 5 pupils, suggesting a possible positive impact on some areas of emotional literacy and more broadly mental wellbeing. Additionally, the study offers potential suggestions for future study along with implications and considerations for educational psychologists when undertaking therapeutic type work with children.

2. Introduction

2.1 Introduction to the current research

This research explores the impact of using as an intervention resource Stallard's (2002) 'Think Good Feel Good: A Cognitive Behaviour Therapy Workbook for Children and Young People' on pupils' emotional literacy, and more broadly, on their mental wellbeing. The focus here is on the use of the 'Think Good Feel Good' resource as part of a universal, rather than targeted intervention, and specifically with pupils in Year 5. In order to assess any potential impact, teachers', parents' and pupils' self-report ratings were gathered using both The Southampton Emotional Literacy Resource (SELR) and The Strengths and Difficulties Questionnaire (SDQ).

2.2 Aims of the research

This research aims to:

- Contribute to national, regional and local policies and priorities
- Further develop educational psychology practice within the areas of mental health and psychological well-being
- Further add to knowledge and research relating to the DfES agenda (DfES, 2004) regarding universal mental health and psychological wellbeing.
- Extend the University of Nottingham's contribution to the Development and Research programme in Educational Psychology, specifically contributing to therapeutic interventions area
- Inform local practice and extend knowledge of the effectiveness and application related to Stallard's, (2002) 'Think Good Feel Good' CBT resource in order to promote more effective support for young people within local settings and establishments.

2.3 Rationale underpinning this research

The rationale which steers this research is seated in exploring the feasibility that although CBT related interventions were initially developed to support 'at risk'

children, it might make sense for all children to be supported in acquiring an understanding of and the ability to draw on CBT principles in order to promote emotional literacy and more broadly, mental wellbeing in order to reduce the potential risk in later life of developing mental health issues.

It is intended, therefore, that the research will add to the literature base regarding the use of a resource of British origin in the delivery of developing the use of CBT principles in the promotion, prevention and universal intervention of emotional literacy and mental wellbeing.

Given that one of the two schools taking part in this current research followed the Social and Emotional Aspects of Learning (SEAL) (DfES, 2007) curriculum, consideration of its impact when used alongside a CBT programme will also be included.

Literature and published research relating to mental wellbeing, emotional literacy, SEAL, CBT, and the adoption of universal, whole-class interventions will be central to the following literature review.

3. Literature Review

3.1 Structure of the Literature Review

The following Literature review aims to describe the historical and political background that informed the design and delivery of the current research.

Definitions and descriptions of key terms and concepts relevant to the research, including mental wellbeing, emotional literacy, SEAL, universal intervention, and CBT are included. Where appropriate, a critique of the research literature and associated methodology is presented.

The literature review is predominantly composed of a non-systematic narrative portrayal. However, it does include an element of systematic search, this aspect focusing on universal interventions utilising CBT aimed at enhancing children's emotional literacy and / or more broadly their mental wellbeing and with a view towards preventing children and young people developing mental health issues later in life. In addition, a systematic search strategy was also employed to seek out research pertaining to the universal and sequential application of the CBT resource 'Think Good, Feel Good' (TGFG) (Stallard, 2002) (i.e. research wherein the TGFG resource was applied in a similar manner to this study). This search, however, yielded nil results. Therefore exploration widened to explore the use of TGFG as an individual and targeted resource.

A rationale for the adoption of TGFG as the intervention used within this research is presented. The role of the educational psychologist in delivering CBT is also discussed.

Finally the literature review draws to a close with a resumé of the current research's proposed unique contribution to the evidence base and associated research hypotheses.

3.2 Historical educational context of behavioural, emotional and social difficulties and mental health.

Given this research is seated within educational psychology, the literature review will firstly highlight the pertinent educational historical context that this research is seated within and is aiming to extend.

Jones, (2003) reported that prior to the 1981 Education Act, pupils with behaviour and emotional difficulties were deemed to be regarded as 'maladjusted individuals' who required treatment in an alternative environment. Sutherland (1981) highlighted the negative connotations associated with those individuals who were identified as emotionally and / or behaviourally maladjusted and / or poorly developing learners. Sutherland noted that these individuals were often socially rejected and thus were excluded from mainstream schooling.

Following the 1981 Education Act and The Warnock Report, (1978) there was a greater onus on schools to accept responsibility for all pupils and to embrace inclusive education. Consequently, throughout the 1980's there was a shift in language and thinking in education that resulted in a new concept of 'special educational needs' that incorporated the notion of Emotional and Behavioural Difficulties (EBD) (Jones, 2003).

Despite the proposals of the 1981 Education Act, The Elton Committee's report (DfES, 1989) reflected the government of the day's concern over the perceived deterioration of behaviour in schools. Some felt that the perceived deterioration may be a consequence of the growing need for schools to incorporate pupils with a wide range of special needs, including emotional and behavioural needs. It was also argued that schools may have been ill equipped to achieve this (Parsons & Howlett, 1996). Thus, the only remedy that seemed feasible in managing extreme behaviours was, to some, that of exclusion.

The concern regarding rising exclusion rates led the then new Labour government (DfEE, 1999) to set out strategies that promoted social inclusion. At this time, children's services were to be transformed with particular attention to emotional wellbeing and school improvement (DFEE, 2000, 2001a). Terminology

changed from EBD to Behavioural, Emotional and Social Difficulties (BESD) thereby including children who experienced or were at risk of developing mental health problems. Also included in their programme of strategies were new guidelines and conditions for pupil exclusion. However, the success in reducing exclusion rates was suggested to be highly dependent on the management and inherent skills of individual schools in tackling those pupils identified as displaying BESD (Rendall & Stuart, 2005).

Further reforms in education, including the introduction of the National Curriculum, competitive league tables and the increasing inclusion of young people with special educational needs, were suggested (DfES, 2004) to have exacerbated pressures on schools, thus hampering their ability to fully embrace the notion of inclusion. Frederickson & Cline, (2005) for example, illuminate the tension and conflict in education between educational attainment and the ability to meet the social, emotional and behavioural needs of young people.

However, the above information relating to BESD and the number of exclusions could be deemed disproportionate to those actually experiencing emotional difficulties. It is possible that the needs of many young people were going undetected since they do not display disruptive behaviour which conflicts with teacher delivery in the classroom. Such neglected needs may, though, manifest themselves as mental health issues in later life (Greig, 2007).

During the inception of this research, the United Kingdom's education and social policy was driven by the Every Child Matters (ECM) Green Paper (DfES, 2004) and enshrined within the Children's Act (2004) which encapsulated the government of the time's response to improving the 'wellbeing' of young people from birth to age nineteen. It sought and funded early intervention, stressed the need for addressing social and emotional needs within schools and regarded staff development as key. Underpinning the Green Paper was the aim of promoting joined up, collaborative thinking between services, and of increasing effective communication between a number of agencies covering health, education, family support and childcare services so as to facilitate the best possible outcomes in life for children in the following areas:

- Being healthy
- Staying safe
- Enjoying and achieving
- Making a positive contribution
- Economic wellbeing.

The ECM agenda and subsequently, The Children's Plan (DfES 2007) set out a range of targets aimed to promote a holistic viewpoint in order to meet the needs of children and young people and so requiring services to work cohesively and efficiently towards positively influencing young people's lives and to promote 'wellbeing'.

Garner (2013, p. 332) stated *'The period from 1997 to 2010 was unusual in that there was a widespread recognition and accompanying policy enactment that overtly sought to tackle the social dimensions of learning. The pupil became the central focus. The emergence of new legislation as part of the ECM strategy placed an emphasis on the wellbeing of young people'.*

The above outlines a historical desire within the UK to support and develop children and young people's emotional, social and behavioural development within education at the time this research was conceptualised and conducted between 2009 and 2010.

The period of time following the completion of this research (2010 to 2016) saw changes in government initially to the Conservative Liberal Democrat coalition and more latterly to Conservative rule. The country entered into a deep recession with austerity measures having widespread impact on all services for children and young people. The DfE (2014b) recognised the links with children's social, emotional and behavioural difficulties and the potential development of mental health issues if difficulties were left unsupported.

Whilst ‘mental health’ was recognised in 2001, explicit reference to mental health within special educational needs in England was only made as late as 2014. During this time there was a call to explore causal factors for behavioural issues and exclusions, and to adopt assessment to determine whether there are unidentified learning, communication or mental health needs. Terminology changed from BESD to reflect the acknowledgment of mental health and as such Special Educational Needs changed to Social, Emotional and Mental Health (SEMH). In addition, there was acknowledgement of the possible contribution of factors such as housing and family circumstances and guidance from multi-agency collaboration. This guidance went further to suggest that in all cases, early identification and intervention can significantly reduce the use of more costly interventions at a later stage’ (DfE / DOH, 2014, p. 96).

Given that the final submission of this research is six years later than when the study was conducted, the author suggests that the research continues to hold relevance in light of more recent political developments resulting in schools being required to liaise with other services to provide a collaborative approach. The New Code of Practice and the adoption of Education Health Care plans emphasise that one of the goals of this collaboration is to further reduce the population of children and young people who experience underdeveloped mental wellbeing, and who would otherwise have the propensity to develop significant problems with their mental wellbeing later in life, therefore requiring targeted support.

3.3 Mental wellbeing in Britain

The Mental Health Foundation, (1999) reported that, whilst clinical significance may never be acknowledged, it is estimated that 20% of young people within one time frame will be affected by mental health issues that negatively impact on their lives. More recently Greig, (2007) suggests that one in ten children and young people in England and Wales experience mental health problems.

The United Nations Children’s Fund (UNICEF) reported that the physical and mental wellbeing of British young people were ranked toward the bottom of the

relevant international ‘league tables’ and notably beneath some fourteen other advanced countries (Adamson, 2010).

It is pertinent to acknowledge that there is a plethora of research which attempts to unpack the possible causal factors for such disappointing mental health and wellbeing indicators as mentioned above. Literature presented below is a mere brief indication of the possible impact that underdeveloped health and mental wellbeing could have on children and young people.

- Green et al., (2005) reported that young people who experience underdeveloped mental wellbeing tend to have also had significant school absences, thereby having an impact on their learning and achievement
- Warwick et al., (2009), reported pupils experiencing limited concentration ability and the possibility of developing behavioural regulation difficulties
- Woodward & Fergusson, (2001) identified the propensity for the young person to become a substance abuser and also be at risk of depression
- Messer & Beidel, (1994) reported that young persons may have underdeveloped social competence
- Greig, (2007) identified that young persons could struggle to form and / or maintain peer relationships
- Greig (2007) reported that children and young people identified as having a range of special educational needs could be more likely to experience mental health difficulties
- Greig (2007) also reported that most vulnerable groups are identified as those children and young people in care
- Kim-Cohen et al., (2003) reported a link between childhood indicators of anxiety and a heightened risk of an anxiety disorder in later adult years.

In addition to the above, Davidson, (2008) suggests that there is a significant number of children who are not identified and that without support experience ‘low level’ mental health needs. These children are at times difficult to identify since they do not present with externalising behaviours (Briesch et al., 2010). Kurtz, (2004) further suggests that upon eventual identification, such cohorts of

children are required to experience lengthy waiting lists to access mental health services which could further adversely affect them and their wider family.

The above suggests that positive mental health is a necessity to secure positive psychological development. Promoting positive mental health in children and young people could equip them with the necessary life skills and encourage them to access support and resources to assist them in fulfilling their potential and in overcoming adversity (Barry & Jenkins, 2007).

Barry & Jenkins (2007) go on to suggest that the prevention of mental health issues aims to reduce the incidence, prevalence or seriousness of already targeted problems, whilst promotion programmes are based upon the premise that mental health and wellbeing are positive concepts that aim to enhance strength, capacity and resources in order that individuals and the wider community are equipped to develop control over their health and mental wellbeing.

3.4 Determinants of health and mental wellbeing: risk, protective and resilience factors

It is suggested that there exists a complex interplay between biological, psychological, social, environmental and economic factors which can potentially be determinants of physical health and mental wellbeing. It is suggested that such determinants reside within the following three main levels: Structural, Community and Individual. With each level there are associated concepts of risk and protective factors. These are consequently argued to have a direct link to both health and mental wellbeing and are elucidated by Barry & Jenkins (2007) who provided the following description of definitions and examples of each concept.

Risk factors are suggested to be those that increase the likelihood that an individual or group will develop a disorder and / or can make existing disorders worse.

Protective factors are those that moderate the impact of stressors and other symptoms of mental wellbeing issues and so aim to reduce the likelihood that a disorder will emerge.

It is suggested that the development of protective factors could then potentially provide protection for children against challenges to their mental wellbeing (Frederickson et al., 2009).

Structural level - protective factors, for example the provision of an environment that is safe and secure, appropriate housing, education and employment with good working conditions, basic needs (food, water, warmth etc.), whilst risk factors being cited as violence and crime within locality, poverty, social and cultural discrimination, lack of supportive services, unemployment and economic insecurity.

Community level – protective factors, for example are aimed at strengthening the community through enhanced social support, inclusion, accepting and also welcoming diversity, opportunities to participate and experience a sense of citizenship at a local level, whilst risk factors are cited potentially as peer rejection, social isolation, separation / loss and experiences of abuse and violence.

Individual level – protective factors, for example, are focused on an individual's ability to manage their thoughts, feelings and regulate their behaviour. Thus, the individual is able to be resilient, manage their life and to cope when they encounter stressors. Risk factors would be potentially physical and / or intellectual disability, attachment difficulties within childhood, low self-esteem, poor coping skills, low self-efficacy. (Examples of risk and protective factors taken from Barry & Jenkins (2007).

When considering the above potential determinants of mental wellbeing, this supports the suggestion of Weare & Markham, (2004) that a 'joined-up' supportive approach seems a highly significant task to undertake in disadvantaged areas where greater numbers of risk factors are potentially experienced by children and young people.

3.5 Are schools best placed to support mental wellbeing?

Both nationally and internationally, the role of schools is increasingly being regarded as key for promoting the mental wellbeing of children and young people. This notion is supported by the fact that children and young people spend considerable time within schools with attendance being compulsory. In addition, school provides a medium of direct daily contact with children, their families and the wider community (Weare & Nind, 2014).

Schools aim to develop not only cognitive development and academic learning skills but also more generic skills for life which include promoting and fostering mental wellbeing, e.g. helping to establish confidence and self-worth, self-control, to establish a sense of identity, interpersonal relationships and a wide range of other transferable skills (Greenberg et al., 2003). Such skills could assist in the development of protective factors and in dealing skilfully when encountering the challenges of growing up at transition times (Newman & Blackburn, 2002). Indeed, the supportive environment with structure and predictability that schools provide could be considered as protective in itself (Lynch et al., 2004). It is also suggested that teachers are in an ideal position to review potential risk factors, playing a pivotal role in identifying and supporting difficulties and disorders including their ability and opportunity in reinforcing, promoting and in turn enhancing protective factors (Koller & Svoboda, 2002).

Most recently, schools seem to be enthusiastic and interested in the promotion of mental wellbeing in congruence with emerging research, some of which indicates the centrality of mental wellbeing to learning and academic success (Weare, 2004). Systematic reviews, which will be explored in more detail later, lend weight to a growing evidence base supporting the delivery of mental wellbeing programmes when implemented effectively within schools. These can provide benefits in the longer term, including fostering improved academic performance, reducing emotional distress, reducing reported conduct difficulties, and improving emotional, social and behavioural functioning (Durlack et al., 2011; Steward-Brown, 2000; Adi et al., 2007; Wells et al., 2003).

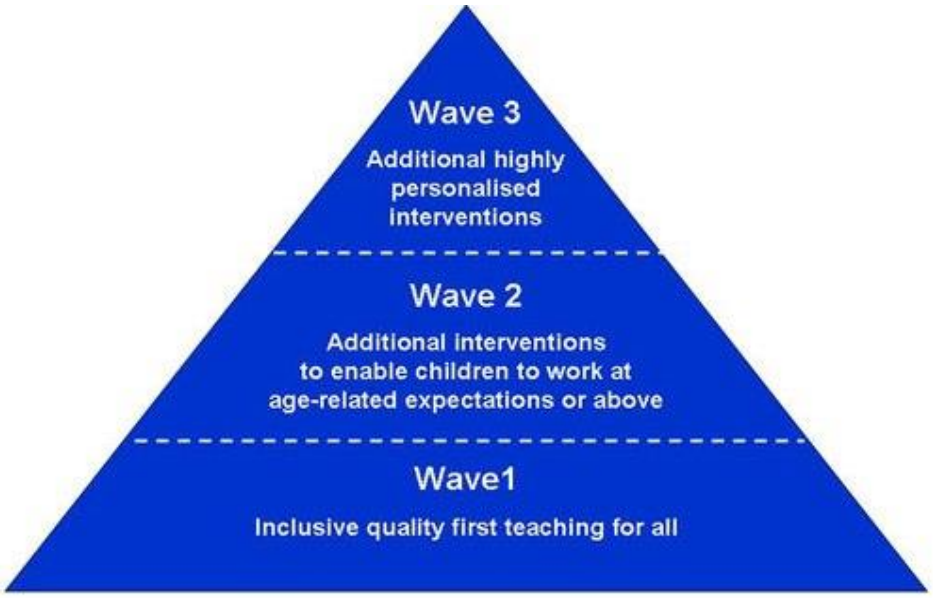
3.6 Delivery of mental wellbeing programmes within schools

The promotion of mental wellbeing can encompass interventions that span a range of levels. These can range from the promotion of positive mental wellbeing, via prevention of problems, through to clinically identifying mental health and wellbeing issues.

The Department for Children, Schools and Families (DCSF, 2008) in England propose the following model to distinguish both need and response to mental health and mental wellbeing.

- **Wave 1** - Universal approaches are aimed at including all children and young people with or without particular problems within the school environment e.g. whole school and or whole class approaches
- **Wave 2** - Targeted approach is provided for those children and young people who are showing clear albeit relatively mild signs of mental health to school staff and / or showing early signs and / or those children deemed within a ‘high risk’ group
- **Wave 3** - Tailored therapeutic intervention is provided for those children and young people who have been identified by professionals as experiencing severe mental health problems (DCSF, 2009a).

Figure 3.1: A diagram to illustrate the National Strategies' Waves of Intervention model (taken from DfES, 2005).



3.7 Britain's education response to developing mental wellbeing

A three year programme starting in 2008 was derived from the Department for Children, Schools and Families (DCSF, 2008) report, setting up the Targeted Mental Health in Schools (TaMHS) project. This had the aim of improving the evidence base regarding effective interventions thereby identifying specific mental health support for five to fifteen year olds who are identified as experiencing mental health problems.

Scholarly reviews suggest that the adoption of programmes to develop mental wellbeing in a school context seem to be the most effective in the promotion of overall health and mental wellbeing (Wells et al., 2001; Stewart-Brown, 2006; Tennant et al., 2007). In addition, the adoption of universal programmes which promote protective factors are suggested to yield the most effect when compared to those which aim to remediate existing negative behaviours (Browne et al., (2004).

Supporting schools to effectively assess, target through intervention, and re-assess needs in this area is, then, arguably, an important undertaking that may

impact positively on pupil outcomes, particularly in terms of promoting positive mental wellbeing. In addition, if effective, it could reduce the demand on mental health services across all age groups (Aked et al., 2009).

The above suggests a significant need for research and intervention geared towards supporting the mental wellbeing of British young people and illustrates the importance of the education system in achieving this. It also illuminates the importance of considering the adoption of universal preventative methods to arrest and potentially minimise the later onset of clinically identified emotional disorders that can have such a pervasive impact upon a young person's life experience.

3.8 Why adopt universal programmes?

Universal interventions are those that are provided to all students in their individual classrooms (Wilson & Lipsey, 2007), as opposed to targeted approaches which are delivered only to those with an identified, specific need. Through a universal approach, all children gain access to potentially proactive and preventative programmes. This can help to reduce the potential stigma for those children most in need of intervention whilst also having a potential benefit to all (Domitrovich et al., 2010).

A rationale for the adoption of universal programmes to develop emotional literacy and mental wellbeing within schools will be presented here. This rationale will be based upon broad reading of the literature pertaining to the effectiveness of universal mental wellbeing promotion and / or prevention programmes. In addition, and as part of this research, an exploration of accumulating evidence on the efficacy of universal prevention programmes in support of emotional literacy and mental wellbeing with primary aged children was conducted via the adoption of a systematic search strategy.

The economic cost of mental ill health to the UK reported by Barry & Friedli (2008), between 2006 and 2007 amounted to over £110 billion. In addition, it is suggested that costs that relate to those who experience some mental wellbeing problems and their related impaired social functioning as opposed to being

identified as experiencing a mental health disorder are not easily measured. These are also most recently under scrutiny (Williams et al., 2005).

Whilst it is acknowledged the obvious need to provide care and treatment for those experiencing mental ill health, there is of equal importance the need to focus on the preventative aspects in promoting mental wellbeing within the UK.

Evidence from systematic reviews and meta-analysis that included the adoption of universal, whole class approach with a focus toward the development of emotional literacy and more broadly mental wellbeing will be presented below.

The following criteria were adopted to identify evidence:

- Population: Children attending primary school settings aged between 4 and 11 years of age
- Evidence selected: National and International research comprising systematic reviews, meta-analysis regarding emotional literacy and mental wellbeing. The selected evidence was restricted to those written in English and reported after 2000.

A summary of key research is found in Appendix 5. The key findings pertinent to this research will now follow.

Interestingly, Wells et al., (2001) Stewart-Brown, (2006) and Tennant et al., (2007) highlighted that programmes targeted at mental health within schools are most effective in the promotion of overall health and wellbeing. Further to this, universal programmes that focus on the development of protective factors yield greater gains than those focussed on the reduction of presenting negative behaviours.

It is worth noting that Adi et al., (2007) in undertaking a review of research to inform The National Institute for Health and Care Excellence (NICE) guidance on universal interventions aimed at the promotion of mental wellbeing in primary

aged children, provided a systematic analysis of published literature pertaining to school based interventions focused on promoting mental wellbeing amongst primary children. This review found evidence to indicate that universal, school based preventative approaches can positively impact upon mental wellbeing.

Domitrovich et al., (2007) suggest universal interventions that embed cognitive, emotional and behavioural skills are essential ingredients in developing socially competent behaviour and positive peer interactions.

Durlack et al., (2011) conducted a meta-analytical review of 213 universal social and emotional development intervention programmes which included a population of 270,034 children aged between 5 and 13 years of age. Findings suggested positive benefits in improved academic performance, reduced emotional distress (pertaining to stress and depression measures); reduced conduct problems and enhanced positive social behaviours and emotional skills for children participating in these programmes compared to their control groups. In addition, Durlack and associates noted that academic achievements were most significant when the intervention was delivered by school staff.

The above indicates positive outcomes when adopting a universal, whole class programme. In addition, it seems that research is developing which is suggestive of an interplay between mental wellbeing and positive outcomes related to educational achievement, skills in positive relationships, productivity within the workplace and also reductions in criminality and harm caused by substance abuse (WHO, 2005).

When reflecting upon the national push towards promoting inclusivity for all children and in supporting long term cost effectiveness by potentially reducing previously unidentified and untreated issues that would have developed into mental health issues, it seems that adopting a universal, whole class programme to develop skills in mental wellbeing may be of benefit for all.

The focus of this next section of the review is to equip the reader with insight into the rationale for adopting ‘mental health’ and ‘mental wellbeing’ terminology

within this research. In order to accomplish this, a brief presentation of theoretical standpoints will be explored.

3.9 Mental health

Whilst the term mental health is a much described concept, there is a distinct absence of a universally accepted definition (Parkinson, 2012). There seems to be a plethora of terms and definitions associated with mental health, with each term seemingly seated within the dominant paradigm that steers the profession; health, social care, youth justice and education (Weare, 2004).

Mental health definitions have changed over time with more recent ideas encompassing concepts in the emotional domain (Goleman, 1996, 1998). The Mental Health Foundation, (1999) suggests that 'good mental health is the foundation of young people's emotional and intellectual growth….Young people who are mentally healthy will have the ability to:

- Develop psychologically, emotionally, creatively, intellectually and spiritually
- Initiate, develop and sustain mutually satisfying personal relationships
- Use and enjoy solitude
- Become aware of others and empathise with them
- Play and learn
- Face problems and setbacks and learn from them
- Enjoy and protect their physical health
- Make a successful transition to adulthood in due course.

Mental health is a broader concept than emotional literacy alone, but this illustrates a direct link between the two.

It is important to remember that mental health is not static and that it can change over time. Good mental health is dependent on many factors and changes to any of these can lead to changes in mental health at any particular time.

Historically, the term mental health has been subject to criticism for implying there is an ideal state of mental health which individuals need to attain (Dogra et al., 2002), and that the term could be regarded as yielding a stigmatising euphemism associated with ‘mental illness’ (Frederikson et al., 2009; Weare, 2004).

The way in which mental health itself is measured is linked to the way in which the term is described and understood. For example, given the simplistic definition of mental health at the time, historical studies utilised scales and surveys to measure the prevalence of mental health problems as the focus was on levels of psychiatric morbidity (Stewart-Brown, 2002; World Health Organisation et al., 2004). As such the concept of mental health seen through a medical model lens could be viewed as categorical. This is evidenced through the use of the DSM-IV, American Psychiatric Association, to aid classification of ‘disorders’ and diagnosis of particular symptoms over a timespan for the development of ‘treatments’ to remediate specific conditions (Carr, 2006).

An alternative viewpoint was suggested by Williams (2005) who proposes viewing psychological problems as dimensional and, as such, that specific problems should be appraised within context.

It has been suggested that mental health could be viewed as two dimensional, including concepts of mental health problems (mental illness, psychiatric morbidity) and mental wellbeing and that these are distinct in their own right (Parkinson, 2012).

Dogra et al., (2002) suggested that mental health problems and mental well-being represent opposite ends of a single continuum. This could potentially explain why the terms mental wellbeing and positive mental health are sometimes used interchangeably. The view of Parkinson, (2012) however is that mental health problems and mental wellbeing have their own distinct continua whereby mental health is a broad, overarching concept encompassing concepts of both mental wellbeing and mental health problems.

Both perspectives describe good mental health as being more far reaching than just the absence of mental health problems and this lends support towards the adoption of the concept of mental wellbeing, described below.

Whilst the ‘dimensional’ and ‘categorical’ debate continues, this research aligns with the dimensional stance and sees it as a better fitting paradigm given this research does not seek to explore individual symptomology but aims to explore the impact of a universal CBT programme on children’s EL and MW.

3.10 Mental wellbeing

As with mental health, there has been a broad range of differing terms and definitions pertaining to mental wellbeing.

Shucksmith et al., (2007) and more recently Parkinson, (2012) reported that The Scottish National Health Service proposes a ‘holistic’ definition of mental wellbeing, which, they suggest, has components which draw from both experience and functioning and as such can be divided into the following areas:

- Subjective experience (also known as emotional wellbeing) – the experience of affect (happiness) and life satisfaction
- Psychological functioning (also cognitive aspects of mental health which includes social and psychological wellbeing) – incorporates concepts such as confidence, energy, creativity, self-acceptance, personal growth and development, purpose in life, competence, autonomy, good relationships with others and self-realisation (Parkinson, 2012, p. 27).

Parkinson (2012) suggested that mental wellbeing is composed of a combination of emotional and cognitive concepts linked to a self-reported sense of wellbeing / resilience when confronted with adversity. This would view emotional literacy as a separate concept in addition to other psychological factors included within mental wellbeing, affecting mental health. It is useful, therefore, to view emotional literacy alongside the notion of mental wellbeing.

Including the term ‘wellbeing’, mental wellbeing can also be linked to understanding the quality of people’s lives (OECD, 2009, Rees, Bradshaw, Goawani & Keung, 2009). The notion of wellbeing alone is wide ranging, encompassing physical, emotional and social aspects and as such could be seen to lack focus. Mental wellbeing however adds detail by describing the more defined concept of psychological wellbeing which includes social and emotional wellbeing. This definition is therefore more aligned and applicable to this research.

3.11 Summary of mental health & mental wellbeing definitions

It seems evident then that mental health is more than simply an absence of mental health problems (Parkinson, 2012) and that it should also include mental wellbeing.

It also seems feasible then to suggest, in line with Parkinson (2012), that the term mental wellbeing refers to a range of attributes (emotional, social and cognitive) that are inextricably linked with individual’s self-declared sense of wellbeing and / or resilience in the face of adversity. In light of the above information the term mental wellbeing will be the term adopted and used throughout this particular research.

The literature will now turn its attention to exploring the notion of ‘emotion’, before moving onto a more substantive exploration of the notion of emotional literacy.

3.12 Emotion

> *“An emotion is a complex psychological state that involves three distinct components: a subjective experience, a physiological response and a behavioural or expressive response”.* (Hockenbury & Hockenbury, 2007).

It is generally accepted that emotions have the following parts, subjective (feelings), physiological (bodily) response and behavioural (expression).

3.12.1 The subjective experience

Whilst it could be acknowledged that there exists a basic universal set of emotions that individuals experience that are not bound by culture and ascribed broad labels such as ‘sad’ or ‘happy’, researchers propose that the experience of emotion can be highly subjective. It is suggested, that whilst we may indeed have broad labels in common (e.g. ‘happy’ or ‘sad’), experiences may be unique to a particular individual and potentially be multi-dimensional. ‘Sadness’ is not always uniform, nor is its intensity in response to particular triggers. (Hockenbury & Hockenbury, 2007).

3.12.2 The physiological response

Physiological responses triggered by emotions are reportedly the easiest of the emotional responses to measure. Emotions can elicit strong physiological responses that can vary in severity (e.g. sweaty palms, rapid breathing, heart palpitations and ‘lurches’ of the stomach) and can be measured with scientific accuracy. Similar internal responses are experienced regardless of age, race or gender resulting in the release of adrenaline, which in turn prepares the body to either run away or fight. Such physiological responses from experienced emotions are controlled by a branch of the autonomic nervous system, namely the sympathetic nervous system (SNS). The SNS, when faced with threat, will enact the body’s ‘fight or fight’ reactions in order for the body to prepare itself to keep safe. Some studies have also explored the amygdala (part of the limbic system within the brain) and its role in the response to emotions and in particular fear. The above demonstrates the impact emotions can potentially have on our physiological responses. (Hockenbury & Hockenbury, 2007).

3.12.3 The behavioural response

The observed behavioural response is the actual expression of emotion, whether through action and / or a verbal medium. Outward signs of emotions can include fainting, muscle tensing, a flushed face, various facial expressions, ‘tone’ of voice, rapid breading and restlessness amongst other various body language displays. This outward expression of emotion provides others with clues to what an individual is experiencing and also assists them to regulate their social interactions. It is the individual’s ability to accurately understand and respond

appropriately with these expressions that some psychologists call emotional literacy (Hockenbury & Hockenbury, 2007). For example, if a person is experiencing fear, a possible behavioural mechanism would be to run away from the fear factor

3.12.4 Emotion theories

There are a number of theories on emotion. One that seems particularly pertinent to this research which will be described below is the Schachter and Singer (1962) Two-factor theory of emotion.

Schachter & Singer's Two-factor theory of emotion incorporates both James-Lang theory and Cannon-Bard's theory of emotion. It is regarded as a cognitive theory of emotion. It is suggested that physiological arousal of the individual occurs prior to the individual identifying the reason behind the arousal in order to label it as an emotion. So, a stimulus elicits a physiological response which then is cognitively interpreted, labelled and so results in an emotion being identified. Schachter & Singer (1962) further suggested that depending on the external context, associated physiological responses may lead to the attribution of differing emotions. While their research experienced some methodological criticism due to the observations of subjects being covert and motivated by extrinsic rewards for their participation, the experiments which were conducted provided valuable insight and contribution to the study of emotion (Hockenbury & Hockenbury, 2007).

The above provides a definition of emotion and its centrality to how individuals think, feel and behave. Emotions can motivate an individual to take action e.g. to revise in order to raise performance in an exam. Feelings can assist individuals in thriving, surviving and avoiding danger, understanding themselves and others, and to make decisions. It is acknowledged therefore that the concept of emotion is integral to this research and to constructs embedded within the notion of emotional literacy which is explored in the following section.

3.13 Emotional literacy and emotional intelligence: introduction

The forthcoming review will aim to consider the definitions, historical origins, theory and debate surrounding emotional literacy (EL) and its related or associated term, emotional intelligence (EI). The literature will also propose EL's suggested potential importance in inclusion within education.

3.13.1 Emotional literacy and emotional intelligence: definitions

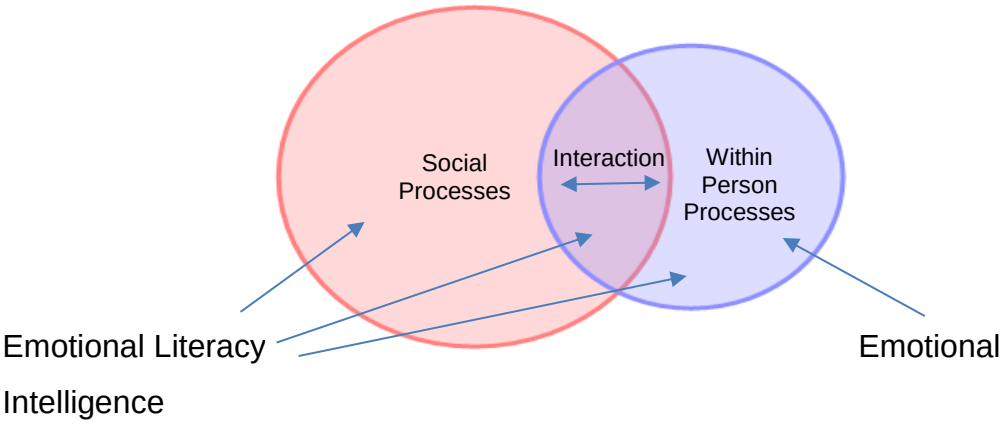
It should be acknowledged that there is an absence of international agreement regarding distinguishing between definitions of emotional intelligence and emotional literacy: these terms have often been used interchangeably (Claxton, 2005; Park, 1999). It has been suggested that this is due to there being a lack of qualitative differences between them (Humphrey et al., 2007; Perry et al., 2008). It is suggested that given the lack of evidence suggesting that EI and EL describe qualitatively different concepts, a single term should be adopted to facilitate progress within this area (Perry et al., 2008).

There is also disagreement amongst some authors who raise the suggestion that EI and EL should be treated differently, proposing EI to be referenced in terms of individual's emotional abilities and EL to be used when describing a process of interaction that develops understanding (Haddon et al., 2005).

Weare and Gray, (2003) propose that the terms EI and EL should be made redundant and replaced with 'social and emotional competence and well-being'.

Whilst acknowledging the variation in stances adopted regarding definitions, there does seem to be some identifiable differences in the use of EI and EL terminology. It is suggested EI emphasises individual qualities (Carnwell & Baker, 2007; Coppock 2006; Salovey & Mayer, 1999) whilst EL makes references towards both internal and social processes as well as exploring the interaction between the two processes (Haddon et al., 2005; Steiner and Paul, 1997).
The distinction between EI and EL as described above is illustrated in the diagram below:

Figure 3.2: A diagram to the distinction between emotional intelligence and emotional literacy.



3.13.2 Emotional intelligence: origin and theory

It is suggested that the term emotional intelligence has been derived from a number of noted theorists including Thorndike, (1920) whose model of intelligence gave birth to the concept of 'social intelligence' and later Gardner, (1983, 1995) who formulated his theory of 'Multiple Intelligences' within which he identified several discrete intelligences incorporating:

- Conventional intelligence
- Personal intelligence
- Intrapersonal intelligence
- Interpersonal intelligence.

Salovey & Meyer, (1990) are accredited with creating the term Emotional Intelligence which they considered essentially addresses the personal appraisal and expression of emotions. Salovey & Meyer, (1990) suggest the following abilities comprise EI:

- Knowing one's emotions
- Managing emotions
- Motivating oneself
- Recognising emotions
- Handling relationships.

Salovey & Mayer, (1997, p. 10) define the concept of EI as *'the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion and regulate emotion in the self and others'.*

Goleman, (1995) suggested that two of the discrete intelligences referred to by Gardiner, namely the 'Interpersonal' (the ability to respond in an appropriate manner towards others' emotions) and the 'Intrapersonal' (the ability to connect with one's own feelings (introspection) were most important and related to a person's emotional intelligence, since they centre on a general sense of self and appraisal of others as opposed to their 'intellectual' capability. Consequently, Goleman suggested that EI could be considered an overarching term joining the intra and interpersonal aspects of intelligence.

Emotional intelligence was claimed to be popularised by Goleman, (1996) through the publication of 'Emotional Intelligence – why it can matter more than IQ' which presented an array of social and emotional competencies.

Goleman, (1996; 1998) defined the following five social and emotional competency domains:

- Self-awareness
- Self-regulation
- Motivation
- Empathy
- Social skills.

Goleman drew together a body of knowledge that claimed emotional intelligence is highly pertinent and attributable to personal, career and academic successes. This drew criticism for being considered as overstated (Mayer et al., 2008). In addition, EI is criticised for the absence of a consistent definition of the construct, without an evidence base to substantiate it and also in its suggested lacking in a theoretical framework (Woodruffe, 2001). In defence, however, Zeidner et al., (2004) suggested that the criticised limited body of research and associated

evidence base could be considered consistent with a new construct emerging and may develop over time.

Despite critics, Goleman's work heralded increased popular attention regarding the development of the domains which seem to map, in a broader sense, onto those of Salovey & Mayer (1990). Whilst Salovey & Mayer suggest there is distinction between their ability based model and that of Goleman's competency domains, it could also be suggested that they seem to be attempting to explain the same terms, yet use them in slightly differing ways.

Weare, (2004) suggests that the above notions and reported various outcomes seem to have led to the conceptualisation of social and emotional competencies. Such competencies will be explored in more detail later in this chapter.

There is acknowledgement that the term emotional intelligence historically stems from the USA. Within the UK, where this research is conducted, the term emotional literacy is more prevalent and preferred by practitioners (Weare & Gray, 2003). This term is discussed below.

3.13.3 Emotional literacy: origin and theory

Claude Steiner, a clinical psychologist and transactional analyst was the author attributed to coining the term 'emotional literacy'. Steiner and Perry, (1997) utilised this term to describe the following abilities:

- Understanding your emotions
- Listening to others
- Empathising with others emotions
- Expressing emotions productively.

Sharp (2001, p. 1) offered the following definition of emotional literacy;
'Emotional literacy may be defined as the ability to recognise, understand, handle and appropriately express emotions'.

Weare (2004, p. 2) describes emotional literacy as:
'*the ability to understand ourselves and other people, and in particular to be aware of, understand and use information about the emotional states of ourselves and others with competence. It includes the ability to understand, express and manage our emotions and respond to the emotions of others in ways that are helpful to ourselves and others'.*

The above definitions of EL seem indicative of a broader social construction compared to the construction of EI discussed above, which seems to lean more towards an individualistic stance.

This elucidation of emotional literacy as a social construction marries with the work of Faupel, (2003) and his colleagues from Southampton who designed the Southampton Emotional Literacy Resource (SELR); a standardised resource to measure emotional literacy that takes into account and makes a distinction between personal and social competencies. It is this resource that is one of two measures utilised within this research and for that reason it is given fuller appraisal within the methodology section.

Whilst within the UK the preferred terminology is that of 'emotional literacy' it is pertinent to note that whilst Faupel, (2003) uses the term emotional literacy, the resource he designed is based on Goleman's (1995) domains of competency linked to the notion of emotional intelligence.

Faupel, (2003) highlights the following personal and social competencies which comprise emotional literacy that are based upon Goleman's (1995) work and which form the competencies for which this research's intervention aims to develop:

Personal competencies

- Self-awareness - developing the ability to recognise and understand our own emotions, preferences, strengths and weaknesses. This is the competency that is considered the foundation on which emotional literacy is seated.
- Self-regulation - developing the ability to manage emotions and in turn regulate impulses in order to express emotion appropriately. Thus, the aim is to decrease reliance on both external sources and environmental factors in steering undesirable behaviours. Self-regulation involves self-monitoring, self-evaluation and self-reinforcement (Kanfer & Scheftt, 1988).
- Motivation - is understood to be the feeling leading to the incentive to act. Faupel, (2003) raises the notion of lack of clarity of the distinction between intrinsic and extrinsic motivation.

Social competencies

- Empathy - the capacity for understanding and sharing of another individual's feelings or ideas
- Social skills - there is an absence of agreed definition of social skills but broadly it is considered a set of skills which individuals use to interact and communicate with each other.

Faupel, (2003) suggests that emotional literacy is a crucial component of child development and as such EL should be a primary aim of schooling. He further suggests:

'The emotional literacy of the peer group, of teachers and of learning support assistants are all important contributions to the emotional development of the individual pupil. So, it is meaningful to think in terms of emotional literacy of classrooms, schools and even LEAs' (Faupel, 2003, p. 6).

3.13.4 Emotional intelligence and emotional literacy: differences and similarities

It is important to acknowledge the differences and similarities between EL and EI, and these will now be explored in further detail and in relation to the current research.

Being advocates of EL, Goleman (1996) and Steiner & Perry (1997) emphasise in their definitions the desired ability to recognise and manage individual feelings, to read the emotional behaviour of others and to use these in combination towards the understanding of ways to interact and to develop positive relationships.

The term ‘intelligence’ is considered by some a construct that aligns itself with the connotation of being inherited, predestined and stable and as such could be considered akin to traditional views of intelligence, namely Ability Theory, (Salovey & Mayer, 1990). In contrast, the term ‘literacy’ alludes to being a developmental, malleable construct, and not considered static.

Emotional intelligence is approached from an ‘ability’ perspective by Mayer et al., (1999) and as such is regarded as a cognitively based model utilising performance testing, alluding to a hierarchical progression ranging from basic to more complex abilities whilst the ‘trait’ approach, aligning with Goleman (1998), is viewed as a dispositional affect and is embedded in domains of ‘competencies’. This lends itself to the use of self-report questionnaires as an appropriate measuring tool.

It is interesting to further note that a three tiered model has been recently suggested (Mikolajczak, 2009) combining both ‘ability’ and ‘trait’ approaches. However, this is beyond the scope of this research and is currently without any empirical evidence base.

It is appropriate to note that the distinction between the above ‘ability’ and ‘trait’ approaches is reportedly akin to different constructs (Petrides & Furnham, 2001) and determined by the measurement method adopted. Whilst Goleman, (1996)

used the term emotional intelligence, the use of ‘intelligence’ within the theoretical approach seems to be that seated as ‘trait’ and considered aligned to developmental and not ‘ability’ aligned to connotations of a fixed, static state.

As previously mentioned, Faupel, (2003) used Goleman’s domains of competencies as a basis for the development of the Southampton Emotional Literacy Resource for use with children and this resource adopts a trait approach measure.

Whilst it is acknowledged that there are some areas of cohesion, there remain limitations regarding alleged inconsistencies of EL & EI and such criticism is further compounded by Locke, (2005) who is critical of the theoretical research base for EI, suggesting it lacks validity. Further to this, there is a distinct lack of empirical evidence to support models proposed by the authors in this field, namely Goleman, (1995); Steiner, (1997); Savoley & Sluter, (1997) & Faupel, (2003).

Criticism has also been raised regarding Goleman’s claims that EI is a better predictor of success than IQ and there remains little to substantiate such claims. EI has been referred to by critics as ‘pop psychology’ (Mayer, Roberts & Barsade, 2008). Goleman makes reference in his writing to EI as denoting an individual’s ‘character’, yielding further claims that such a concept doesn’t contribute anything more than is already known by those working in the field of personality and that EI is indistinguishable from the major personality dimensions. However, Petrides and Furnham, (2003) have demonstrated the discriminant and incremental validity of trait EI against the ‘Giant Three’ (psychoticism, extraversion, and neuroticism) and the ‘Big Five’ (extraversion, neuroticism, agreeableness, conscientiousness and openness to experience) personality dimensions.

In this research, the term emotional literacy will be adopted. The concept of EL is shaped by the notion that it alludes to progressive emotional development. The use of the term ‘literacy’ is viewed as malleable, helpfully avoiding possible negative connotations that could be inferred from the label ‘intelligence’ which could be seen to imply a more fixed, innate state. By viewing EL in this way, it

could be viewed that EL encompasses a set of skills seated within mental wellbeing that can be pursued, taught and encouraged (Weare, 2004). Consequently, it could be deemed a useful way of practically applying the concepts that were originally presented in the USA based EI within a UK school context.

3.13.5 Cross-cultural considerations

There are notable cross-cultural considerations that are pertinent to consider when discussing EI & EL, namely those put forward by Ekman (1992), who detected that individuals from isolated cultures were able to reliably identify the expressions of emotion when presented with photographs of individuals and were able to link facial expressions to descriptions of certain situations from cultures that were not familiar to them. Ekman suggested that some emotions were noted to be basic and or biologically universal to all, whilst other researchers, namely Ecclestone & Hayes (2009) are critical about the cultural assumptions adopted by proponents of EL, suggesting that it cannot be assumed that findings regarding emotional and social competencies can be generalised to non-Western societies (Saarni et al., 2006).

3.14 Does mental health and mental wellbeing link with emotional literacy?

Within an array of literature, some highlighted above, it is acknowledged that emotional intelligence and emotional literacy have on occasion been used interchangeably alongside mental health and mental wellbeing, all of which have previously been proclaimed as a *'linguistic minefield'* with a lack of consensus reported between authors over the broad use of the terms and relating to their lack of agreement regarding a definitive meaning (Weare, 2004 p. 1).

In addition, some definitions of mental health are reported to include aspects defined within emotional literacy. For example some mental health definitions include social and emotional competencies such as 'empathy' (Goleman, 1998).

Emotional intelligence and emotional literacy have been considered key for children's mental wellbeing and some theorists have encapsulated these terms

within the definition of mental wellbeing (Blair et al., 2010). Others consider such constructs as distinct from each other and from mental wellbeing, with further suggestions of them being in addition to other psychological constructs that contribute to mental wellbeing (Parkinson, 2012).

However, there appears to be a close link between the levels of emotional literacy (along with associated definitions) and 'positive' mental health and mental wellbeing. Indeed, the Mental Health Foundation (1998) stated that '*emotionally literate children are less likely to experience mental health problems and, if they develop them, are less likely to suffer long term'* (cited in Coppock, 2007).

3.15 Summary

For the purpose of this research and given their direct link with education, the terms emotional literacy and mental wellbeing will be adopted.

- **Emotional literacy**: refers to the understanding and application of skills of clearly defined emotional and social competencies.
- **Mental wellbeing**: refers to the wider encapsulation of emotional, social and psychological concepts and their attributes which includes emotional literacy due to its congruence with psychological aspects of wellbeing.

The researcher will take the perspective that emotional literacy and its associated emotional and social competencies may contribute to children's mental wellbeing and that mental wellbeing may contribute to children's emotional literacy. The overarching term that best describes the notion under investigation in this study is 'mental wellbeing'.

The reader should assume mental wellbeing to include aspects of emotional wellbeing, psychological wellbeing and social wellbeing. It might also be helpful to acknowledge that whilst the notion of mental wellbeing being employed here has elements in common with emotional literacy, again it goes beyond the traditional scope of the latter term. Finally, the reader should note that whilst an emotional literacy measure is employed to evaluate the impact of the programme

under investigation, this is not the only measure employed i.e. the evaluation goes beyond the more specific notion of emotional literacy: hence the notion of mental wellbeing will form the foundation for the research, and these terms will be used throughout the following thesis.

This researcher does however acknowledge the prevalence of newer terminology. It also seems evident that the conflicting terminology offered internationally and within the UK is confusing, and could potentially impact collaboration within this important field. It would therefore seem prudent for future multi-national consultation to reach agreement on a common acceptable terminology.

3.16 UK based universal mental wellbeing promotion and prevention programmes

As a response to the burgeoning interest in the area of mental wellbeing and in light of the rationale that underpins universal oriented programmes as described above, moves within the UK have been made towards developing universal support in order to promote children's mental wellbeing and competencies associated with emotional literacy.

It was further anticipated that universal promotion and preventative approaches could have a positive, widespread and cost effective impact upon effective learning, behaviour and school attendance in Britain's children. Most notably used as a universal intervention was the Social and Emotional Aspects of Learning (SEAL) (DfES, 2007) curriculum in UK schools, this being aimed at developing children's social and emotional skills.

3.17 Social and Emotional Aspects of Learning (SEAL)

SEAL has been developed for both primary (DfES, 2005) and secondary school children (DfES, 2007a). It is the former Primary SEAL implementation that will be covered within this review since it falls within the age range of participants included in this research.

The historical underpinnings and influence of SEAL originate from the American programme, Social and Emotional Learning (SEL) which was reported to be a rapidly developing area in America. It is worth clarifying that SEL could be considered the American equivalent to British emotional literacy.

In addition to considering American intervention developments in this area, the British government of the day commissioned Weare & Gray, (2003) to conduct research to inform how, at a national and local level, the social and emotional development of children could be supported.

Wear & Markhams', (2005) research lends further support to the school being a key place to foster the promotion of mental wellbeing. Pertinent to such skill development, teaching staff could be seen to play a vital role in the assessment and delivery of the intervention (National Institute for Health and Clinical Excellence, 2008).

Within the SEAL design, the DfES (2006b) acknowledge similarities with and links to the notion of emotional literacy, suggesting SEAL aims to address all of the identified components as outlined in the above section on emotional literacy.

The employment of SEAL in schools was considered to provide a comprehensive, whole school approach to facilitating the development of children's skills regarding their social and emotional development. Furthermore, it was designed to be seated within the Primary National Strategy (DfES, 2005) as previously described and spanned the three 'Waves of Intervention'.

SEAL was developed to promote the following key social and emotional skills that are seated within Goleman's (1995) emotional intelligences and more recently noted to be consistent with Faupels' (2003) Southampton Emotional Literacy Resource:

- Self- awareness
- Self-regulation

- Motivation
- Empathy
- Social Skills.

Hallam et al., (2006) and Hallam, (2009) provide evaluations of the SEAL approach, primarily as part of the 'Behaviour and Attendance' pilot. This in part included the use of SEAL at Wave One, which is particularly relevant to the present research. The evaluation was produced in part, investigating the connection between the SEAL programme and the promotion of positive behaviours and effective learning and wellbeing in primary aged children at a universal, whole school level.

A range of designs and research methods were employed (Hallam, 2009); these included questionnaires and structured interviews used with school staff and pupils in evaluating the SEAL materials. However, both reports were vague as to the exact methodologies used, and so should be viewed with caution. It is also worthy to note that this systemic intervention approach to developing the social and emotional needs of children within school seems to assume that certain elements (school ethos, policies and staff knowledge and understanding) are effectively operational and already established.

With reference to the social and emotional aspects of mental wellbeing, both evaluations reported some positive findings of a qualitative and quantitative nature pertaining to teacher reportage regarding their perceptions of participant increased confidence, increased co-operative play and varied engagement with peers from differing backgrounds following intervention. Children's pre and post data from Key Stage 2 and the children's response to interviews demonstrated the following positive results:

- Children were perceived as more supportive of each other
- Peer relationships were believed to be stronger
- Children developed increased emotional vocabulary
- Children demonstrated greater personal responsibility for their actions

- Children showed improved turn taking, and sharing
- Children showed understanding of another's perspective.

However, there were some methodological drawbacks which include the following:

- Response returns were derived from teachers and were from a very small sample
- There was no control group included within this research. Therefore such data should be viewed with caution
- The schools involved within this research were invited and not randomly selected
- The extent to which schools implemented the materials varied
- Frequency of delivery varied enormously
- A variety of professionals delivered the materials, therefore treatment integrity could not be assured.

Hallam (2009) found gender to be a predictor for all responses in Key Stage 2 with the sole exception of social skills and relationships.

Hallam, (2009, p. 329) concluded, *'Overall, the SEAL programme was successful in individual schools'*. This is in relation to the extent to which it reflected the key elements outlined by Maxwell et al., (2008).

One should note, however, that Craig, (2007) raises many criticisms regarding the research of Hallam et al., (2006) questioning the validity of the reported positive outcome measures, limited inclusion and review of parental views and lack of a control group. Craig, (2007) further criticises and indeed offers a very different interpretation of Hallam's finding on exclusions and suggests that the presentation of data made it difficult for readers to interpret. Banerjee, (2010) also noted a further potential drawback is the absence of a longitudinal plan that incorporates a longitudinal study.

The DfES, (2005) formal guidance for the implementation of SEAL does not reinforce a set way of delivery: *'The SEAL resource is built on the premise that each school or setting should find its own way into, and use for the materials'* (DfES, 2005, p. 11). Wide ranging variations in the delivery of SEAL within differing schools does not yield, upon analysis, a clear picture of the effectiveness of SEAL and this has been raised critically by Humphrey et al., (2008) and Humphrey et al., (2010).

However, with reference to Wave Two, Humphrey et al., (2010) conducted an important piece of research into a brief social and emotional intervention called 'Going for Goals' which used part of the SEAL programme materials. The following is a brief summary of this research:

- The aim of Humphrey et al., (2010) was to explore the impact of 'Going for Goals' on the social and emotional skills, behaviour and wellbeing of 182 children spread across 22 primary schools who were between the ages of 6 and 11 years. 102 children took part in the intervention and 80 formed the control group.
- The 102 children within the intervention group took part in a 45 minute small group session spanning and 8 week period.
- Pre and post data were collected from parent, teacher and child self-report through the use of the Southampton Emotional Literacy Resource (SELR) and the Strengths and Difficulties Questionnaire (SDQ).
- Upon statistical execution of the pre and post data, favourable outcome measures were noted in pupil self-report and teacher responses lending support to small group intervention having a positive effect with reference to the social and emotional skills of children who had previously been identified for additional support in such areas. It is worthy to note, however, that the effect size calculated was considered small. Positive outcomes were also found in the reduction of previously identified emotional and behavioural difficulties which showed a small to medium effect size. Data derived from parents elicited null results.

According to Humphrey et al., (2010), their research reflected similar findings to those found previously by Larkin & Thyler, (1999) with both studies demonstrating improvements in self-esteem, self-control and in diminishing difficult behaviour. Interestingly, the design structure and participants of Larkin & Thyler's research were also similar to those of Humphrey et al., (2010) in the following areas:

- Age of child participants
- Child profile
- Length and intensity of intervention
- Content.

Humphrey's et al., (2008) & Humphrey et al., (2010) suggest the following potential reasons for 'null results' being derived from parental data:

- The inability of the child participants in generalising taught skills beyond the school setting. Such a notion concurs with previous research reportage by parents following similar interventions
- Lack of parental involvement provided after consent was given that their child could take part in the intervention
- Some child / participant's unique home circumstances are suggested as a potential barrier to positive outcome measures.

Further interesting research can be found in the form of a case study provided by the DfES, (2007a) depicting a school's implementation of SEAL. In this case, the intervention adopted a whole-school approach (assemblies, lessons, visual supports for SEAL) in addition to the adoption of small group delivery and liaison with parents. However, whilst interesting, there is an absence of an explanation as to how the data were collected and how it could be deemed reliable, valid or generalisable. There was also an absence of justification of treatment integrity.

Overall, it does seem apparent from the above that social and emotional skills provision within British schools aimed at whole school, whole class and targeted

approaches could potentially yield positive impact with a view to maximising positive outcomes for aspects of children's mental wellbeing. However, it seems that there is little robust evaluation of Wave One, universally delivered Primary SEAL despite its widespread use in British schools (Weare, 2010).

3.18 An introduction to Cognitive Behaviour Therapy

Knowledge, understanding and associated research findings pertaining to Cognitive Behaviour Therapy (CBT) is fundamental to this research. This section will aim to consider CBT's historical origins, definitions, theory, methodology, research, and debate. The literature will also propose CBT's usage with primary aged pupils to hold potential importance in its inclusion within education in the form of universal, whole class delivery. This would be proposed to lend evidence towards a UK CBT resource as a medium to promote emotional literacy and more broadly mental wellbeing.

3.19 Cognitive Behaviour Therapy

NICE Guidelines, (2005) encourage the use of CBT for the treatment of those who experience mental ill health. Most recently in the UK, the Improving Access to Psychological Therapies (IAPT) initiative by the National Health Commissioning has adopted CBT as a cost effective, first line intervention for those who require therapeutic support (Rachman & Wilson, 2008). CBT programmes have additionally been utilised not solely for identified individual mental health support, but also used as targeted and universal intervention.

3.19.1 What is CBT?

The empirical foundation from which CBT stems is from Ellis, (1957) Rational Emotive Behaviour Therapy (REBT) and Beck et al., (1979, 1990); Beck, (1985) and Emery, (1985).

CBT is suggested to be the synthesis of two separate parts of psychotherapy, those of behaviour therapy and cognitive therapy.

'The fundamental maxim behind cognitive-behavioural theories is that thinking, emotion and behaviour are inextricably involved with each other. Self-defeating

*behaviour is related to self-defeating thinking, which in turn is related to feeling 'down" (*Rogers, 1994, p. 46).

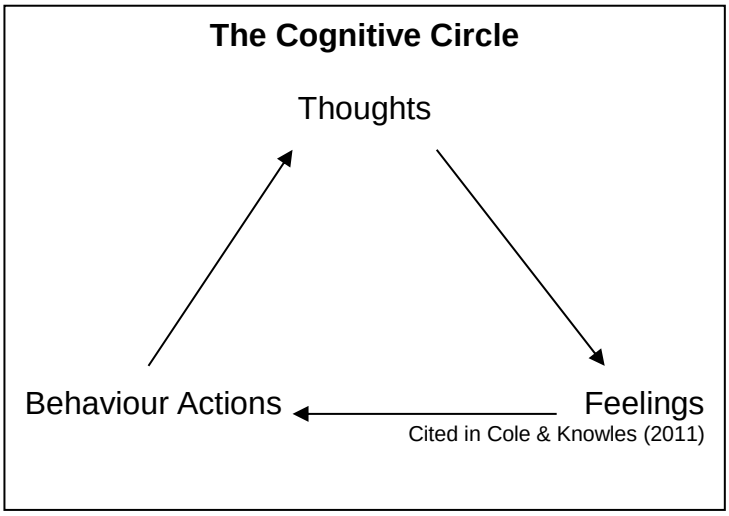
The theory that drives CBT as a model is based on the premise that what a person feels and does is influenced by what an individual thinks and how he / she perceives situations. The aim is to develop learning to identify unrealistic or unhelpful thoughts, (commonly termed cognitive distortions or faulty thinking) in order to assist in acquiring skills to change feeling and behaviour (Squires, 2001).

Embedded within this is the focus on cognitive distortion as opposed to a deficiency in cognitive skills. Whether cognitive distortions are present when an individual is in an appropriate emotional state or whether they are present beforehand and therefore could contribute to the development of the emotional experience is raised by Williams et al., (1997). Some children who experience difficulties in mental wellbeing could be considered to process information in a distorted manner. This may be coupled with a deficiency in cognitive processing skills which could lead to limited development in their problem solving skills (Kendal, 1985).

CBT practitioners propose that it isn't the actual events or situations which elicit emotions or behaviours, but the individual's beliefs, deeply entrenched thought patterns (known as automatic thoughts) and cognitive distortions that determine their feelings and subsequent actions to arising situations. It follows that through challenging the way in which one thinks about a presenting situation, one can impact on the way they behave within that situation (Toland & Boyle, 2008).

The above can be illustrated by the Cognitive Circle shown below:

Figure 3.3: A diagram to illustrate the triadic interactions that form the Cognitive Circle



Beck et al., (1990) outlined the following CBT determinants for individuals to develop:

- To understand and clearly be able to identify relationships between cognition, feeling (affect) and behaviour
- To develop greater awareness of one's own personal thoughts, to identify cognitive distortions and distorted automatic thoughts
- Adopt logic, reasoning and empirical testing to develop appropriate responses to presenting distorted thoughts
- Swap distorted cognitions for balanced thoughts thereby modifying long established dysfunctional assumptions and deep seated concerns
- To develop plans of action towards securing new patterns of thought.

It is therefore suggested through the use of CBT, the individual with the aid of a skilled CBT practitioner will be able to explore alternative ways of thinking and problem solving strategies that will aid them in interpreting more rationally their thoughts, feelings and behaviours. Within this collaboration, the individual plays an active role in both identifying goals for development and also in monitoring their progress. Encouraging the practice of newly developing skills is argued to

lead to alternative patterns of thinking and positively affect behaviour. CBT is seated within the ‘here and now’ and requires active participation to elicit change.

Hofmann, (2011) suggests contemporary CBT refers to a family of interventions that combine a variety of cognitive, behavioural, and emotion-focussed techniques and as such, whilst there is great emphasis on cognitive factors, what are also recognised are the physiological, emotional and behavioural components and the roles that such can play in the maintenance of difficulties.

3.19.2 CBT with children

Stallard, (2009) suggests that ‘faulty’ thinking patterns in children can lead to negative behaviours and emotions (e.g. dizziness, anxiety, experiencing a rapidly pulsating heart beat and feeling nauseous amongst others). As such, a child displaying ‘faulty thinking’ can develop behaviour that allows them to avoid situations they perceive as stressful to make themselves feel safe. This may lead to maladaptive behaviour and maybe even the development of mental health issues later in adolescence and into adult life.

Hoffamn et al., (2012) conducted a review of meta-analyses of the efficacy of CBT, his findings suggesting that the adoption of CBT approaches yield positive outcomes with large effect sizes noted when used with children for anxiety (Santacruz et al., 2002; James et al., 2005). Medium effect sizes were noted in relation to obsessive compulsive disorder (Guggisberg, 2005, Barrett et al., 2004) and depression (Santacruz et al., 2002). Other noteworthy research included postive impact on Chronic Fatigue Syndrome (Stulemeijer et al., 2005) and social phobias (Spence, 2000).

Whilst the above reported outcomes for children accessing individual CBT appear positive, limitations are suggested regarding limited consistent measures explored regarding longer-term benefits to children. A further limitation could be that the core features of CBT have not entirely been defined as distinct from that of behaviour therapy (Stallard, 2005).

3.19.3 Considerations when engaging children in CBT

Durlack et al., (1991) conducted a meta-analysis which indicated that the level of a child's cognitive development was found to be the sole indicator correlated with the effectiveness of CBT intervention. The success rate of CBT was reported to be double in children aged between eleven and thirteen years old compared with those aged between five and seven and those between eight and eleven years old.

Further support for the findings of Durlack et al., (1991) was offered by Shirk, (2001) and latterly Sukhodolsky et al., (2004), reporting that whilst their meta-analysis did not prove to be statistically significant, they did report a larger effect size for the adolescent age band (fifteen to seventeen) compared to a much smaller effect size for the child age band (seven to ten year olds). These two studies therefore lend support to the view that the greater the child's cognitive ability, the more effect a CBT intervention is likely to have on a child. It is worth noting that in the research of Durlack et al., (1991) interventions were not employed for 'typical' children – rather, intervention was geared towards the treatment of psychopathology (Stallard, 2005).

In response to Durlak et al., (1991), Stallard, (2005) highlights in his 2005 'A Clinician's Guide to Think Good - Feel Good: using CBT with children and young people', the contribution of Thornton, (2002) suggesting caution and limitations regarding a sequential staged model of the development of cognition, suggesting that if children are provided with appropriately pitched instructions, they are able to engage in demanding cognitive tasks. Further support to the above is suggested by Friedberg et al., (2000) and Ronen, (1997). Harrington et al., (1998b) offers further support reporting that CBT predominantly requires concrete thinking rather than cognitive processes requiring abstract conceptual processing.

Stallard, (2005) suggests that clinicians who use CBT need to be mindful to differentiate their intervention in accordance with the child's / children's ability. Stallard additionally suggests that children of this age range may find precise, concrete techniques (such as self-talk) beneficial coping techniques. He goes

further to say *'there is an emerging clinical view that children aged 7 years and above can effectively engage in child-focused CBT'* (Stallard, 2005, p. 94).

A final consideration which is applicable to all talking therapies would be to ensure that the child holds sufficient language skills (Rait, 2010). It is suggested that this could be done through careful analysis, and to avoid making assumptions regarding a child's receptive and expressive language abilities.

3.19.4 Research into the effectiveness of CBT in developing Emotional Literacy and Mental Wellbeing

Exploration of the research literature around CBT suggests that there is considerably more research pertaining to single case application of CBT than to group CBT application – i.e. applications with groups, whole classes or at a truly universal level.

The focus within this literature review, in line with the focus of the research itself, will therefore now turn to CBT interventions aimed at the universal, whole class level.

3.19.5 Research regarding CBT delivered within a universal context

Whilst not as prevalent as individually focused CBT approaches, some universal CBT based programmes have now been developed that aim to enhance aspects of mental wellbeing which have been increasingly subjected to research evaluation. Presented below is an outline of the literature search strategy used to capture such programmes and associated research pertinent to this study.

- Search terms used: Emotional literacy, emotional intelligence, children, cognitive behaviour therapy, mental health promotion, prevention, mental well-being, whole class, universal intervention, programme. All possible combinations of the search terms above were used in order to identify relevant literature.

- Data bases utilised: PsycINFO, ERIC and ASSIA. In addition, Google Scholar was utilised in order to further establish articles from citations that had not been captured within the preliminary search.
- Selection criteria consisted of peer reviewed journal articles published after 2000.

Findings following a preliminary screen indicated that out of a total of 441 articles that were captured within this search across all databases, 21 were found to be duplicated and omitted with the total being 420.

A further screening took place using the following inclusion criteria in order to locate the most relevant studies to the area of particular interest:

- Population: Children between the ages of 8 and 11 years old in mainstream primary education or whereby research predominantly included this age range. Studies within and outside of the UK were included if English speaking.
- Intervention: Only CBT based interventions that were delivered to the whole class and which aimed to enhance children's emotional literacy and / or mental wellbeing. Those interventions which included substantive aspects (main focus) pertaining to developing social and emotional competencies were included.
- Design: The studies included should measure aspects of children's emotional literacy and or mental wellbeing.

Studies that were identified following the application of the above criteria are presented below:

The Penn Resiliency Programme for Children and Adolescence (PRP) (Gillham et al., 1990)

- **Non-UK studies included:**
  Stice et al., (2009); Sawyer Harchak et al., (2010); Sawyer, Pfeiffer, et al., (2010).

- **UK based studies:**
  Challen, Machin & Gillham, (2013).

PATHS (Promoting Alternative Thinking Strategies) (Kusche & Greenberg, 1994).

- **Non-UK studies included:**
  Greenberg & Kusche, (2002); Kam, Greenberg & Kusche, (2004); Kam et al., (2003).
- **UK based studies:**
  Curtis & Norgate, (2007).

The FRIENDS Programme (Barrett, 2004)

- **Non-UK studies:**
  Lowry-Webster, Barrett & Dadds, (2001); Lowry-Webster, Barrett & Lock, (2003); Barrett, Farrell, Ollendick & Dadds, (2006); Rose, Miller & Martinez, (2009).
- **UK based studies:**
  Stallard, Simpson, Anderson, Carter, Osborn & Bush, (2005); Stallard, Simpson, Anderson, Hibbert & Osborn, (2007); Stallard, Simpson, Anderson & Goddard, (2008).

The systematic literature search revealed very few programmes and associated UK based studies other than those of Stallard and colleagues' usage of the FRIENDS and SEAL programmes that aim to develop emotional literacy and / or mental wellbeing at a universal whole class level. What is evident in the above studies is the diverse range of measures employed. The above studies will be explored in more detail below.

3.20 CBT oriented programmes which have been delivered outside of the UK as a universal intervention

3.20.1 The Penn Resiliency Programme for Children and Adolescence (PRP)

The Penn Resiliency Programme (PRP) (Gillham et al., 1990) was developed initially by a team of psychologists at the University of Pennsylvania (Brunwasser et al., 2009). Whilst the programme was initially aimed at prevention of adolescent depression, it later steered its programme comprising of twelve, ninety minute sessions towards developing resilience and preventing depression through teaching primary and secondary age children cognitive behavioural and social problem solving skills.

A fairly large number of controlled studies have been undertaken to evaluate the PRP approach (Stice et al., 2009; Sawyer Harchak et al., 2010; Sawyer, Pfeiffer, et al., 2010), most of which had small sample sizes and incorporated randomised control designs measuring the impact on children participating in the programme. Findings were supportive of preventative or reduction measures in depressive and behavioural difficulties (Cutuli et al., 2006). This programme demonstrates longer term validity from gathering empirical evidence over several years with children and teens from various ethnic and cultural backgrounds following attendance of universal delivery (Gladstone & Beardslee, 2009) with the least beneficial impact for African-American children (Cardemil et al., 2007). However, there appears to be little research on the effects of depression prevention programmes when implemented on a larger scale, where measurements across studies varied as did the skills of those delivering the programmes (ranging from teachers, school assistants and counsellors).

The PRP was adapted for UK use and renamed UK Resilience Programme (UKPRP) by Challen, Machin & Gillham, (2013) whose objective was to deliver the programme at a universal level and to assess the effectiveness of an eighteen hour CBT intervention (namely UKPRP) in reducing depressive symptoms (and potential comorbid outcomes) with 2,844 school age children across 16 schools spanning three local authorities.

Measures utilised were the Children's Depression Inventory (Kovacs, 1992) and the Strengths and Difficulties Questionnaire (Goodman, 1997).

Pre and post intervention measures were taken with follow up post intervention measures at 1 and 2 years. Outcomes were suggestive that the UKPRP programme, whilst it did not demonstrate effect on either anxiety or behaviour, did impact positively in reducing depressive symptoms compared to the control group. However, the effect size was small and was not maintained either at 1 or 2 years follow up. Strengths of this study include the large sample size, lengthy follow up period and the inclusion of a large number of schools from three different regions, thereby increasing external validity of the results. The response rates and low attrition for the study were deemed good. The measures adopted had previously been used and were deemed to have sound reliability and validity. Those who delivered the intervention were school staff and not unfamiliar mental health professionals. However, there are limitations to the study, one being the lack of randomisation of children assigned to the two conditions and additionally whether an appropriate control group was included. It was further noted that the UKPRP programme groups tended to have iof children with higher academic attainment which could have had an impact on the studies' outcome data.

3.20.2 PATHS (Promoting Alternative Thinking Strategies) (Kusche & Greenberg, 1994).

PATHS originated in America. Its theoretical underpinning is influenced by the authors of the 'ABCD' model of development theory (Affective, Behavioural, Cognitive and Dynamic). This incorporates emotional understanding, self-control, social skills and social problem solving skills. The PATHS programme content was designed by Kusche & Greenberg, (1994), their aim being to develop a programme to facilitate social and emotional competence with specific skill areas that incorporate those pertaining to emotional literacy, self-control, problem solving and towards the promotion of positive peer relations (Webster-Stratton & Reid, 2008). The programme is designed to be delivered by teachers following a period of training. A randomised control study undertaken by Greenberg & Kusche, (2002) found greater improvements in children's emotional

understanding and social problem solving in the intervention group alone with lower rates of externalising behaviour problems at a two year follow-up. Subsequent to the 2002 study, Kam, Greenberg & Kusche, (2004) found the implementation of PATHS yielded positive results in children's knowledge of feelings, ability to recognise the feelings of others and also showed a decrease in depression. Improvements were maintained at a 2 year follow up and continued the reduction of internalising and externalising problems. It seems prudent to highlight that American large scale trials have been highly suggestive of PATHS being favourable for children. This was found to be especially so when teachers implemented the programme and the programme was implemented explicitly as outlined in the manual. (Kam et al., 2003).

PATHS has further been supported in the UK by Norgate in his 2007 study using 287 children residing in England with 114 accessing the PATHS programme and 173 forming a control / comparison group. Pre and post data were collected using The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997). In addition to quantitative data, qualitative data were gathered via teacher interviews to add weight to the positive findings. This showed improvement on all five dimensions of the SDQ for those who received PATHS and an absence of such improvement noted for the control group.

There were notable limitations to Norgate's 2007 study in that the SDQ measured some skills (hyperactivity) that were not directly covered within the PATHS programme. Also, the study did not adopt a RCT design or random allocation of the intervention / control groups. The control group was reported at pre-test to include more children who were identified as already having elevated emotional and social competent skills. It is however, deemed advantageous to have included semi-structured interviews with classroom teachers thus supplementing the findings supporting evidence that PATHS potentially can have beneficial impact to social and behavioural outcomes at universal level for children who live in the UK.

3.20.3 The FRIENDS Programme (Barrett, 2004)

The FRIENDS Programme (Barrett, 2004) is a CBT oriented approach drawing from elements of Ellis's and Beck's theories. It is heralded as an intervention for the remediation and prevention of anxiety and depression in children between for the age range seven to eleven. It has been used at a universal level with a number of stringent control research studies lending support to its efficacy. It is argued to be successful in reducing signs of anxiety with English and non-English speaking children. This programme spans a 10 week period, with the addition of further two week booster sessions.

Stallard, (2010) reported that The FRIENDS programme utilises psycho-education to develop relaxation techniques, cognitive restructuring with positive self-talk, problem solving, goal setting, self-reward and assists in potential relapse prevention. It is further pertinent to note that incorporated into the programme for children of seven to eleven years of age is a six hour parent component (Shortt, Barrett & Fox, 2001).

3.20.3.1 The FRIENDS programme outside of the UK

Research examining the therapeutic and preventative effects of the FRIENDS programme as a universal delivery was undertaken in Brisbane by Lowry-Webster, Barrett & Dadds in 2001 which involved 594 children aged between ten and twelve years of age and spanning 7 schools. The researchers matched each participating school for size and socio-demographics. The schools were then subject to random allocation to determine which received intervention and the other allocated as a 'wait list' control.

Measures adopted were The Spence Children's Anxiety Scale (Spence, 1994), The Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1978) and The Child Depression Inventory (Kovacs, 1981).

Children were at pre-test screened and aligned into 'high' and 'low' groupings for anxiety.

Findings suggested that those children who accessed the intervention compared to those of the wait-list control group, irrespective of their risk of anxiety status, reported to have less symptoms of anxiety as measured using The Spence Children's Anxiety Scale. The Child depression Inventory similarly revealed positive impact with lower scores attained for those children previously identified as experiencing 'high' anxiety measurements. The Revised Children's Manifest Anxiety Scale yielded no significant change for either group. It should be noted that there is an absence of attrition data and methodological limitations associated with data that is solely derived from self-report measures should also be acknowledged.

After twelve months, a follow up study was conducted by Lowry-Webster, Barrett & Lock in 2003 with findings suggesting continued maintenance of intervention success according to self-report and the most recent adoption of diagnostic interviews. Unfortunately the diagnostic interview data is without prior comparison data to lend to a more robust evaluation.

Barrett, Farrell, Ollendick & Dadds, (2006) evaluated the longer term effectiveness of research previously conducted by Lock & Barrett in 2003 using The FRIENDS programme, adopting universal prevention with whole class delivery aimed at reducing anxiety and depression in two age bandings, those of grade 6 (9 to 10 year olds) and grade 9 (14 to 16 year olds). Sample size in 2003 at the start of the research was 737 children which fell to 669 in 2006. Data from the 12, 24 and 36 month follow ups were also presented. Results were suggestive that the reductions demonstrated in anxiety previously reported by Lock & Barrett in 2003 were maintained for those students in school grade 6 (aged 9-10 years) with the intervention group yielding significantly lower anxiety ratings at long term follow up. Interestingly the effect of gender on levels of anxiety was found, with girls in the intervention group reporting significantly lower anxiety at follow up points of 12 and 24 months but not 36 months. Overall results were suggestive of a preventative effect with significantly fewer 'high' risk children at 36 month follow up than was found in the control group. The above data were interpreted by its researchers to suggest that grade 6 (pupils aged between 9 & 10) could be seen as an optimal age range for intervention. Whilst caution should be raised

regarding the potential confounding effects that could be typically found from external forces when research is conducted over a lengthy period, it should also be balanced with the knowledge that this research holds strengths in that it adopts a RTC design with a large sample size with the same measures adopted over the time period.

Research conducted in Canada by Rose, Miller & Martinez in 2009, attempted to replicate the Australian research cited above. Similarities included the adoption of the FRIENDS programme with a whole class delivery approach using children aged between 8 and 9 years. Variations to the Australian research included a smaller number of participants with the inclusion of merely 52 children. The design utilised a non-random control group with a pre-test, post-test design. The intervention measure for anxiety was of a self-report nature using the Multidimensional Anxiety Scale for Children (March, 1997). This research did not indicate treatment integrity. Results were suggestive of all children reporting a reduction in anxiety levels upon post-test analysis. However, no statistical significance was found for either intervention or control group. As a result, the researchers questioned whether there was value in the use of universal delivery of such a programme for those children who were shown not to be experiencing elevated levels of anxiety at the research's conception. An obvious drawback of this research is the very limited sample size and as such its inability to adopt RCT design or the opportunity to employ and gather a multi-component data set.

3.20.3.1.1 Summary of FRIENDS programme outside of the UK

Much of the research implementing the FRIENDS programme has been conducted outside of the UK and in the main, Australia. Some of the studies in Australia have been reported to typically include children who are educated outside of the state sector within independent schools. Therefore, it is reasonable to use caution when considering the direct application of this programme to children in UK schools when hoping that similar benefits could be attained.

3.20.3.2 UK universal delivery of the FRIENDS programme

Stallard, (2010) highlighted the fact that there have been very few comparison studies comparing CBT approaches other than those of Stallard et al., (2005;

2007; 2008), which explored the use of the FRIENDS programme within the UK. This important research, then, is summarised below.

In the United Kingdom Stallard et al., (2005) conducted the first reported universal delivery of the FRIENDS programme. This research included 197 children aged between 9 and 10 years of age from 6 primary schools all of which were residing in the South West of England. The study utilised school nurses who had received prior training in the delivery of the FRIENDS programme. Intervention measures used were The Spence Children's Anxiety Scale (Spence, 1994) and The Culture Free Self-Esteem Questionnaire (Battle, 1992). Post-test outcomes suggested children in the 'high' risk group reportedly experienced a significant decrease in anxiety and a significant increase in self-esteem. The research noted a 60% positive improvement within the 'high' risk group. Stallard et al., (2007) conducted a subsequent study including 106 children comprising four classes within three schools. At six months prior to the commencement of the FRIENDS programme, measures of children's anxiety and self-esteem were obtained and found to be stable. Interestingly, some three months after programme delivery, statistically significant results were found in the reduction of anxiety and increases noted in children's self-esteem. Twelve months after programme delivery, Stallard et al., (2008) re-assessed successfully 63 children (59% of the original sample) and found post-treatment gains were maintained for both anxiety and self-esteem for whole group and those children within the 'high' risk group. Stallard et al., (2008) also postulated that results were suggestive of a preventative effect.

Whilst Stallard et al., (2005, 2007 & 2008) research lends tentative support for the adoption of FRIENDS as a universal programme within the UK, the studies unfortunately demonstrate the following significant methodological limitations.

There is a restricted number of children used within the research's sample and they are also drawn from a limited geographical area in which the programmes were delivered. Also, like the earlier Australian studies, data were derived purely from children's self-report measures. Furthermore, the validity of the study is called into question by its omission of a control group which further impedes

determining whether intervention improvements are due to maturation, time passing or are directly attributable to the programme (Stallard et al., 2010).

On reflection, Stallard et al., (2010) propose the notion that the most potent impact of mental health promotion / prevention programmes could be considered by analysis of the number of referrals to specialist mental health services. It seems further prudent to recognise that there remains little evidence that FRIENDS is able to have a positive impact on the incidence of emotional wellbeing in the UK population and in turn on reducing demand on services that support mental wellbeing (Stallard et al., 2010).

3.21 Critique of CBT

It is pertinent to note that the studies presented above have individually highlighted wide ranging methodological flaws. The need for adopting control groups and long term follow up is considered essential (Cartwright-Hatton et al., 2004; Neil & Christensen, 2009).

Whilst there is some evidence indicative of supporting the adoption of CBT with children older than six, there are important areas that would benefit from future investigation (Cartwright-Hatton, 2004). Consequently it is suggested that age and developmental level could potentially impact on outcomes. However due to the limited choice in assessment measures, it is difficult to unpack such relationships (Grave & Blissett, 2004). On further reflection, considering the research base presented, further evidence would be beneficial in exploring how specific elements seated within CBT interact with a particular developmental pathway as well as to lend some insight into the prediction of future outcomes as a catalyst for positive effects (Compton et al., 2004). It may be worth noting that there is only one published universal, school based mental wellbeing study, that of Barratt & Turner (2001) that has compared the effectiveness of teacher and psychologist delivered intervention. Whilst there were no differences found, it is pertinent to note that the conclusions highlighted could be questionable given the same psychologist undertook all the delivery of all intervention groups and there were differing class teachers that delivered each group in the comparison studies.

Lastly, very few studies have been presented utilising CBT as an intervention beyond that of individual and small group. The potential use of CBT as a preventative mechanism is considered in its infancy and emergent within the UK (Stallard, 2010).

3.22 CBT summary

The literature presented above relating to theory, research and methodologies that are consistent with the use of CBT approaches lend some weight to its use with primary aged children. It further illuminates some of the positive impact of targeted, indicated and more specifically universal, whole class delivery of CBT programmes. As such it adds to the evidence base that CBT can be of potential benefit in the promotion of the emotional literacy and mental wellbeing of children and young people within the UK. Additionally it may be concluded that the adoption of early action in the promotion of good mental wellbeing aimed at reducing future mental health difficulties would be highly beneficial from both a positive mental health and also economic perspective. It also seems prudent to propose that further evidence based research is required to substantiate such notions, and to explore more fully the effectiveness of preventative orientated programmes specifically in the UK.

In concluding this section, it seems apparent that a critique has been presented which is suggestive of the need for further exploration into the application of a universal, whole class programme which teaches primary aged children to develop their knowledge, understanding and application of CBT principles which are derived from a UK written resource in order to add to the national evidence base pertinent to this area of research.

3.23 Think Good Feel Good: A Cognitive Behaviour Therapy Workbook for Children and Young People' Stallard, (2002)

This research utilises the CBT resource designed by Stallard, (2002), 'Think Good, Feel Good: A Cognitive Behaviour Therapy Workbook for Children and Young People' (TGFG). This focuses on developing pupils' understanding of, and ability to apply core CBT principles.

The TGFG resource was designed to be goal orientated with a set of sub-resources that can be utilised within interventions that aim to teach children how to practically overcome problems in their life and to develop their self-control.

TGFG is reported to be used primarily by Clinical Psychologists (Nixon & Pearce, 2012) and most recently by Educational Psychologists, (Squires, 2001; Toland & Boyle, 2008; Squires & Caddick, 2012) in their work with individuals and small groups of children and young people presenting with a range of psychological problems including anxiety, depression, interpersonal problems, school refusal, anger, phobias and chronic illness.

A robust systematic review of research literature to explore TGFG outside of its design purpose - that of being a flexible set of sub-resources used as a systematic intervention tool - yielded only one reference that met the criteria, that of McNamara, (2004).

McNamara, (2004, p. 184) reported, *'whilst TGFG was not intended to be delivered in a standardised 10 session course, I have used it very much in that fashion with satisfaction and success, finding that the structure appealed to this age group'*.

A detailed search to identify a more comprehensive picture of McNamara's usage of this resource proved unsuccessful.

3.23.1 Implications of this research

This section will now consider the implications of this research, encompassing implications for local authorities *and* within schools, and will offer suggestions regarding the potential implications for educational psychologists.

The researcher acknowledges the suggestion of Barry, (2007) that collaborative working should be at the core of mental health and wellbeing promotion. Larger scale systematic reviews indicate that children will benefit greatest when families, education, community partnerships and health care work in collaboration (Wells et al., 2003; Stewart-Brown, 2006).

This researcher calls for the LAs and schools to consider the adoption of whole school policies and approaches with regard to the promotion of mental wellbeing – not least through the ethos, environment and teaching within the school. This could include enhanced training and contributions from all stakeholders and in particular a governmental steer to enhance teacher training and leadership in order to accommodate the changing mental health and wellbeing landscape.

Whilst it is acknowledged that parental involvement is an essential protective factor that is known to enhance cognition and foster mental wellbeing and emotional resilience, when children are faced with problems, engaging parents has proved one of the greatest challenges to facilitate (Inchley et al., 2007). So, given the important contributions parents can provide, it seems essential that LAs, schools and teachers work to strengthen the links between home and schooling contexts. Developing in educational professionals the skills and confidence that would help them to foster relationships with parents seems an important goal.

There is a growing recognition of the importance of school and parental involvement in mental wellbeing programmes, and as essential components for reinforcing strategies across home, school and community contexts and within the community in which they live can yield significant and sustained improvements for children (Durlak et al., 1995; Weare & Markham, 2005). This 'joined-up' approach seems to this researcher highly significant in disadvantaged areas whereby greater numbers of risk factors are potentially experienced by children and young people.

This researcher further argues that it is of great importance to explore and understand factors that are relevant to the LA and / or school context prior to implementing mental wellbeing programmes, acknowledging that differing schools will be at differing points in readiness for change.

LAs and schools should consider building capacity and a knowledgeable skill base around the promotion and support of mental wellbeing. Of direct relation to

this research, it would be unreasonable to expect a programme aimed at promoting emotional literacy and mental wellbeing to be effective, when the person who is delivering the programme does not hold sufficient skills in this area themselves. Weare & Markham, (2005) suggest that teachers should not be expected to promote the mental wellbeing of their pupils if their own needs are not fulfilled. Given research regarding increased stress and burnout in the teaching profession, which can decrease teaching quality (Domitrovich et al., 2008), there appears a very real argument in support of teachers enhancing their own mental wellbeing requirements (Koller & Schvoboda, 2002).

In summary, when considering Kessler et al.'s, (2005) assertion that research indicates half of all cases of mental health disorders emerge by the age of 14, it seems prudent to suggest that promotion of mental wellbeing could fall within the early stages of education. Further, serious consideration should be given to the full inclusion of mental health promotion within the school curriculum. As such, LAs and schools should consider ways of fully embracing and including the promotion of mental wellbeing. Some suggestions above are offered by the present research regarding possible ways forward in this regard. Furthermore, the researcher suggests that educational psychologists could have a pivotal role in assisting and shaping the promotion of mental wellbeing within LAs and schools.

Prior to concluding this literature review, a final consideration will look to explore the possible role of the Educational Psychologist in further supporting mental wellbeing.

3.24 Educational Psychologist's (EP) role in supporting Mental Wellbeing

The DCSF, (2008) Child and Adolescent Mental Health Service (CAMHS) Review acknowledges the potentially important role of the Educational Psychologists in promoting preventative interventions within the educational environment, as well in their support of schools with regard to reactive strategies that evolve through casework. Within this review, EP's were included with other professionals within Tier 2 – comprising professionals who can support and implement interventions

that could be therapeutic in nature with the aim of promoting the mental health and wellbeing of young people.

In their review of Educational Psychologists' functions and contributions, Farrell et al., (2006) highlight the scope of EPs potential engagement in therapeutic type work including the application of CBT. MacKay, (2007) suggests that it is EPs who are best placed to conduct therapeutic interventions with children and young people by having greater and regular access to the community, compared with clinical psychologists, whose primary work is conducted within clinical settings with individual clients. EPs working knowledge of school systems and the overall educational context's impact on children, according to Rait et al., (2010) is suggestive that EPs are ideally placed to support directly or indirectly with the delivery of CBT based programmes. Additional reasoning is offered in suggesting that EPs have a broad training in applied psychology. It has been further proposed that the implementation of universal CBT interventions could reduce the stigma associated with previously tried delivery via a targeted and selected approach. The adoption of early universal delivery could reduce demand for specialist Child and Adolescent Mental Health Services (CAMHS) (Kurtz, 2004) and contribute to the prevention of future mental wellbeing difficulties (Stallard, 2010), therefore relieving pressure on costly specialised targeted services.

Greig & MacKay (2005) state that there have been many EPs who have expressed an intention to engage in therapeutic work which could include CBT. However, Greig, (2007) and Elliot et al., (1994) all point to the reported difficulties associated with EPs adopting this role whilst having to fulfil their statutory responsibilities.

The above literature pertaining to the possible role the EP may have in delivering CBT principles lends support to the final part of this literature review. What follows is a summary which led to the development of this research's unique contributions defined by the research questions.

3.25 Development of the research question

This research has been informed by the following points which have been highlighted in this literature review.

It is clear from the presented research literature that CBT based approaches could be beneficial to students in a number of ways. It is also clear that numerous factors including the age of the children, their cognitive abilities, environmental factors, and other educational and learning strategies running concurrently with the intervention may also have an influence on the effectiveness of any such CBT intervention.

Whilst CBT has predominantly been utilised in an individual and targeted way with children, there remain few studies that have utilised such programmes at a universal level in the UK. Of these studies, the programmes were written outside of the UK and as such may not potentially be fully generalisable or fully effective across different countries and cultures. Therefore the author, having previously utilised the UK published TGFG programme in a sequential manner during casework involvement, she decided to explore its use as a resource that could be beneficial and have impact at a universal, whole class level.

Universal based research seems highly suggestive that schools are ideal settings in which to offer programmes that can act as promotion, prevention and intervention mechanisms in the areas of emotional literacy and more broadly mental wellbeing.

Positive outcomes have also been reported from the delivery of SEAL, seated within a structured three tiered system which includes universal school and whole class delivery.

Further to this, the researcher considered the following assertion: *'Mental health preventive interventions in schools can fit comfortably alongside other emotional health initiatives such as SEAL'* (Stallard, 2010, p. 32).

Positive outcomes have also been observed from the use of the Australian based CBT FRIENDS programme delivered at a universal level as reported by Stallard et al., (2010) in the promotion of mental wellbeing.

Research suggests that mental wellbeing includes a wide range of components (anxiety, depression, resilience, conduct etc.) and associated measures. This author suggests that what future studies would benefit from is a consistent set of skills that are more appropriate to an educational framework and that sit within the domain of mental wellbeing. Those found within the Emotional Literacy Framework outlined earlier are worth exploration.

That the TGFG resource designed in the UK is being used infrequently across the local authority in which the researcher works is perhaps not surprising given the research reviewed above. However, it seems important in the light of the lack of a supportive evidence base that the impact of the approach on children is assessed more rigorously.

It is also apparent from the literature relating to the TGFG resource that as a typical 'CBT' approach, one might expect this approach to have some positive effect in the classroom, at an individual, targeted or universal intervention level. Crucially however, there appears to be only very limited research evidence currently available relating to the effectiveness of this approach in primary settings, neither is there any significant research evidence relating to its impact at a universal intervention.

This research therefore explores the impact of using as an intervention resource Stallard's, (2002) 'Think Good Feel Good: A Cognitive Behaviour Therapy Workbook for Children and Young People' on pupils' emotional literacy, and more broadly on their mental wellbeing. The focus here is on the use of the 'Think Good Feel Good' resource as part of a universal, rather than targeted intervention, and specifically with pupils in Year 5. In order to assess the impact of intervention, teachers, parents and pupils self-report ratings were gathered using both The Southampton Emotional Literacy Resource (SELR) and The Strengths and Difficulties Questionnaire (SDQ).

3.26 Professional and personal rationale

At the outset of the research, the author was working as a Trainee Educational Psychologist in a Local Authority Educational Psychology Service whereby the promotion of children's social, emotional and behavioural difficulties was seen as a priority area to address.

The local authorities Educational Psychology Service had linked with The Behaviour Support Team and jointly they developed the 'Emotional Literacy Programme for Teachers and Support staff'. This was delivered over a four week period, with staff release part funded from the local authority. The aim of the programme was to support teachers in developing knowledge, understanding and skills of emotional literacy. This was considered a vital first step before engaging in further training with schools in supporting children's emotional literacy skills. Training also resulted from the implementation of the SEAL curriculum and associated training for its delivery within the local authority.

As part of her professional practice, the author had attended a three day, whole service certified training course on CBT. This provided the opportunity to be involved in delivering a CBT oriented resource within a school to support a small group of year 3 children over a six week period. Follow up from the intervention, according to teacher feedback yielded positive outcomes. In addition, the author was able to use Stallard's 'Think Good, Feel Good' resource to good effect with a Year 5 child.

This research originated as a result of the author's personal interest in the area of promoting children's emotional literacy and more broadly their mental wellbeing and the belief that in supporting all children in developing skills that they can utilise to good effect when they encounter life's challenges will go some way in lessening mental wellbeing difficulties later in life.

3.27 Suggested unique contribution of this research

The following provides a summary of the suggested unique contribution of this research:

- This research is aimed at adding to the literature base in supporting the use of CBT delivery at Universal whole class level
- Aims to add to the literature base in exploring the impact CBT has on measures of Emotional literacy using a resource commonly found in schools (SELR) and a measure of mental wellbeing (SDQ) which hold good reliability and validity
- Given the potentially beneficial influence of the SEAL materials, the researcher decided to also take the opportunity to investigate whether the additional implementation of the SEAL approach, alongside the CBT intervention, would positively enhance measures of emotional literacy and more broadly those of mental wellbeing
- Explores the use of a UK written resource TGFG (Stallard, 2002), as a programme to teach primary children the principles of CBT at a whole class delivery.

3.28 Research questions

This research aims to explore the following questions:

- Question 1.

What is the impact of a six week whole class programme promoting the acquisition of CBT principles using the 'Think Good, Feel Good' resource on the emotional literacy and more broadly mental wellbeing of Year 5 pupils.

- Question 2.

What is the impact of a six week whole class programme promoting the acquisition of CBT principles using the 'Think Good, Feel Good' resource on the emotional literacy and more broadly mental wellbeing of Year 5 pupils when this programme is completed alongside primary SEAL programme?

4. Methodology

The following discussion will illuminate the philosophical debates, methodology and ethical issues that have informed this research. A description of the pilot study that informed the main research is offered, together with a detailed account of sampling data and descriptions of the instruments employed. A full description of the research procedure, along with a detailed account of the schedule of intervention and resources utilised to support intervention delivery, is also included.

The author will, throughout this section, critically appraise all areas of the research.

4.1 Methodological contention between natural and social sciences

This section seeks to explore, in depth, epistemological issues relevant to social science research.

Natural science research is proposed to seek to identify cause and effect. Such research utilises an objective and quantitative method of analysis in order to identify predictable and consistent relationships between variables.

In social science research, where interest lies in making sense of complex human behaviour, it has been argued that an alternative methodology is required.

There has been some contention regarding whether social science research can be considered sufficiently scientific to warrant being called a science (Bell, 2005). This statement alludes to an ‘age old’ argument at the conception of research in social sciences whereby social scientists were criticised for their lack of adherence to methodologies that were embedded in the natural sciences (Somekh & Lewin, 2005). Bell, (2005) suggests that research adopted by social scientists remains under scrutiny against the natural sciences’ positivist philosophy. Such contention is commonly known as the ’Positivist – Anti-Positivist debate’.

4.1.1 Positivism & Constructivism

The French Philosopher Auguste Comte is associated with the notion of Positivism, and his belief was that knowledge and understanding can be acquired only by the adoption of the scientific method, i.e. through the systematic gathering of fact through experimentation and observation (Cohen et al., 2007).

Mertens, (1998) and latterly Cohen et al., (2007) note that embedded within a positivist viewpoint is a belief that the social world can be studied in a similar way to how one would study the natural world. Data is collected using strict criteria and procedures in order to provide explanations focused on causality between events or variables through the adoption of experimentation and observation (Robson, 2006). Such a view alludes to there being 'one reality' which can be accessed via systematic and empirical research. Many researchers are of the opinion that for research to be deemed scientific, control of experimental condition(s) is required (Romm, 2001).

So, positivism adopts experimental designs usually deriving quantitative data in order to test hypotheses, with the notion that through measurable facts and observation the world can be explored (Golafshami, 2003).

Fox, (2002), though, suggests that positivist methodology is unable to capture the various contexts of individual's work and their 'individual' way of viewing the world around them. Indeed, Robson (2006) posits the notion that positivist methodology could be regarded as reductionist in nature, rendering generalisations to the real world problematic. Robson, (2006) further notes that research in the social sciences tends to explore contextual situations and therefore in highly controlled conditions, such as laboratory experiments, are often not conducive to such explorations. Social worlds, he argues, should be explored within context and with considerable caution regarding notions of validity, reliability and generalisability.

It is with such concerns in mind that many social scientists, for example, Mertens, (1998), argue that an anti-positivist viewpoint rejects 'one reality; one truth' and adopt, instead, a Constructivist stance.

Matthews, (2003) & Robson, (2006) explain that Constructivists view an individual's behaviour as being dependent on their unique personal views and associated meanings. Understanding and identifying 'reality' (social constructs) according to individual perception and interpretation therefore forms the basis of effective 'Constructivist' research (Robson, 2006). Constructivist methodology usually utilises qualitative data in order to explore and illuminate the daily activities, thoughts, feelings and beliefs of individuals in their natural settings.

4.1.2 A move to Post – Positivism

Despite the distinctions outlined above, Romm, (2001) suggests that there is some overlap between natural and social science research in that they both aim to:

- Build upon knowledge of specific topics utilising a systematic approach
- Develop techniques towards greater understanding of facts
- Relate such findings to scientific understanding.

Mertens, (1998, 2009), points to the potential usefulness of a post-positivist stance, developed to bridge research contentions whilst accepting the notion of 'one reality' but acknowledging human limitation and 'imperfection'. This standpoint sees measurement as fallible and calls for multiple measures in order to aim to triangulate data so as to gain a fuller and more accurate picture of reality (Robson, 2006).

Historically, psychological studies have been linked to experimental laboratory based investigations, whereby researchers have been required to implement control measures in pertinent aspects of the environment. Researchers carrying out such studies became increasingly mindful that generalisations from laboratory to the real world were difficult. That human behaviour is a complex phenomenon with many interconnecting variables that prove difficult to account for in such an artificial setting as the laboratory became increasingly apparent. Over time, psychological researchers became increasingly responsive to the

notion of conducting research in ‘the real world’ of the research participants (McQueen & Knussen, 1999).

The distinguishing difference between positivism and post-positivism is eloquently reported by Stone, (2006) as being the understanding that views and associated hypotheses, together with the beliefs of the researcher, can influence research. As such, it is crucial to identify the possible effects of such biases.

McQueen & Knussen, (1999) and latterly Robson, (2006) suggest that real world research utilises experimental methods within the context of the natural environment. As such it is useful for researchers conducting psychological investigations because it identifies, where possible, the varying factors that could contribute to a specific behaviour or phenomenon and also in determining specific variables that are pertinent to their research. Consequently, such specific variables could be studied in ‘real life’ and within ‘real world context’.

4.2 The Foundations of the current research

There have reportedly been significant shifts over recent years in the adoption of particular methodologies within the educational psychology field from ‘strict’ scientific principles to an acceptance of alternative methodologies (Greig, 2001). Such shifts have apparently been driven, at least in part, through political aims and policies.

This became particularly evident following an increase in research involving ‘school contexts’ and ‘systems change’ (Farrell et al., 2006).

In the current educational climate, with schools often ‘buying-in’ psychological services from a consumer stance, there is a tendency to employ research as a means to validate interventions by demonstrating positive outcome effects and financial value for money. This is suggested to have led to a developing notion of educational psychologists as scientist-practitioners whose work is subject to scrutiny with demands for practices to be ‘evidence-based’ or ‘evidence-informed’, to be ‘outcomes-driven’ and to exemplify ‘what works’ (Miller, A., & Frederickson, N., 2006).

Moore, (2005) suggests that there has also been a change in the perception of educational psychologists, such that they are increasingly viewed as 'applied scientists' who are concerned with putting theory into practice to effect change and outcomes.

In light of theoretical perspectives presented above, this research adopts a post-positivist paradigm with a quasi-experimental design.

In adopting such a stance, this researcher is required to systematically and carefully plan all aspects of the research and to provide an account of the design along with detailing the threats to validity and generalisability and how measures have been taken to minimise such threats.

A useful way of beginning any research is to firstly conduct a pilot study to enable an initial run through of the intervention and research methodology. It assists the researcher in becoming familiar with the resource intervention and the researchers design and delivery. A pilot study assists in identifying any flaws that can be addressed before substantive research is undertaken.

4.3 Background to pilot study

The intervention under investigation in the current research is the 'Think Good, Feel Good' (TGFG) resource (Stallard, 2002), and potential instrument measures were considered to be the Southampton Emotional Literacy Questionnaire (SELR) and the Strengths and Difficulties Questionnaire (SDQ) –both of which were 'piloted' before the main research was undertaken. The researcher wished particularly to test potential instrument measures to inform further research design and construction considerations.

Children already known to the researcher in her professional capacity as a Trainee Educational Psychologist, and who the researcher felt might benefit from developing their knowledge, understanding and application of techniques of Cognitive Behaviour Therapy (CBT) were identified. Discussions regarding time commitment, resource arrangements and measures to be used ensued with

schools of those children identified. However, after approaching the attending schools, only one school agreed to make available time to complete this intervention with one child.

The British Psychological Society's Code of Conduct, Ethical Principles and Guidelines (BPS, 2005) were adhered to in this initial stage of the research.

4.3.1 Aims of the pilot study

Through the pilot study it was intended that:

- The researcher would become familiar with using the intervention tool identified (TGFG)
- The researcher would identify areas where the delivery of particular sections of the resource might require adaptation
- The researcher would test timings in line with using each set of resources per session
- The researcher would further refine facilitation skills in delivering intervention techniques
- The researcher would hone skills in data collection and analysis
- The researcher would consider the reliability and validity of the tools in use.

4.3.2 Pilot study design

A single case design and an opportunity sample were used within the pilot study.

The single participant was a year old 5 boy who reportedly did not experience academic difficulties but who was deemed by his parent and school to warrant some psychological support regarding his emotional, social and behavioural responses to peers and adults alike. Following consultation with his parent, school staff and this researcher's supervisor, it was deemed appropriate for him to access support at an individual level.

Measures employed were the SELR and SDQ. The participant scores ranged from 'Below Average' to 'Average' at pre-test measure using the SELR. The SDQ yielded no areas of concern. Intervention was the TGFG Cognitive Behaviour Therapy resource (Stallard, 2002).

4.3.3 Pilot study procedure

The following provides an overview of the steps taken during the pilot study:

- Permission was gained from parent, young person and class teacher for the delivery of the CBT intervention to the pupil
- Baseline scores using SELR and SDQ were collected on the Friday before the intervention began
- One hour, twice weekly (Monday and Friday Afternoon) implementation of the 'TGFG' resource was used over a six week period
- Following completion of the six week intervention, post measures were obtained using the same instruments (SELR and SDQ)
- During the child's Annual Review, feedback was provided to the young person, parent, school staff and social worker
- Completed resource sheets were shredded and parental permission was granted to keep pre and post data scores in the young person's file to further inform target setting and monitor progress.

4.3.4 Ethical considerations incorporated into the pilot study

Ethical considerations incorporated into the pilot study were:

- Parental and young person's consent to engage in the intervention were sought and provided in written form
- Participant right to withdraw at any time was explained
- Confidentiality was described and assured
- A description of the length of time data would be kept and how it would be destroyed was provided
- 'De-briefing' took place during the Annual Review of the young person.

4.3.5 Pilot study outcomes, reflections and revisions

The pilot study was successful in providing the following observations:

- Familiarity with TGFG resource was achieved
- The teaching of lesson 5 of the TGFG resource involving raising knowledge and understanding and identification of Negative Automatic Thoughts took longer than had been planned and required modification and / or alternative additional resources to supplement this area
- Timings for delivery were highly manageable with variance of only five to ten minutes. This was considered appropriate as when teaching whole classes it was anticipated more time would be required and available
- This researcher noticed more fluency and confidence in delivering the intervention mid-way through the intervention. This served to build confidence and helped refine her facilitation skills
- Data collection was considerably more time consuming than anticipated. Parental response for both SELR and SDQ was slow. Therefore time management of data input required further consideration and modification
- Positive changes were noted as measured on the SELR in the domain of Self-regulation and Motivation, bringing this young person within average range overall across SELR domains. This measure was therefore deemed useful to use within the substantive research
- There were no noted changes in the SDQ score. However, the employment of the SDQ measure was a requirement of the University and as such remained in the study as a measurement tool

4.4 Background to Current Research

During the start of the academic year, the researcher attended an initial planning meeting involving the respective head teacher and SENCo in each of the researcher's primary schools. After completing all initial planning visits, analysis of the reported training requests and areas of possible development suggested, a theme was emerging; that of supporting the Social, Emotional and Behavioural development of young people, particularly in the latter years of primary education. Further consultations with those schools explored possible interest in school

development that might include an intervention aimed at supporting mental health and wellbeing, which could impact on pupils Social, Emotional and Behaviour development.

Through discussion, the intention arose to deliver such a programme as a whole class initiative, in order to foster greater inclusion. The objective was to train teachers in the delivery of such an intervention and thus build capacity in school whilst adhering to the government agenda of supporting and promoting the emotional wellbeing of young people.

This researcher was familiar with the TGFG resource (Stallard, 2002) and had, as outlined above, previously used the resources to good effect with a Year 5 pupil. Two out of seven head teachers had an awareness of this resource and the underpinning principles of CBT and its potential usefulness in supporting those at risk of mental health and wellbeing issues.

4.5 Epistemological foundation of the current research

As stated above, in the light of the research outlined in the Literature Review and in light of theoretical perspectives presented regarding selection of particular methodologies, this current research adopts a post-positivist stance and the adoption of a quasi-experimental design.

4.6 Research questions for this current study

The present research aims to explore the following questions:

Question 1.

- What is the impact of a six week whole class programme promoting the acquisition of CBT principles using the ‘Think Good, Feel Good’ resource on the emotional literacy and more broadly mental wellbeing of Year 5 pupils?

Question 2.

- What is the impact of a six week whole class programme promoting the acquisition of CBT principles using the 'Think Good, Feel Good' resource on the emotional literacy and more broadly mental wellbeing of Year 5 pupils when this programme is completed alongside primary SEAL programme?

4.6.1 Hypothesis relating to the research questions

A hypothesis is a precise, unambiguous prediction of the findings of a study.
A Null hypothesis (H0) states that there is no significant difference between the control and experimental groups (or no correlation) and any differences identified are due to chance.

Within this research the following one tailed experimental hypotheses with associated null hypotheses will be tested:

- Hypothesis in relation to Question 1.
  Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' will make significantly greater gains than control group participants.

- Null Hypothesis for Question 1.
  No significant differences will be found between the scores achieved by Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' and control group participants. Any differences found might be explained by chance.

- Hypothesis in relation to Question 2.
  Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' alongside the SEAL curriculum will make significantly greater gains than Year 5 pupils receiving training in CBT principles alone.

- Null Hypothesis for Question 2.
  No significant differences will be found between the scores achieved by Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' alongside the SEAL curriculum and Year 5 pupils receiving training in CBT principles alone. Any differences found might be explained by chance.

4.7 Analysis variables to be used

The experimental variables identified are as follows:

The independent variables (IV)

- All pupils being in academic Year 5
- The CBT TGFG programme
- SEAL curriculum.

The dependant variables (DV)

- Experimental group 1 & 2 scores obtained from parents, teacher and pupil self-report using The SELR and the SDQ measures.

4.8 Methodology relating to current study

4.8.1 Adoption of quasi-experiment

A Quasi-experiment is useful in exploring the causal impact of an intervention on its chosen population.

With reference to this research, the intervention is training Year 5 pupils in using principles of CBT through utilising the TGFG (Stallard, 2002) resource. Quasi-experiments are most useful and effective due to their use of pre and post testing. The causal impact in this research is measured using the SELR and SDQ. All measures taken are identified as the dependent variables. Quasi-experiments can have naturally occurring continuous independent variables that already exist. The independent variables within this research pertain to age; all pupils are in school Year 5. Another independent variable is the SEAL curriculum that is running concurrently in one of the schools allotted to an experimental group.

Possible drawbacks of using quasi-experiments relating to internal and external validity are sometimes subject to concern, thus questioning if the results yielded from the research can be used to make causal references and generalised across populations. Such issues and steps to address concerns are noted later within this section. Quasi-experiments however could be considered a valuable tool to utilise since they provide necessary and valuable information that cannot be obtained by strict experimental methods alone (Morgan, 2000).

4.8.2 Sample selection

Following the pilot study described above, the schools serviced by the researcher were approached, their training needs having been previously identified during the initial school planning meeting. Out of seven primary schools approached, two agreed to engage with the proposed intervention and associated research project.

Ideally, an experimental design would have a sample of participants who are randomly assigned to different group conditions (Ader, Mellinbergh & Hand, 2008). Unfortunately, due to the low response from the patch of primary schools, the research selection criteria of the current research can be best described as a 'self-selection opportunity sample'. As such, one must be aware that the sample may not be representative of all schools and that both schools might have specific characteristics that have led them to undertake the intervention and which may in turn influence how they and their students respond to said intervention.

The two volunteering schools were neighbouring schools within the same local authority and geographical cluster area. They are both described as urban schools with a high percentage of pupils receiving free school meals.

The participants within these schools were all pupils within Year 5 classes: two classes were provided from one school and consisted of the experimental group 2 and also the control group. The final group, experimental group 1, was from the second of the two neighbouring schools.

Table 4.1 provides descriptive statistics pertaining to the participating schools. This information was taken from the Department for Education's (formally department for Children, Schools and Families) 'Edubase' database.

Table 4.1: Descriptive statistics pertaining to the participating schools

<table>
<tr><td colspan="2">School 1</td><td>School 2</td></tr>
<tr><td colspan="2">Percentage of free school meals:
31.1%
Age range: 3 to 11 years
School capacity: 452
Urban > 10k - less sparse</td><td>Percentage of free school meals:
30.5
Age range: 3 to 11 years
School capacity: 210
Urban > 10k - less sparse</td></tr>
<tr><td>Experimental Group 2</td><td>Control Group</td><td>Experimental Group 1</td></tr>
</table>

Interestingly, despite the significant difference in school capacity, the percentage of free school meals was fairly close. The schools were within 3 miles of each other with both being feeder primary schools to the local high school.

4.8.3 Design

An increasingly common approach in social science research is a hybrid of fixed and flexible methodological designs, namely a mixed-method design utilising both quantitative and qualitative data (Robson, 2006).

A fixed research design was, however, deemed most suitable for the current research.

Robson, (2002, p. 45-46) argues that fixed designs require a significant amount of 'pre-specification about what you are going to do' and that such pre-planning should also include a 'developed conceptual framework' designed in order to hold advanced understanding of the process of such research. Also, that collection of data should be complete before analysis is initiated. Both Robson, (2002) and Ader, Mellenbergh & Hand, (2008) suggest that the adoption of a fixed, quantitative experimental design requires the researcher to manipulate (change)

a particular variable to investigate the effect it has on that variable which is being studied. The researcher should also attempt to control other extraneous variables that could confound the results of the study.

To best address the above, the pilot study provided the opportunity to test pre and post data collection and analysis which informed subsequent modifications of the research timescales, and also informed the researcher much about the flexibility and appropriateness of resources, and provided familiarity with the notion of developing and delivering research on this scale. Fine tuning of the research procedure in light of the pilot study outcomes allowed the research to concur with the post-positivist fixed design methodology whereby pre-specification of the research was identified.

A fixed research design was used to compare the following three groups:

- Experimental group 1 - accessing CBT & SEAL
- Experimental group 2 - accessing CBT
- Control group - accessing neither CBT nor SEAL.

4.9 The focus intervention: 'Think Good, Feel Good'.

'Think Good, Feel Good: A Cognitive Behaviour Therapy Workbook for Children and Young People', written by Stallard, (2002), was used to form the basis of delivering knowledge, understanding and application of Cognitive Behaviour Therapy based principles to Year 5 pupils within experimental groups 1 and 2.

This resource provides a range of resources comprising activities and worksheets appropriate for Year 5 children. Stallard, (2002) reports that the workbook is not an intervention tool per se and was not developed to be used as such. However, the workbook is a collection of resources to develop knowledge and understanding of core principles within the application of Cognitive Behaviour Therapy. Such coverage spans ten pertinent sections which assist those who access the resources in facilitating the understanding of the core principles of CBT and in deploying the strategies to assist in the development of mental health and wellbeing with increased skills associated with emotional literacy.

The differing activities and worksheets require the pupils to identify the three domains of CBT, cognitions (Thought Tracker), emotions (Feeling Finder) and behaviour (Go Getter) and to recognise them in others and themselves, to problem-solve ways of looking at thoughts and actions that could be deemed negative or upsetting, and to find positive solutions through modifying a particular modality (thinking, feeling and doing). The resource also caters for possible homework tasks in which the pupil can consolidate new learning and possibly generalise newly learnt skills.

The 'Think Good, Feel Good' resource is integral to the research questions and associated hypotheses. It provides resources in the form of activities, exercises and teaching materials that can be used on white boards and form a complimentary presentation.

However, it is pertinent to note that the following limitations have been highlighted by the author, and were considered within this research:

- There does not appear to be a substantive research evidence base regarding the use of such a resource. It is also worth noting the limited literature base of this resource utilised as an intervention tool in its entirety with whole classes.
- There is an absence of a defined age range for this resource, although Stallard points out that 'children at least 7 years of age will be able to engage in CBT. The intervention needs to be pitched to the cognitive developmental level of the child' (Stallard, 2006, p. 16).

4.10 Social and Emotional Aspects of Learning (SEAL)

As covered within the Literature Review, SEAL is a comprehensive, whole-school approach to promoting the social and emotional skills that are thought to underpin effective learning, positive behaviour, regular attendance, and emotional wellbeing (Department for Education and Skills, 2005). It was introduced in primary schools in 2005. At the time this research took place, approximately 80% of primary schools and 20% of secondary schools were thought to have been making use of the SEAL resources (available from www.bandapilot.org.uk).

The first wave of SEAL delivery centres on whole-school and whole class development work designed to create the ethos and climate within which social and emotional skills can be most effectively promoted, as well as direct teaching of these skills across the curriculum. This element of SEAL was evaluated as part of the Behaviour and Attendance Pilot (Hallam, Rhamie & Shaw, 2006a), and it was found that the programme, *"had a major impact on children's well-being, confidence, social and communication skills, relationships, including bullying, playtime behaviour, pro-social behaviour and attitudes towards schools"* (Hallam, Rhamie & Shaw, 2006b, p. 1).

SEAL was designed to promote the social and emotional skills that have been classified under the five domains proposed in Goleman's (1995) model of emotional intelligence. These are:

- Aspects of Personal Competence namely: Self-awareness, Self-regulation (managing feelings) & Motivation
- Aspects of Social Competence: Empathy & Social skills.

The SEAL resource adopts a spiral curriculum, thereby revisiting each theme throughout each school year group, building on existing knowledge and skills. The design of SEAL was underpinned by the premise that each school *'should find its own way into, and use for, the materials, drawing on the school or setting's own particular character'* (DfES, 2006 p. 11).

4.11 Exposure of SEAL to experimental group 1

Whilst reportage upon first approach to the two schools involved within this research confirmed that they did not have SEAL or anything similar running. Some months later, the school comprising experimental group 1 retrospectively reported during the third session of delivering the Think Good, Feel Good programme that they had been implementing SEAL across all age groups, utilising the resources associated for the time period set out in the Excellence and Enjoyment Guidance (DfES, 2005) (see table 4.2). No specific resources

used at that time were obtained by this researcher despite many requests to the school for an outline of programme delivery details.

Given SEAL (Wave 1) was being accessed by experimental group 1 and ran concurrently with the TGFG, CBT programme, the implementation of SEAL as an Independent variable into this research was subsequently incorporated and reflected in its addition to hypotheses.

The dates for which this research's implementation of the Think Good Feel Good programme was conducted overlapped with this time period. The TGFG programme was conducted between February and March.

Table 4.2: SEAL intervention delivery to participants in experimental group 1

Month	Years 5. Green set	Areas covered
November / December	Getting on and falling out	Managing feelings Empathy Social skills
January / February	Going for goals!	Motivation Self-awareness
February / March	Good to be me	Self-awareness

4.12 Pre and post intervention measures

McQueen & Knussen, (1999) suggest that well-constructed questionnaires could elicit valuable data from research participants. As such, they can demonstrate relationships of cause and effect between variables as well as explore important differences. Further advantages of utilising questionnaires include their low cost, speed of administration and that they are straightforward (Dillman, 2000).

This research used questionnaires to gather data. The questionnaires were completed at 'time one' - the baseline, pre-intervention measure being scheduled for the week prior to the intervention starting - and 'time two - the post-intervention measure taking place the week following the end of the intervention.

McQueen & Knussen, (1999) highlighted that it is important for the researcher to be aware that the chosen questionnaire measures the respondent's thoughts about what they are observing / doing / believing though this may not be what is actually happening.

All measures were administered to the class teacher, parent of each pupil and pupil who accessed the intervention and those within the control group.

Data which did not form a complete set, i.e. where not all questions were completed by class teacher, parent and pupil were discarded.

4.12.1 Intervention measure 1 – Southampton Emotional Literacy Resource and Intervention Ages 7 to 11 (SELR) Southampton Psychology Service, Editor Adrian Faupel, (2003)

Adrain Faupel and his colleagues from the Southampton Educational Psychology Service developed an assessment and intervention tool that could be used by those working within the educational sphere. Two resources were devised, one for 7 to 11 year olds and another for 11 to 16 year olds. It is the former of the two resources that this study utilised.

The resource provides an overview and guidelines for users on how to assess emotional literacy.

The guide provides detailed outlines of the components of emotional literacy, which are:

- Self-awareness
- Self-regulation
- Motivation
- Empathy
- Social Skills.

The resource also provides guidance regarding the appropriate uses of the three questionnaires (teacher, parent & pupil) as well as exploring how such findings

can be utilised in design interventions when working with pupils, such as found in this research.

The questionnaires, which are devised for teacher, parent / carer and pupil self-report, take approximately 10 minutes to complete. The teacher and parent questionnaire responses provided the researcher with measures of the relative strength and weaknesses against the emotional literacy categories and the pupil questionnaire produces a single overall emotional literacy score.

Within the resource, the following information assisted the researcher in ascertaining particular standardisation of data:

- The participant sample that completed the Pupil Checklist comprised 732 pupils from some 28 schools. Of this sample 54% were male. Faupel, (2003, p. 31).

Cronbach's Alpha was utilised to assess reliability with the range of values for this statistical analysis ranging from 0 to 1, with the higher score indicative of a reliable scale. If the majority of each subscale obtained 0.70 scoring it was therefore assumed reliable.

However, reliability was found for the child, teacher and parent / carer's overall score. Faupel, (2003, p. 33).

When investigating validity for the SELR, it is pertinent to note that the child self-report subscales were not found to be reliable. However, reliability was found for the child's overall score. The majority of the subscales for teacher and parent were found to be reliable as were the teacher and parent / carer's overall score (Faupel, 2003, p. 33). The teacher and parent / carer questionnaires were utilised to explore the extent to which the five dimensions of the SELR are evident in the data collected. As such, validity was reported to be measured using the following:

- ‘By examining the patterns of the correlations between each item in the checklist with the subscale and overall emotional literacy scores
- By revealing the underlying dimensions of the patterns of scores in the standardisation data using principal components factor analysis (Faupel, 2003, p. 34).

It is also worthy of note that the SELR is a self-report scale. According to Borgers et al., (2004), self-report scales tend to hold adequate normative and psychometric properties with significant student regulatory and classroom behaviour predictors. Further to this, the SELR has not been in existence for a significant period of time and so has not been included within much published research. Consequently there have been relatively few published evaluations of its usage in a research context. It has, however, grown in popularity in British schools and has also been used in an evaluation study of the effectiveness of the Social, Emotional Aspects of Learning (SEAL) (Humphrey, 2008).

4.12.2 Intervention measure 2 - The Strengths and Difficulties Questionnaire (SDQ) Goodman, (1997, 2001)

The use of the SDQ in this research is to use it as a pre and post measure to investigate the impact of an intervention across experimental conditions and against a control group.

This measure was based on Goodman’s model of adaptive and maladaptive behaviour and was originally created by Goodman in 1997. There is a questionnaire for parent / carer, teacher and child’s self-report (age range of 4 to 16 years). The questionnaire has also been deemed suitable for children between 8 and 16 years old (Muris et al., 2004). There are several versions of this questionnaire and it is offered in many languages.

The SDQ has been reported to be successfully used in other countries to screen children for mental health problems. The SDQ has been reported by Goodman, (2000) to be significantly effective in the identification of conduct, hyperactivity, depressive and some anxiety disorders. The measure is reported to be less

effective in the identification of separation anxiety, specific phobias and eating disorders.

The SDQ is made up of 25 items, taking between 5 to 10 minutes to complete. The items are sectioned to 5 subscales (overall stress, emotional distress, behavioural difficulties, hyperactivity / attention difficulties, difficulties getting along with other children and kind / helpful behaviour). There is a three point scale ranging from 'not true', 'somewhat true' and 'certainly true'. Scores are attributed to each scale point that is summed up with overall scores in the five subscales with a total score of 'overall stress'. In addition, an interval scale of measurement is utilised with a score range from 0 – 10 having a total score range of 40 (ibid).

Regarding the construct validity of such a tool, it is worthy of note that Goodman, (2001) included 10438 participants to explore the validity of the SDQ as a screening tool and its internal and criterion validity, including its diagnostic properties. Further research has been undertaken (Goodman et al., 2002, Sharp et al., 2005) to confirm stability over time. Hill and Hughes, (2007) reported '*The SDQ shows that it has the potential to meet the need for a brief, psychometrically sound screening measure of children's behavioural and emotional adjustment for community-based public health research. This instrument would be of particular value to school psychologists involved in assessing the effectiveness of universal prevention programmes in improving mental health and decreasing symptoms of emotional and behavioural wellbeing'* (p. 12). However, a note of caution should be observed in that when individuals are required to rate, such responses are subject to many variables and this can impact on such ratings and so confound the data (Sharp et al., 2005).

4.13 Research procedure summary

What follows is a sequential breakdown of the chronology of the research procedures undertaken.

All primary schools within a particular socio-demographic cluster for which the researcher was the named representative from Stoke-on-Trent Educational Psychology Service were invited to take part.

A detailed description of the intervention with associated potential gains for pupils was provided to head teachers:

- RESPONSE: Only two schools opted to receive the intervention thereby impacting on sample selection criterion.

The researcher met with each Year 5 class teacher from the volunteer schools. The researcher provided a comprehensive overview of the intervention and the procedural elements of the assessment tools to be used and the role and responsibilities required of the teacher as assistant intervention leader:

- RESPONSE: No teacher opted to withdraw from the research and all agreed to comply with ethical guidelines.

A parental letter was drafted and approved by the researcher's supervisor before being shared with school staff and in turn before being sent to parents. The letter was written with the intention that parents would complete and return the letter to *'opt out'* of the intervention. This letter was sent out two weeks before the intervention was due to start:

- RESPONSE: Two parents opted their children out of the intervention. School staff made accommodations for those children, accessing alternative activities. Reasons provided included - one pupil would be absent in the most part due to an imminent operation and the second pupil was reported to have regular out of school commitments.

Parent questionnaires from the SELR and SDQ were sent out in pupil's bags for parental completion and subsequent return to school:

- RESPONSE: It was agreed that the researcher would maximise on the opportunity to attend the scheduled parents evening and with spare questionnaires would encourage parental completion. Between automatic

returns and attendance at the parents evening, a fairly good parental response was observed. Parents who did not respond via the above two methods were contacted by telephone by the researcher and asked if they were willing to complete the questionnaires during the call, or to arrange a further convenient time to call.

The researcher trained the class teachers on how to input the data after setting up the electronic scoring systems (SELR CD and the SDQ scoring website) for baseline, pre-data collection onto both experimental and control groups teachers' laptops:

- RESPONSE: Class teachers reported they understood data input procedure.

Straws were drawn to decide in one school (two-form intake) which class would become experimental group 2 and the other the wait-list control group (who would receive the intervention at a later date, this being delivered by the experimental group 2 teacher):

- RESPONSE: groups were assigned.

On the Monday of the week before the intervention was initiated, the computer suite was used in both schools, with time allotted for class teachers and pupils of all conditions to complete the Time One intervention assessment measures thereby electronically completing the SELR and SDQ questionnaires.

To facilitate maximum attention and learning during the delivery of the intervention, the classrooms in both experimental groups were arranged in a horseshoe fashion. Those students who could be regarded as 'lower attainers' – i.e. who might benefit from support - were seated towards both ends of the horseshoe and interspersed with 'higher attainer' pupils. The class teacher and researcher were positioned at either end to provide support where required.

All resources including a laptop were supplied by the researcher. The white board was utilised within the classroom. For those pupils who were supported at school action plus, teacher differentiation was provided.

The intervention was delivered on a Monday and Friday afternoon at 1pm until 2pm for experimental group 2, and 2.20pm to 3.20pm for experimental group 1. Travel time between schools took ten minutes.

This research intervention utilised resources sequentially pre-planned from the 'TGFG Workbook' (Stallard, 2002). Further to this, the web resources downloaded from http://www.wiley.com/go/clinicianguide were used as visual white board presentations to assist in the delivery and teaching of year five pupils about cognitive behavioural principles and their application. A breakdown of coverage can be seen in table 4.3 below.

4.14 Fidelity on intervention implementation

It is important in any research of this nature to explore the extent to which the intervention was consistently and accurately delivered. (A recent analysis indicated that 68% of published treatment research within education, relating to school based interventions for children with either learning and behaviour problems did not measure the accuracy of intervention implementation (Wheeler, Baggett, Fox & Blevins, 2006).

The most common method to measure treatment integrity is that of direct observation and self-report.

Direct observation is usually characterised by the 'rater' observing the implementation of the intervention in vivi and recording what and what does not happen.

Gresham, (1998) suggested that direct observation can elicit accurate measurement of many components to an intervention. However, it was also acknowledged that this method is highly time consuming. In addition to this, the

possibility of teacher / researcher reactivity, in which the presence of the rater leads to inflated integrity levels, is a threat to the reliability of the undertaking.

Treatment fidelity in relation to self-report is monitored by the use of interviews or questionnaires with those delivering the intervention in order to assess the extent to which the intervention was implemented correctly. Although Noell, (2007) found a number of potential limitations to the self-report process, demonstrating that teacher's self-reports and observations were often incongruent, self-reports methods of treatment integrity checking have been found to be more efficient than direct observation.

For the present research it was agreed that each session in each school (covering experimental groups 1 and 2) would follow particular slides and provide specific resources (worksheets, activities and homework as set out in table 4.3 below).

At the end of each session, resources covered would be highlighted. To ensure that all children received access to all the resources, any tasks which were not covered (either due to late arrival of a pupil or unforeseen events) would be delivered outside of the session and before the following session by the class teacher.

Those children with special educational needs who required significant modification of the materials, accessed differentiated materials prepared by their class teacher in advance and were also supported by their class teacher in-class. It was not feasible for the researcher to provide modified resources across experimental groups, not least because each group was in a different school and with different needs.

The intervention in both experimental groups was delivered by the researcher, who had previously accessed a four day certificated course in CBT. The resources were followed sequentially, as in the pilot study.

The researcher also had extensive experience of deploying teaching to whole classes and running small group interventions from her previous teaching employment.

What follows is an outline of the intervention, session by session, with resources used and homework tasks adopted. Debriefing the pupils is also included.

Table 4.3: A table to illustrate intervention coverage.

Session Coverage	**Session Title**	**Session Aims**	**Session Resources (including homework)**
1 Introduction to CBT	Thoughts Feelings and What You Do	• Psycho-education • Introduction to the core elements of thoughts, feelings and behaviour	• Magic Circle worksheet • Negative Trap worksheet • If/then quiz • What I think, what I do or how I feel puzzle
2 Automatic Thoughts 1	Automatic Thoughts	• Introduction to automatic thoughts and cognitive triad	• My Hot Thought worksheet • Nice Thoughts About Myself worksheet • Nice Thoughts About My Future worksheet • Unpleasant Thoughts About Myself worksheet **Worrying Thoughts About What I do worksheet (homework)**
3 Automatic Thoughts 2	Automatic Thoughts	• Developing further understanding of automatic thoughts and the cognitive triad • Thought monitoring and identification of common	• What Are They Thinking worksheets • Worrying Thoughts About What I do worksheet • What Are They Thinking worksheets **Thoughts and Feelings Diary (homework)**
4	Thinking Errors	• Identification of types of cognitive distortions	• Identifying Thinking Errors worksheet

Common Cognitive Distortions		• Thought monitoring and identification of common cognitive distortions	• What Thinking Errors Do You Make worksheet **Thinking Errors Diary (homework)**
5 Cognitive Restructuring and Balanced Thinking	Balanced Thinking	• Cognitive evaluation • Thought testing • Cognitive restructuring • Balanced thinking	• Looking For Evidence worksheet • Balanced Thinking worksheet • Looking For Evidence Diary (homework) • Thought Thermometer worksheet **Balanced Thinking Diary (homework)**
6 Core Beliefs	Core Beliefs	• Identification of core beliefs • Challenging and testing core beliefs	• Identifying Core Beliefs worksheet • Challenging Core Beliefs worksheet • Common Beliefs worksheet
7 Developing New Cognitive Skills 1	Controlling Your Thoughts	• Behavioural experiments • Distraction • Positive diaries	• Test Your Thoughts worksheet • The Thought Challenger worksheet • Looking For The Positive Worksheet
8 Developing New Cognitive Skills 2	Controlling Your Thoughts	• Positive self-talk • Coping self-talk • Thought stopping	• Positive Self-Talk worksheet • Coping Self-Talk worksheet • The 'Worry Safe' exercise • Turn The Tape Off exercise • Practice Being Successful exercise • Thought Stopping exercise

9 Identifying Feelings	How You Feel	• Affective education • Affective monitoring	• Thoughts and Feelings worksheet • What Feeling Goes Where exercise • My Feelings exercise • The Feeling Thermometer exercise **Selection of homework activities choose 1 from below:** • **What Happens When I Feel Sad? worksheet** • **What Happens When I Feel Angry? worksheet** • **What Happens When I Feel Anxious? worksheet** • **What Happens When I Feel Happy? Worksheet**
10 Strategies for Controlling Unpleasant Feelings	Controlling Your Feelings	• Affective management • Physical relaxation • Controlled breathing • Imaginal relaxation • Anger management	• The Feeling Strong Room exercise • Anger Volcano exercise • Learning to Relax Exercise • My Relaxing Place exercise
11 Ideas for Changing Behaviour	Changing Your Behaviour	• Activity monitoring • Activity rescheduling • Hierarchy development • Systematic desensitisation • Response prevention	• Next Step Up The Ladder exercise • Face Your Fears exercise • Dump Your Habits exercise Pupils to self-select and feedback to group 1 from the following: • Things That Make Me Feel Good worksheet

			• Things That Make Me Feel Unpleasant worksheet • Things I would Like To Do worksheet
12 Approaches for Problem Solving	Learning To Solve Problems	• Alternative thinking • Consequential thinking • Self-instructional training • Debrief on intervention	• Identifying Possible Solutions exercise • What Are The Consequences of My Solutions worksheet • Looking For Solutions worksheet • Stop, Plan and Go exercise

- **Bold text indicates homework set**

At the end of each session, the class teacher highlighted and noted what was covered against the outline for that section. It was agreed that if there was a resource that was not covered in the time allotted, it was the class teacher's responsibility to use class time during that week to complete the resource.

The week after the administration of the full intervention was completed, time was allocated in the ICT suite in both schools to collect post intervention data. Teacher data was input by all three teachers of all three groups (experimental groups 1, 2 & Control).

Questionnaires from the SELR and the SDQ measures were sent out in pupils' bags for parental completion. Just under half of the questionnaires were returned over a two week period with a second copy of the questionnaire sent out as a prompt. The researcher allocated time to contact parents via the telephone in order to boost the response rate.

The researcher input both SELR and SDQ post intervention data via electronic scoring of all parental responses.

Debriefing for all participating pupils was conducted within the last session.

For the purposes of debriefing, the researcher met with the class teachers involved with the research and provided a full explanation of what the two assessments measured were and how such measures link in with the intervention.

A date was arranged for the researcher to offer consultation in support of the experimental group 2 class teacher delivering the intervention to the then control group who had accessed neither SEAL nor CBT.

Manipulation for statistical purposes was completed and a full description and analysis is found in the following Results section of this research.

4.15 Integrity of implementation process which had informed this research

4.15.1 Reliability

Research is only deemed 'trustworthy' and therefore 'useful' if the results are deemed to hold sufficient reliability.

In order to maximise reliability, all potential causes of unreliability should be taken into account. Robson, (2006) reported possible unreliability causes as including:

- Observer error – unrelated factors influence perception and or recording of the observer
- Observer bias – the observer's own ideologies (deliberately or sub-consciously) impacts on recording and skews their data
- Subject error – subject responses are influenced by external factors to the study such as thirst, tiredness, hunger
- Subject bias – subjects are influenced (sub-consciously or deliberately) by their preconceived ideas of how they ought to respond.

4.15.1.1 Reliability pertinent to this research

Factors which could pose a threat to this research's reliability must be considered.

According to Robson, (2006) the adoption of a fixed design offers the potential of high reliability. However, possible reliability risks for this particular research could include:

- **Observer error**

  Whereby unrelated factors influence the perception and / or recording of the class teacher, parent / carer or pupil, such as fatigue, willingness to engage and either speed up and provide an unintentional score

- **Participant error**

  Pupil's responses to pre & post measures could be influenced by external factors to the study such as thirst, tiredness, hunger and boredom or level of willingness to engage and speed up and provide an unintentional score or completed by error

In order to address such potential threats, the researcher made procedural accommodations to ensure the teacher had time away from the teaching timetable and arranged during that same period to conduct the pupil self-report baseline data collection at the pre-data collection stage. This took place within the week before the intervention commenced for both schools. Also, parents were provided with the questionnaires via school mail in their child's bag. For those who were unable to complete or had not returned their questionnaires, a second phase of baseline data collection was offered conveniently during a 'Parents Evening', staffed by the researcher.

At the post data collection phase, the same procedure was conducted to provide support and consistency for the class teacher and pupils in the week following the intervention ceased. However, parent data was anticipated to be more difficult to gain and a plan to apportion time to make contact over the telephone, and go through the questions verbally was developed and implemented for those 'non-returning' post data parents or carers.

Further to this, the researcher attempted to alleviate such potential threats to reliability by identifying and ensuring protection of the time allocated to complete both pre and post data collection (for the class teacher and pupils) – this being the first hour of the school morning during the week before the intervention started. The same time was provided the week after the intervention ceased in order to alleviate potential observer and participant error.

Other reliability threats were:

- **Observer bias**
  Whereby the Class teacher, parent / carer's, pupil's own ideologies (deliberately or sub-consciously) could impact on recording and skew their data responses

- **Participant bias**
  Whereby the pupils are influenced (sub-consciously or deliberately) by their pre-conceived ideas of how they ought to respond following the re-administration of the data collection measures

In order to address potential issues in this area the researcher provided the same verbal statement to all those contributing to the pre and post data to ensure consistency.

4.15.2 Internal validity

Further to addressing reliability issues satisfactorily, it was also important to consider the matter of construct validity, and following this, the notion of internal validity – considering particularly how well the tool of measure is fit for purpose. Robson, (2006) reported possible threats to internal validity include:

- **History** – participant's experiences, environmental changes that could be unrelated to the research

- **Testing** – changes brought on by previous experience with tests used or practice impacts on performance
- **Regression** – if subjects are selected for unusual or atypical reasons, later testing may give less typical scores and cause a 'regression to the mean'
- **Mortality effects** – participants dropping out of the research
- **Maturation effects** – participant's development or growth, which is unrelated to the study, impacting on the research outcome
- **Selection effects** – comparison groups are different prior to study Robson, (2006).

4.15.2.1 Internal validity pertinent to this research

The following are important factors that could potentially pose a threat to this research's internal validity:

- **History & Maturation** – although the time period of this research intervention is only 6 weeks and does not constitute a lengthy period of intervention, it is pertinent to note the impact of the passage of time elapsing, and possible associated changes to the participant.

- **Testing** - whilst the pre and post measures remain the same, and are delivered in all instances in exactly the same way, a potential threat could be that participants respond to the same question but in a different way - their perspective having shifted or circumstances having changed outside and independent of the research.

- **Diffusion of treatment** - two different schools are utilised, making two different experimental groups and one control group, in one school there is both an experimental and control group. As such there could be incidental skill transference during and following intervention, therefore posing a threat to the internal validity of this research.

4.15.3 External validity

Cohen, Manion & Morrison, (2007) suggest that for research results to be of use, generalisability outside of the confines of that research should be possible. The

researcher's intention should be to develop and conduct research that is generalisable and so repeatable in the wider system, thereby holding robust external validity. As such, threats to external validity restrict the degree to which generalisations can be drawn from the experimental research (Cohen, Manion & Morrison, 2009, p. 156). Conversely, Roth and Foggarty, (1996), proponents of randomised controlled trials, accept that conditions that lead to high internal validity can compromise the external validity of the research.

4.15.3.1 External validity pertinent to this research

'Generalisability to other populations' was identified as something to be considered with caution in relation to the current research. This aspect could have been addressed by increasing the number of participants and, indeed, participating schools. However, whilst this was desirable, only two schools opted to be included in the research. Further, by increasing the participants, it is likely that by elevating external validity, the internal validity could be threatened since this would increase extraneous variables (differences in and between schools) that would require control. Kazdin, (2003) suggested that internal validity is of greater importance to a piece of research than external validity since it is of less importance whether the results of research can be generalised if the research itself does not measure what it should be measuring.

4.16 Ethical considerations pertinent to current study

Webster & Bond, (2002) suggest that the implementation of ethical practice and research by educational psychologists is highly important for true professional practice. This is especially so for the vulnerable clientele EPs serve. Such adherence to ethical practice ensures appropriate professional codes of conduct.

The British Psychological Society guidelines and principles of practice, (2006) provide strict guidelines for how research should be conducted. From thoroughly reviewing such comprehensive guidelines the following were deemed the most pertinent to the present undertaking:

- **Consent**

  The researcher gained permission from the Head teacher and associated class teachers from each school, written permission from parents of the classes of pupils who would take part, along with a brief resume of what the intervention entailed. Following this, the researcher arranged to visit the experimental classes involved and shared information about the intervention including themes, activities and potential benefits of engaging as well as gaining informed consent from the pupils themselves. The researcher met with the class teachers to share the research process and intervention materials, and to discuss the pre and post data so that they are informed of the research requirements.

- **Confidentiality**

  No participant or schools names were included in the data collection records - only researcher assigned numbers were recorded. No personal data other than parental to child codes were noted and these codes were destroyed following analysis, so as to assure anonymity.

- **Right to withdraw**

  Prior to the intervention beginning and half way through the intervention, pupils were notified of the right to withdraw from the intervention and were further informed that their personal data would be shredded on completion of the research. The same was offered to parents prior to and following data collection.

- **Debriefing**

  At the end of the intervention, debriefing took place with the pupils and school staff. A closing letter was sent out to thank parents for their participation and to inform them of the completion of the intervention and its aims.

4.17 Method of analysis

4.17.1 Statistics and hypothesis testing

Descriptive statistics are used to quantitatively describe the basic features of data captured within the research and are used in conjunction with tabular and graphical analysis. They provide a simple summary of large amounts of data in order to help understanding of any relationships between variables.

By looking at the descriptive statistics within the research, it is possible to cautiously ascertain if the hypothesis being tested is supported or not. However, this can cause issues in that:

- Descriptive statistics are sometimes ambiguous, making it difficult to draw conclusions
- The interpretation of descriptive statistics alone is not robust enough to draw firm conclusions.

Statistical tests that calculate the probability that any apparent relationship between variables is due to chance are therefore also utilised and will be described with regard to the current research shortly.

In summary, to test hypotheses, the following steps are taken:

- Formulate the hypothesis
- Measure the appropriate variables and examine the relationships between them
- Use statistical tests to calculate the probability that the relationships observed are due to chance
- If the probability is small enough, it suggests that the finding is unlikely to be due to chance which means that the hypothesis is supported.

4.17.2 Hypothesis and null hypothesis

As described above, statistical testing requires that the probability that research findings have arisen by chance needs to be calculated. Therefore, in addition to the research hypothesis which predicts that a relationship will exist between variables, a null hypothesis which equates to the opposite is also required.

Once the probability that findings have arisen by chance is known, it is possible to accept one hypothesis and reject the other.

The following sections detail the steps taken in order to quantify, analyse and summarise the dataset captured within the research in order to investigate the hypotheses being tested.

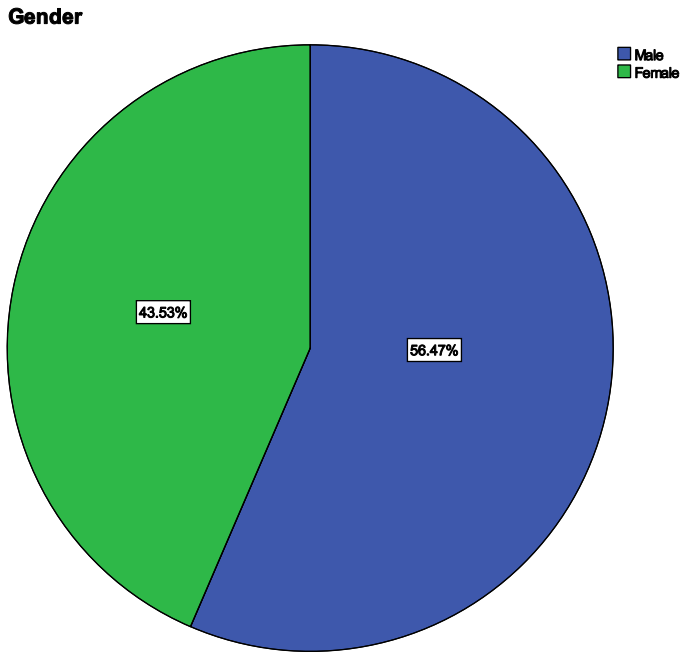
An account of the data, and the outcomes of the data analysis presented according to the research questions and associated hypotheses as set out above will be presented in the following Results section.

5. Results

5.1 Research groups and participants

In this research, 85 subjects were recruited. Of these, 48 participants (56.5%) were male, and 37 (43.5%) were female (see figure 5.1).

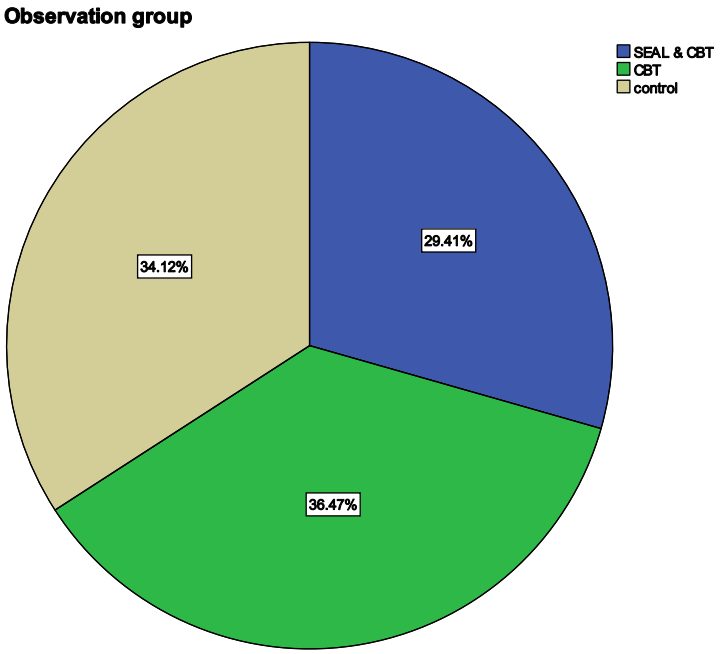
Figure 5.1: A diagram to illustrate the percentage of male and female participants in the research



The 85 participants were split into three groups relating to the intervention method(s) applied.

Experimental group 1 was subject to the SEAL & CBT intervention and contained 25 participants (29.4 %). Experimental group 2 participants received CBT only intervention and contained 31 participants (36.5%). A Control Group (group 3) which received no intervention had 29 participants (34.1%). This is illustrated in figure 5.2 below.

Figure 5.2: A diagram to illustrate the distribution of participants in different groups of research



Further analysis of group participants by gender is described in table 5.1 below.

Table 5.1: A table to illustrate participant gender breakdown by observation group

Observation Group	**Male Participants**	**Female Participants**	**Total Participants**
Experimental Group 1 (SEAL & CBT)	15	10	25
Experimental Group 2 (CBT)	17	14	31
Group 3 (Control)	16	13	29

It was decided that the impact of gender upon outcome measures would not be part of this research and that this could be considered for further analysis in future research.

5.2 Data collection and input

Participants completed the Southampton Emotional Literacy Resource (SELR) and the Strengths and Difficulties Questionnaire (SDQ) in order to collect data which would form the basis of the research and provide data for further analysis.

Using the resources described above, 31 different variables were measured describing data received from parents, teachers and children. The measurements were taken before intervention (pre-data variables) and repeated after intervention (post-data variables). Data were inputted into the statistical software package SPSS.

The variables derived from the SELR and the SDQ are listed in tables 5.2 and 5.3 below.

Table 5.2: A table to show the list of pre and post variables measured in this research using the SELR

Pre & post-test SELR variables	Parent-rated: self-awareness Parent-rated: self-regulation Parent-rated: motivation Parent-rated: empathy Parent-rated: social skills Parent-rated: total
	Teacher-rated: self-awareness Teacher-rated: self-regulation Teacher-rated: motivation Teacher-rated: empathy Teacher-rated: social skills Teacher-rated: total
	Student self-report: total

Table 5.3: A table to show the list of pre and post variables measured in this research using the SDQ

Pre & post-test SDQ variables	Parent-rated: overall stress Parent-rated: emotional distress Parent-rated: behavioural difficulties Parent-rated: hyperactivity and concentration difficulties Parent-rated: difficulties getting along with other children Parent-rated: kind and helpful behaviour
	Teacher-rated: overall stress Teacher-rated: emotional distress Teacher-rated: behavioural difficulties Teacher-rated: hyperactivity and concentration difficulties Teacher-rated: difficulties getting along with other children Teacher-rated: kind and helpful behaviour
	Student self-report: overall stress Student self-report: emotional distress Student self-report: behavioural difficulties Student self-report: hyperactivity and concentration difficulties Student self-report: difficulties getting along with other children Student self-report: kind and helpful behaviour

5.3 Analysis by difference variables

This researcher's use of the SELR and the SDQ resources produced data before (pre) the intervention period and following (post) the CBT based intervention.

The way in which the resulting dataset was analysed depended on a number of factors.

A 'Difference' variable can be obtained by subtracting the pre intervention data values from the post intervention data values, as long as they are both measured on the same metric. This simplifies the analysis by comparing groups by mean

‘difference scores’ although it has been argued that mixed factorial analysis can have more power (Huck and McLean 1975).

In order to compare participants in different research groups, 31 ‘Difference variables’ were calculated as introduced in tables 5.4 and 5.5 (i.e. Difference variable = post variable – pre variable) relative to the resource method used.

5.3.1 Longitudinal design

A longitudinal design is one which is carried out over a period of time so that change can be measured on the same individuals at certain time intervals, subsequent to the delivery of the intervention. The timespan of a longitudinal study can be weeks, months or years.

Longitudinal studies can either be ‘two-wave’ or ‘multi-wave’ designs. Two-wave designs take measurements at two times; pre-intervention and post-intervention. Multi-wave designs take measurements at multiple times over the timespan of the longitudinal study.

A major advantage of longitudinal designs is that they allow change to be measured directly rather than being inferred indirectly from comparisons of different people, which is the case with cross-sectional studies. A disadvantage of longitudinal designs is that they can suffer from attrition whereby participants may remove themselves from the study at any time therefore impacting on the participant sample.

This particular study was limited in that the timespan available for the delivery of the intervention was 6 weeks. Time and resource limitations also meant that measurements could only be practically taken pre-intervention and post-intervention. Therefore this design could be described as a short term two-wave longitudinal study.

The limitations of the study did mean that the potential for ‘attrition’ was minimised. Therefore, the participants in the study sample were the same at pre-intervention and post-intervention.

5.3.2 Difference scores and the measurement of change

As highlighted above, longitudinal designs are effective in being able to directly measure change.

Change is most commonly measured using 'difference scores' by subtracting a participant score taken at pre-intervention from the same participant score taken post-intervention for the same variable.

Using difference scores as a measurement of change has been subject to intense debate. Lord, (1956, p. 429) suggested that *'differences between scores tend to be much more unreliable than the scores themselves'* and also that *'the difference between two fallible measures is frequently much more fallible than either'* (Lord, 1963, p.32). This view has subsequently been endorsed by many methodologists (Gottman, 1995).

However, more recent research has provided support for the use of difference scores to assess change and much of the previous criticisms have been shown to be based on misconception. Rogosa and others (Rogosa and Willett, 1983, 1985; Rogosa, Brandt and Zimowski, 1982; Zimmerman and Williams, 1982) have since shown that in fact difference scores can be an intuitive and unbiased simple measure of individual growth or change.

Criticisms of the use of difference scores have often been more applicable to two-wave designs than to the use of difference scores themselves. This is due to the limited information on individual change being available by measuring at only two points on the longitudinal design timeline. No amount of statistical sophistication can fix what is limited by design and measurement (Chan, 1998a).

However, in circumstances where the research design is limited in time and resources such that a short term two-wave longitudinal study is the only practical option, Rogosa et al., (1982) suggest that *'the difference score is a natural and useful measure of individual change'*.

Therefore using difference scores in this research study can be supported.

Table 5.4: A table to show a list of calculated difference variables using SELR

Difference Variables calculated using the SELR
Difference in Parent-rated: self-awareness
Difference in Parent-rated: self-regulation
Difference in Parent-rated: motivation
Difference in Parent-rated: empathy
Difference in Parent-rated: social skills
Difference in Parent-rated: total
Difference in Teacher-rated: self-awareness
Difference in Teacher-rated: self-regulation
Difference in Teacher-rated: motivation
Difference in Teacher-rated: empathy
Difference in Teacher-rated: social skills
Difference in Teacher-rated: total
Difference in Student self-report: score

Table 5.5: A table to show a list of calculated difference variables using SDQ

Difference Variables calculated using the SDQ
Difference in Parent-rated: overall stress
Difference in Parent-rated: emotional distress
Difference in Parent-rated: behavioural difficulties
Difference in Parent-rated: hyperactivity and concentration difficulties
Difference in Parent-rated: difficulties getting along with other children
Difference in Parent-rated: kind and helpful behaviour
Difference in Teacher-rated: overall stress
Difference in Teacher-rated: emotional distress
Difference in Teacher-rated: behavioural difficulties
Difference in Teacher-rated: hyperactivity and concentration difficulties
Difference in Teacher-rated: difficulties getting along with other children
Difference in Teacher-rated: kind and helpful behaviour
Difference in Student self-report: overall stress
Difference in Student self-report: emotional distress

Difference in Student self-report: behavioural difficulties
Difference in Student self-report: hyperactivity and concentration difficulties
Difference in Student self-report: difficulties getting along with other children
Difference in Student self-report: kind and helpful behaviour

5.4 Distribution of data

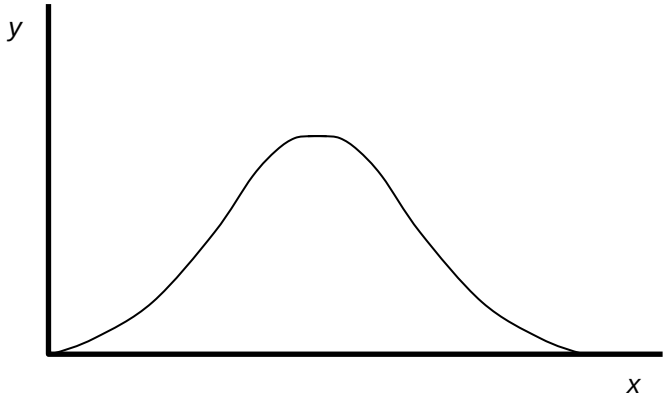
Before deciding on a statistical analysis method to apply to the dataset, the distribution of the data needs to be explored.

Statistical techniques make assumptions regarding the way in which data is distributed and so certain analysis methods should be chosen depending on the nature of that distribution. Fundamental to this is to determine if the data collected follows a normal or non-normal distribution.

5.4.1 Normal and Non-Normal Distribution

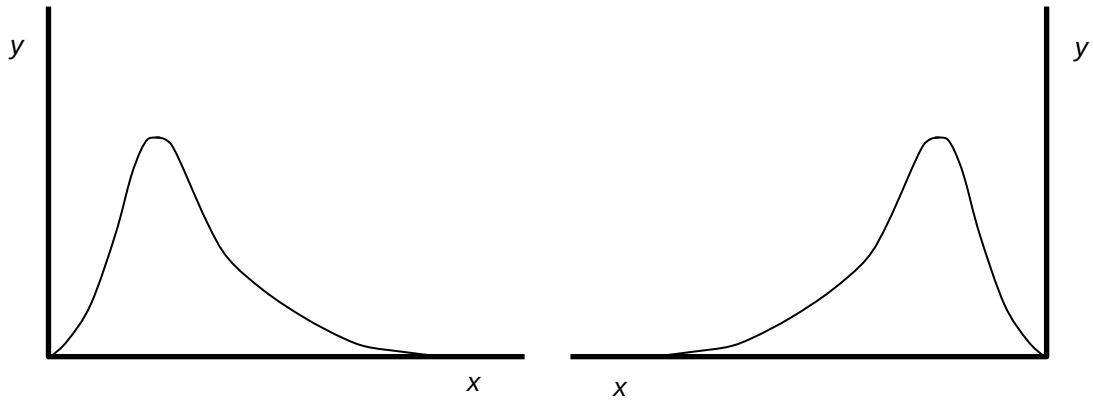
A normal distribution of data provides a ‘bell-shaped’ symmetrical curve when plotted on the x/y axis. This is illustrated by figure 5.3 below.

Figure 5.3: A diagram to illustrate a normally distributed dataset



A non-normally distributed dataset would differ markedly from the above when plotted on the x/y axis. Examples would be curves that are skewed or not symmetrical with peaks being biased towards either end of the measurement scale. Figure 5.4 provides two examples of datasets that do not demonstrate normal distribution.

Figure 5.4: A diagram to illustrate non-normally distributed datasets



5.4.2 Normality tests

Both Shapiro-Wilk (S-W) and Kolmogorov-Smirnov (K-S) tests were applied to the data to determine if distribution was normal or non-normal.

The S-W test tests whether a dataset has been drawn from a normal distribution.

The K-S test statistically evaluates if the difference between a theoretically normal distribution and a measured distribution is small enough to be just due to chance. If the distribution between the actual distribution and the theoretical distribution is

larger than is likely to be due to chance (or sampling error) then the actual distribution would be non-normal. The K-S test is performed with a Lilliefors Significance Correction. This correction is applied when estimating parameters rather than using known values.

The null hypothesis tested is that the dataset follows a normal distribution. The tests reject the null hypothesis of normality when the statistically significant (Sig or p-value) is less than or equal to 0.05. If the normality is failed, this indicates with 95% certainty that the data does not comply with normal distribution.

Tables 5.6 and 5.7 provide the results of the K-S and S-W normality tests for the SELR and SDQ resources respectively. It can be seen that no datasets within the research are normally distributed (except '*Difference in Student self-report overall stress'* using the SDQ) as the Sig (p) value is less than or equal to 0.05 for all datasets. This means that the null hypothesis that data is normally distributed can be rejected in all instances (except '*Difference in Student self-report: overall stress').*

Table 5.6: A table to show results of Kolmogrov-Smirnov and Shapiro-Wilk tests for the SELR

Difference Variables Using The SELR	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Difference in Parent-rated: self-awareness	.183	69	.000	.943	69	.004
Difference in Parent-rated: self-regulation	.211	69	.000	.945	69	.004
Difference in Parent-rated: motivation	.172	69	.000	.958	69	.020
Difference in Parent-rated: empathy	.162	69	.000	.928	69	.001
Difference in Parent-rated: social skills	.203	69	.000	.905	69	.000
Difference in Parent-rated: total	.108	69	.045	.975	69	.182
Difference in Teacher-rated self-awareness	.143	69	.001	.954	69	.013
Difference in Teacher-rated: self-regulation	.196	69	.000	.954	69	.013
Difference in Teacher-rated: motivation	.189	69	.000	.941	69	.003
Difference in Teacher-rated: empathy	.148	69	.001	.945	69	.005
Difference in Teacher-rated: social skills	.224	69	.000	.937	69	.002
Difference in Teacher-rated: total	.179	69	.000	.936	69	.002
Difference in Student self-report: score	.110	69	.038	.936	69	.002

a. Lilliefors Significance Correction

Table 5.7: A table to show results of Kolmogrov-Smirnov and Shapiro-Wilk tests for the SDQ

Difference Variables Using The SDQ	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Difference in Parent-rated: overall stress	.147	69	.001	.973	69	.134
Difference in Parent-rated: emotional distress	.245	69	.000	.922	69	.000
Difference in Parent-rated: behavioural difficulties	.315	69	.000	.855	69	.000
Difference in Parent-rated: hyperactivity and concentration difficulties	.186	69	.000	.924	69	.000
Difference in Parent-rated: difficulties getting along with other children	.252	69	.000	.883	69	.000
Difference in Parent-rated: kind and helpful behaviour	.235	69	.000	.929	69	.001
Difference in Teacher-rated: overall stress	.125	69	.010	.938	69	.002
Difference in Teacher-rated: emotional distress	.154	69	.000	.963	69	.037
Difference in Teacher-rated: behavioural difficulties	.305	69	.000	.858	69	.000
Difference in Teacher-rated: hyperactivity and concentration difficulties	.213	69	.000	.932	69	.001
Difference in Teacher-rated: difficulties getting along with other children	.217	69	.000	.934	69	.001
Difference in Teacher-rated: kind and helpful behaviour	.202	69	.000	.947	69	.006

Difference in Student self-report: overall stress	*.096*	*69*	*.193*	*.983*	*69*	*.455*
Difference in Student self-report: emotional distress	.153	69	.000	.969	69	.082
Difference in Student self-report: behavioural difficulties	.152	69	.000	.949	69	.007
Difference in Student self-report: hyperactivity and concentration difficulties	.120	69	.015	.957	69	.019
Difference in Student self-report: difficulties getting along with other children	.215	69	.000	.935	69	.001
Difference in Student self-report: kind and helpful behaviour	.179	69	.000	.942	69	.003

a. Lilliefors Significance Correction

5.4.3 Non-normal distribution outcomes

It is desirable to have normally distributed data as the associated statistical tests can have more 'power' (Brace et al., 2009). This is derived from the fact that the shape of the distribution can be mathematically described so that one can draw more, and more firm conclusions.

Statistical power is the ability of a statistical test to observe a significant effect. This describes the frequency with which the correct valuation of an effect is achieved if it is repeated many times.

As a normally distributed dataset has a predictable shape, this increases the probability that a significant effect of an intervention technique will be detected.

Non-normally distributed data can be normalised by changing it statistically. This is called 'transforming the distribution'. The transformation method used is dependent on the way in which the dataset departs from normality.

Statistical data transformation can make data easier to interpret and analyse. The power of statistical tests that can be applied to normally distributed data sets is greater than those applied datasets that are non-normal.

In this research, attempts were made to transform data to make its distribution normal, such as through the application logarithm (since the difference data include values equal to or less than zero, logarithm was based on values plus a constant amount). However, the new computed variables did not satisfy the statistical tests.

A second approach that was undertaken in order to influence the distribution of data involved using SPSS to transform data for the rank and calculate the Blom normal scores. However, again the transformed variables did not satisfy normality tests.

5.4.4 Parametric and non-parametric statistical tests

Normally distributed data can utilise parametric statistical tests. Data that is not normally distributed requires the use of non-parametric tests.

In this research normality tests indicated that the vast majority of datasets were not normally distributed. In addition, transformation techniques failed to provide normally distributed data. Hence, in this research non-parametric tests were utilised.

5.5 Non Parametric Statistical Analysis

The choice of non-parametric statistical test depends on the research undertaken. In summary, the main available tests are:

- Spearmans Rho
- Mann-Whitney U test
- Wilcoxon signed ranks test
- Kruskal Wallis test
- Friedman test.

In this instance, the Kruskal-Wallis test was chosen as described below.

5.5.1 Kruskal Wallis Test

The Kruskal Wallis (K-W) statistical test is a non-parametric test for one way analysis of variance by ranks. Derived from the Mann-Whitney U (M-W) test it is an appropriate choice when there are 3 or more research groups. Given that this research has participants within experimental group 1 (SEAL & CBT), experimental group 2 (CBT) and group 3 (Control), the K-W test was chosen for this research.

This test is used for a non-normally distributed population with. A comparable parametric test which would be used for normally distributed data is the one-way analysis of variance (Anova).

Normally, the K-W test is used when the research has a nominal and a measurement variable and also where the measurement variable does not satisfy a normal distribution as required by Anova.

5.5.1.1 Ranking data

As with most non-parametric tests, the K-W test is used on ranked data. Data and measurements are transformed into their ranks in the overall dataset. The least value would have a rank of 1, the next least value a rank of 2 and the remaining values ranked in this way. The sum of the ranks is then evaluated in each group. The test statistic (H) is then calculated for each group where H determines the variance of the ranks among groups.

The degradation in data introduced by using the rank values instead of the original data values can mean that this non parametric test is not as powerful as the equivalent parametric test (Anova).

Although the test does not assume normally distributed data, it does assume that each group tested contains data with a similar distribution form. Subsequently, if

different groups have different forms of distribution, the power of the test can be lessened (Fagerland and Sandvik 2009).

Using the K-W test, 31 difference variables were compared between the three research groups as shown in tables 5.8 and 5.9 relating to the SELR and SDQ resources used respectively. The null hypothesis is that the distribution of difference in the variable tested is the same across research groups. Where this is rejected it indicates that different research groups have an effect on the distribution of difference and that a difference is detected. Instances of the null hypothesis being rejected are hence shown **in bold** in tables 5.8 and 5.9.

Table 5.8: A table to show results of the Kruskal-Wallis test on the Difference variables using the SELR

Hypothesis Test Summary			
Null Hypothesis	**Test**	**Sig. or p-value**	**Decision**
The distribution of Difference in 'Parent-rated: self-awareness' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.213	Retain the null hypothesis.
The distribution of Difference in 'Parent-rated: self-regulation' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.176	Retain the null hypothesis.
The distribution of Difference in 'Parent-rated: motivation' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.037	**Reject the null hypothesis.**
The distribution of Difference in 'Parent-rated: empathy' is	Independent-Samples	.290	Retain the null hypothesis.

the same across categories of observation group.	Kruskal-Wallis Test		
The distribution of Difference in Parent-rated: social skills' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.776	Retain the null hypothesis.
The distribution of Difference in 'Parent-rated: TOTAL' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.128	Retain the null hypothesis.
The distribution of Difference in 'Teacher-rated: self-awareness' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.000	**Reject the null hypothesis.**
The distribution of Difference in 'Teacher-rated: self-regulation' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.000	**Reject the null hypothesis.**
The distribution of Difference in 'Teacher-rated: motivation' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.035	**Reject the null hypothesis.**
The distribution of Difference in 'Teacher-rated: empathy' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.000	**Reject the null hypothesis.**

The distribution of Difference in 'Teacher-rated: social skills' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.000	**Reject the null hypothesis.**
The distribution of Difference in 'Teacher-rated: TOTAL' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.000	**Reject the null hypothesis.**
The distribution of Difference in 'Student self-report: score' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.343	Retain the null hypothesis.

Significance level is .05

Table 5.9: A table to show results of the Kruskal-Wallis test on the Difference variables using the SDQ

Hypothesis Test Summary			
Null Hypothesis	**Test**	**Sig. or p-value**	**Decision**
The distribution of Difference in 'Parent-rated: overall stress' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.755	Retain the null hypothesis.
The distribution of Difference in 'Parent-rated: emotional distress' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.705	Retain the null hypothesis.
The distribution of Difference in 'Parent-rated: behavioural	Independent-Samples	.929	Retain the null hypothesis.

difficulties' is the same across categories of observation group.	Kruskal-Wallis Test		
The distribution of Difference in 'Parent-rated: hyperactivity and concentration difficulties' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.300	Retain the null hypothesis.
The distribution of Difference in 'Parent-rated: difficulties getting along with other children' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.456	Retain the null hypothesis.
The distribution of Difference in 'Parent-rated: kind and helpful behaviour' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.976	Retain the null hypothesis.
The distribution of Difference in 'Teacher-rated: overall stress' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.025	**Reject the null hypothesis.**
The distribution of Difference in 'Teacher-rated: emotional distress' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.048	**Reject the null hypothesis.**
The distribution of Difference in 'Teacher-rated: behavioural difficulties' is the	Independent-Samples	.024	**Reject the null hypothesis.**

same across categories of observation group.	Kruskal-Wallis Test		
The distribution of Difference in 'Teacher-rated: hyperactivity and concentration difficulties' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.000	**Reject the null hypothesis.**
The distribution of Difference in 'Teacher-rated: difficulties getting along with other children' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.070	Retain the null hypothesis.
The distribution of Difference in 'Teacher-rated: kind and helpful behaviour' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.315	Retain the null hypothesis.
The distribution of Difference in 'Student self-report: overall stress' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.729	Retain the null hypothesis.
The distribution of Difference in 'Student self-report: emotional distress' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.487	Retain the null hypothesis.
The distribution of Difference in 'Student self-report: behavioural difficulties' is the	Independent-Samples Kruskal-Wallis Test	.480	Retain the null hypothesis.

same across categories of observation group.			
The distribution of Difference in 'Student self-report: hyperactivity and concentration difficulties' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.034	**Reject the null hypothesis.**
The distribution of Difference in 'Student self-report: difficulties getting along with other children' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.197	Retain the null hypothesis.
The distribution of Difference in 'Student self-report: kind and helpful behaviour' is the same across categories of observation group.	Independent-Samples Kruskal-Wallis Test	.364	Retain the null hypothesis.

Significance level is .05

The K-W test provides evidence that there are statistically significant differences between research groups for some variables but not all. Variables where a significant difference was observed are:

Utilising the SELR

- Difference in Parent-rated motivation
- Difference in Teacher-rated self-awareness
- Difference in Teacher-rated self-regulation
- Difference in Teacher-rated motivation
- Difference in Teacher-rated empathy
- Difference in Teacher-rated social skills
- Difference in Teacher-rated total.

Utilising the SDQ

- Difference in Teacher-rated overall stress
- Difference in Teacher-rated emotional distress
- Difference in Teacher-rated behavioural difficulties
- Difference in Teacher-rated hyperactivity and concentration difficulties
- Difference in Student self-report hyperactivity and concentration difficulties.

Immediate observations that can be drawn are that:

- 12 of the 31 tested variables showed a significant difference
- These differences were mainly observed in teacher responses
- Of 13 difference variables recorded using the SELR, 7 showed a significant difference
- Of 18 difference variables recorded using the SDQ, 5 showed a significant difference.

The null hypothesis of the K-W test is that the mean ranks of the groups are the same and so this test will identify if the differences in the mean rank data between the groups are so large that they are unlikely to have occurred by chance.

The mean rank is the average of the rank values observed for each group for a particular observed difference variable. Mean rank values were identified for each of the variables that showed a significant difference for the 3 research groups. This is shown in tables 5.10 and 5.11 reflecting the use of SELR and SDQ resources respectively. The highlighted *p* values are taken from tables 5.08 and 5.09 confirming the statistically significance of those particular difference variables.

Table 5.10: A table to show mean rank values for variables that are detected by the Kruskal-Wallis test to have statistical significance between the research groups utilising the SELR

Name of the variable	**Mean rank for Experimental Group 1 (SEAL & CBT)**	**Mean rank for Experimental Group 2 (CBT)**	**Mean rank for Group 3 (Control)**	**p-value of the Kruskal-Wallis test**
Difference in Parent-rated: motivation	40.70	43.17	29.12	0.037
Difference in Teacher-rated: self-awareness	18.43	49.35	54.83	0.000
Difference in Teacher-rated: self-regulation	22.76	56.42	41.84	0.000
Difference in Teacher-rated: motivation	31.50	47.97	43.95	0.035
Difference in Teacher-rated :empathy	22.96	45.63	53.22	0.000
Difference in Teacher-rated: social skills	21.65	53.34	46.02	0.000
Difference in Teacher-rated: total	17.35	53.79	48.95	0.000

Table 5.11: A table to show mean rank values for variables that are detected by the Kruskal-Wallis test to have statistical significance between the research groups utilising the SDQ

Name of the variable	**Mean rank for Experimental Group 1 (SEAL & CBT)**	**Mean rank for Experimental Group 2 (CBT)**	**Mean rank for Group 3 (Control)**	**p-value of the Kruskal-Wallis test**
Difference in Teacher-rated: Overall stress	32.31	49.85	40.43	0.025
Difference in Teacher-rated: emotional distress	31.92	43.52	47.55	0.048
Difference in Teacher-rated: behavioural difficulties	35.40	50.10	37.52	0.024
Difference in Teacher-rated: hyperactivity and concentration difficulties	29.12	54.95	37.70	0.000
Difference in Student self-report: hyperactivity and concentration difficulties	51.27	37.74	35.57	0.034

In order to locate the exact place of the difference in the above variables, the M-W test was undertaken comparing the groups two by two.

5.5.2 Mann-Whitney U (M-W) Test

The M-W test is appropriate to utilise where a non-normal dataset distribution is observed (non-parametric test) and it identifies differences in the mean of two groups. The equivalent parametric test is the independent samples t-test and should be used when data is not normally distributed and when that data cannot be transformed to a normal distribution by the use of relevant statistical transformation methods.

In order to avoid inflating error type I, Bonferroni Correction was undertaken, i.e. critical value for the significance was divided by the number of tests. As there were three groups it is necessary to undertake the test three times to compare the groups (Experimental group 1 vs. Experimental Group 2 / Experimental group 1 vs. Group 3 / Experimental Group 2 vs. Group 3). Therefore, 0.05 divided by 3 equals 0.016.

Type 1 errors can be introduced when the research hypothesis is mistakenly accepted and the null hypothesis is mistakenly rejected. This is more prevalent when the p-value observed is on the boundary between being seen to be significant or insignificant.

Comparisons between research groups are summarised in the following tables 5.12 and 5.13 (SELR and SDQ resources used respectively). Total undertaken tests are presented in the appendix 3.

Table 5.12: A table to show p-value of Mann-Whitney U tests as a post hoc test for Kruskal-Wallis test with Bonferroni correction utilising SELR variables. When the difference is statistically significant (≤0.016), it is highlighted.

Name of the variable	**Experimental Group 1 (SEAL & CBT)** **vs.** **Experimental Group 2 (CBT)**	**Experimental Group 1 (SEAL & CBT)** **vs.** **Group 3 (Control)**	**Experimental Group 2 (CBT)** **vs.** **Group 3 (Control)**
Difference in Parent-rated: motivation	0.727	0.061	0.013
Difference in Teacher-rated: self-awareness	0.000	0.000	0.454
Difference in Teacher-rated: self-regulation	0.000	0.001	0.006
Difference in Teacher-rated: motivation	0.013	0.057	0.483
Difference in Teacher-rated: empathy	0.000	0.000	0.134
Difference in Teacher-rated: social skills	0.000	0.000	0.201
Difference in Teacher-rated: total	0.000	0.000	0.422

Table 5.13: A table to show p-value of Mann-Whitney U tests as a post hoc test for Kruskal-Wallis test with Bonferroni correction utilising SDQ variables. When the difference is statistically significant (≤0.016), it is highlighted.

Name of the variable	**Experimental Group 1 (SEAL & CBT)** **vs.** **Experimental Group 2 (CBT)**	**Experimental Group 1 (SEAL & CBT)** **vs.** **Group 3 (Control)**	**Experimental Group 2 (CBT)** **vs.** **Group 3 (Control)**
Difference in Teacher-rated: overall stress	0.005	0.258	0.151
Difference in Teacher-rated: emotional distress	0.000	0.042	0.347
Difference in Teacher-rated: behavioural difficulties	0.019	0.701	0.019
Difference in Teacher-rated: hyperactivity and concentration difficulties	0.000	0.178	0.004
Difference in Student self-report: hyperactivity and	0.044	0.012	0.784

concentration difficulties			

Immediate observations that can be drawn are that where differences have been identified between groups:

- Significant differences mainly exist between experimental group 1 (SEAL & CBT) and experimental group 2 (CBT)
- Some significant differences are identified between the CBT and Control group.

In addition, it is interesting to observe that some differences exist between experimental group 1 (SEAL & CBT) and group 3 (Control). Although not directly part of this current research or related to the hypotheses and null hypotheses being tested, this provokes further debate and possible future research. This is further described in the Discussion section of this research.

In addition, when analysing the results in detail, it is possible that certain intervention methods are suitable for certain measured variables and that a particular group may show significant differences in some variables and not others.

5.5.3 Boxplot graphical representation

Boxplot diagrams (also known as box and whisker plot) are an efficient method for displaying a five number data summary.

This form of graphical representation of data summarises the following statistical measures:

- Median
- Upper and lower quartiles
- Minimum and maximum data values

Understanding the boxplot: (ref: www.netmba.com):

- The box equates to the middle 50% of the data. The upper edge equates to the 75th percentile of the dataset (lower 25% plus middle 50%) and the lower edge equates to the 25th percentile. The range of the middle two quartiles is known as the inter-quartile edge
- The line in the box provides the median value
- If the median line within the box is not equidistant from the hinges, the data is skewed (not normally distributed)
- The ends of the vertical lines represent the minimum and maximum data values (unless outliers are observed which means that the lines extend to a maximum of 1.5x the inter-quartile range). Any value that falls above or below these lines is considered extreme.

The following boxplot diagrams describe the mean rank difference between research groups for the variables that have been identified to show a difference.

Relating to each relevant variable, the outcome of the boxplot analysis is then compared to the hypotheses being tested.

Initially described in the Methods section, the reader is now reminded of these hypotheses and null hypotheses as these are crucial to the interpretation of each boxplot diagram:

Experimental Hypothesis in relation to research question 1

Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' will make significantly greater gains than Control Group participants.

Null Experimental Hypotheses in relation to research question 1

No significant differences will be found between the scores achieved by Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel

Good' and control group participants. Any differences found might be explained by chance.

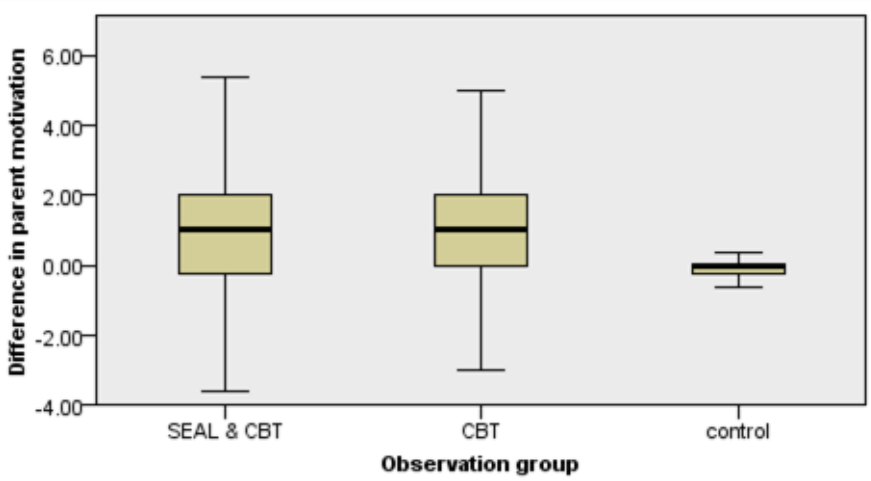
Experimental Hypothesis in relation to research question 2

Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' alongside the SEAL curriculum will make significantly greater gains than Year 5 pupils receiving training in CBT principles alone.

Experimental Null Hypothesis in relation to research question 2

No significant differences will be found between the scores achieved by Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' alongside the SEAL curriculum and Year 5 pupils receiving training in CBT principles alone. Any differences found might be explained by chance.

Figure 5.5: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Parent-rated: motivation'



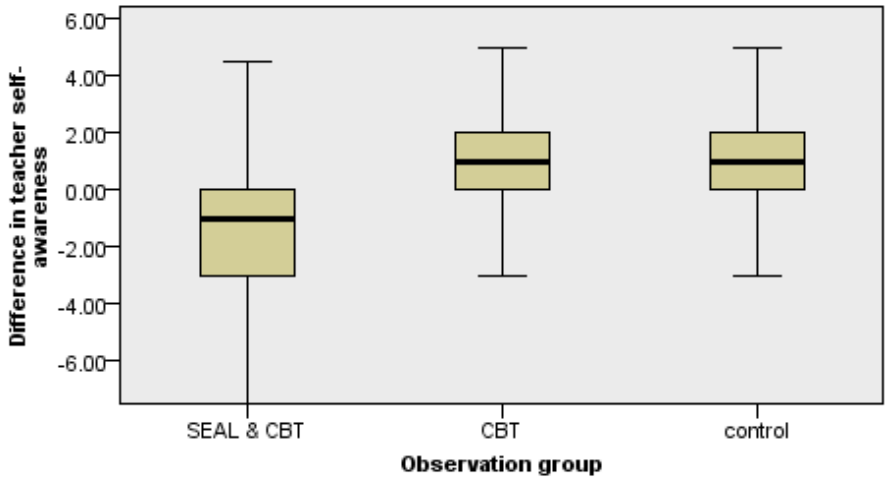
Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Parent-rated: motivation' is statistically significant ($p < 0.05$).

In order to locate the exact place of the difference, the M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 2 (CBT) and group 3 (Control) was 0.013 and is therefore statistically significant ($p<0.016$).

In relation to experimental null hypothesis 1, results indicate that for Parent-rated: motivation, the difference between the group receiving CBT training and the control group receiving no training is significant. Therefore the null hypothesis can be rejected. In addition, the boxplot median values in conjunction with the data in table 5.10 illustrates that this significant difference is due to positive change. Consequently, experimental hypothesis 1 is accepted.

In relation to experimental null hypothesis 2, results indicate that for Parent-rated: motivation, the difference between the group receiving SEAL & CBT training and the group receiving CBT training alone is not significant. Therefore the null hypothesis is retained and the experimental hypothesis 2 cannot be accepted.

Figure 5.6: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Teacher-rated: self-awareness'



Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Teacher-rated: self-awareness' is statistically significant ($p < 0.05$).

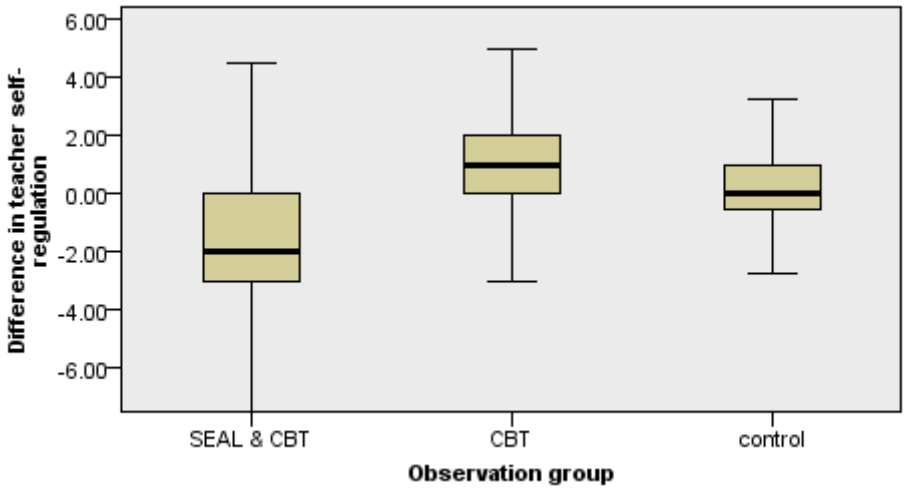
In order to locate the exact place of the difference, M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 1 (SEAL & CBT) and experimental group 2 (CBT) group is statistically significant ($p<0.016$), and also that the difference between experimental group 1 (SEAL & CBT) and group 3 (Control) group is statistically significant ($p<0.016$).

In relation to experimental null hypothesis 1, results indicate that for Teacher-rated: self-awareness, the difference between the group receiving CBT training and the control group receiving no training is not significant. Therefore the null hypothesis is retained and experimental hypothesis 1 cannot be accepted.

In relation to experimental null hypothesis 2, results indicate that for Teacher-rated: self-awareness, the difference between the group receiving SEAL & CBT training and the group receiving CBT training alone is significant. Therefore the null hypothesis can be rejected. However, although a significant difference is observed, the boxplot median values in conjunction with data in table 5.10 illustrate that this is not in the expected direction and that negative change is

observed. Consequently, it seems that experimental hypothesis 2 cannot be accepted.

Figure 5.7: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Teacher-rated: self-regulation'



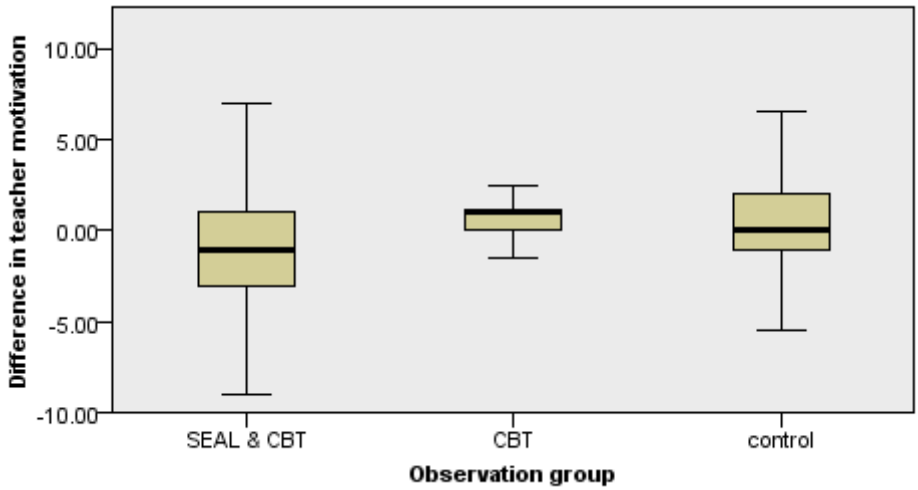
Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Teacher-rated: self-regulation' is statistically significant ($p < 0.05$).

In order to locate the exact place of the difference, M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 1 (SEAL & CBT) and experimental group 2 (CBT) is statistically significant ($p<0.016$), also the difference between experimental group 1 (SEAL & CBT) and group 3 (Control) is statistically significant ($p<0.016$), and also the difference between experimental group 2 (CBT) and group 3 (Control) is statistically significant ($p<0.016$).

In relation to experimental null hypothesis 1, results indicate that for Teacher-rated: self-regulation, the difference between the group receiving CBT training and the control group receiving no training is significant. Therefore the null hypothesis can be rejected. In addition, the boxplot median values in conjunction with the data in table 5.10 illustrates that this significant difference is due to positive change. Consequently, experimental hypothesis 1 is accepted.

In relation to experimental null hypothesis 2, results indicate that for Teacher-rated: self-regulation, the difference between the group receiving SEAL & CBT training and the group receiving CBT training alone is significant. Therefore the null hypothesis can be rejected. However, although a significant difference is observed, the boxplot median values in conjunction with data in table 5.10 illustrate that this is not in the expected direction and that negative change is observed. Consequently, it seems that experimental hypothesis 2 cannot be accepted.

Figure 5.8: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Teacher-rated: motivation'



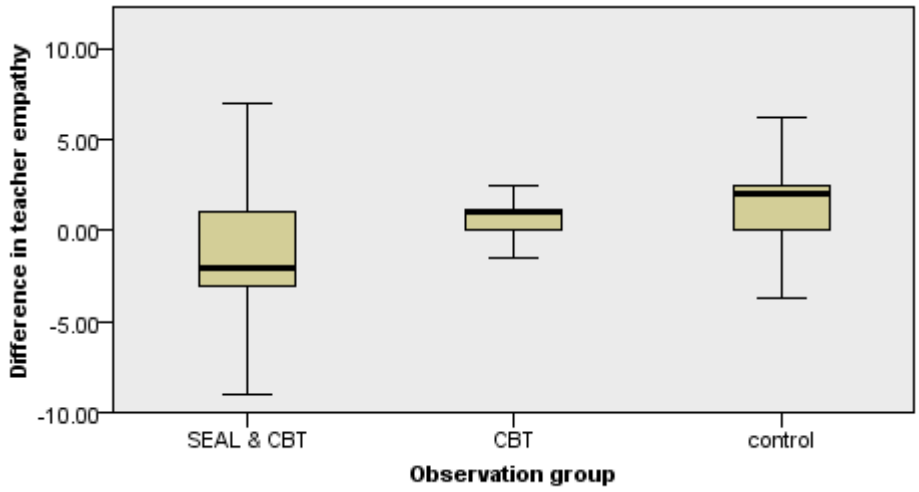
Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Teacher-rated: motivation' is statistically significant ($p < 0.05$).

In order to locate the exact place of the difference, M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 1 (SEAL & CBT) and experimental group 2 (CBT) is statistically significant ($p<0.016$).

In relation to experimental null hypothesis 1, results indicate that for Teacher-rated: motivation, the difference between the group receiving CBT training and the control group receiving no training is not significant. Therefore the null hypothesis is retained and experimental hypothesis 1 cannot be accepted.

In relation to experimental null hypothesis 2, results indicate that for Teacher-rated: motivation, the difference between the group receiving CBT + SEAL training and the group receiving CBT training alone is significant. Therefore the null hypothesis can be rejected. However, although a significant difference is observed, the boxplot median values in conjunction with data in table 5.10 illustrate that this is not in the expected direction and that negative change is observed. Consequently, it seems that experimental hypothesis 2 cannot be accepted.

Figure 5.9: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Teacher-rated: empathy'



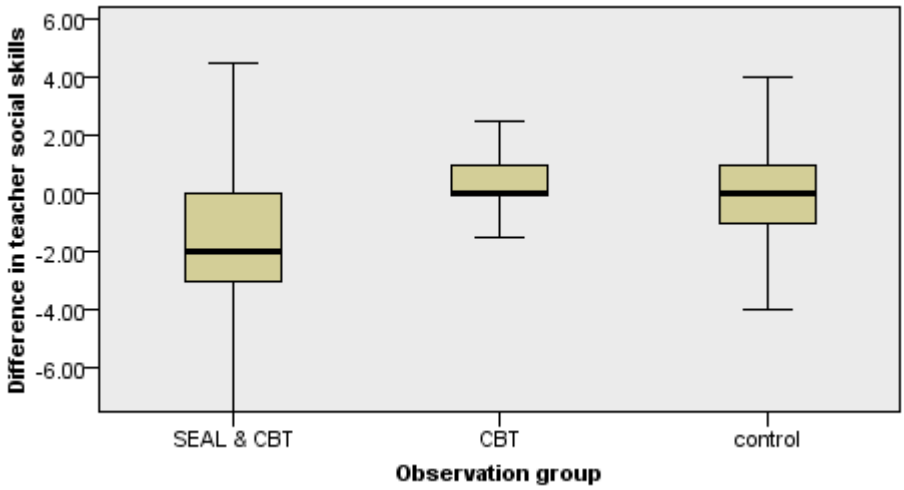
Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Teacher-rated: empathy' is statistically significant ($p < 0.05$).

In order to locate the exact place of the difference, M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 1 (SEAL & CBT) and experimental group 2 (CBT) is statistically significant ($p<0.016$), and also the difference between the experimental group 1 (SEAL & CBT) and group 3 (Control) is statistically significant ($p<0.016$).

In relation to experimental null hypothesis 1, results indicate that for Teacher-rated: empathy, the difference between the group receiving CBT training and the control group receiving no training is not significant. Therefore the null hypothesis is retained and experimental hypothesis 1 cannot be accepted.

In relation to experimental null hypothesis 2, results indicate that for Teacher-rated: empathy, the difference between the group receiving SEAL & CBT training and the group receiving CBT training alone is significant. Therefore the null hypothesis can be rejected. However, although a significant difference is observed, the boxplot median values in conjunction with data in table 5.10 illustrate that this is not in the expected direction and that negative change is observed. Consequently, it seems that experimental hypothesis 2 cannot be accepted.

Figure 5.10: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Teacher-rated: social skills'



Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Teacher-rated: social skills' is statistically significant ($p < 0.05$).

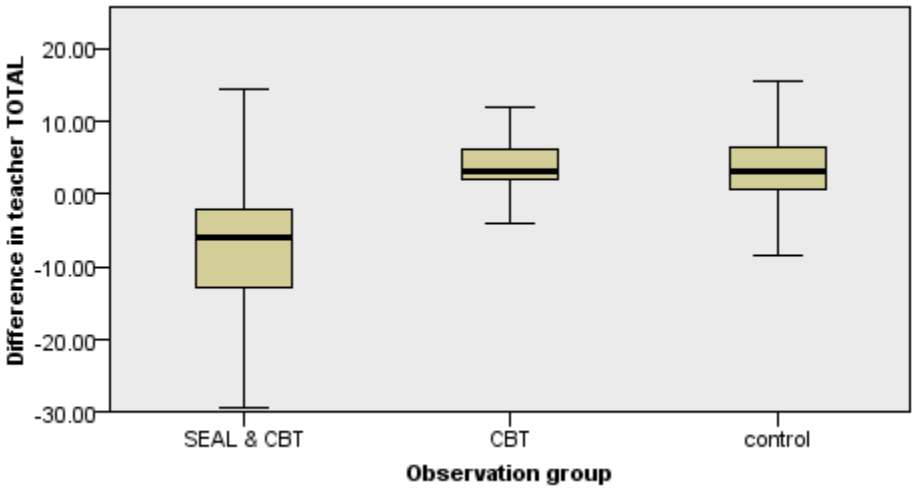
In order to locate the exact place of the difference, M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 1 (SEAL & CBT) and experimental group 2 (CBT) group is statistically significant ($p<0.016$), and also the difference between the

experimental group 1 (SEAL & CBT) and group 3 (Control) is statistically significant (p<0.016).

In relation to experimental null hypothesis 1, results indicate that for Teacher-rated: social skills, the difference between the group receiving CBT training and the control group receiving no training is not significant. Therefore the null hypothesis is retained and experimental hypothesis 1 cannot be accepted.

In relation to experimental null hypothesis 2, results indicate that for Teacher-rated: social skills, the difference between the group receiving SEAL & CBT training and the group receiving CBT training alone is significant. Therefore the null hypothesis can be rejected. However, although a significant difference is observed, the boxplot median values in conjunction with data in table 5.10 illustrate that this is not in the expected direction and that negative change is observed. Consequently, it seems that experimental hypothesis 2 cannot be accepted.

Figure 5.11: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Teacher-rated: Total'



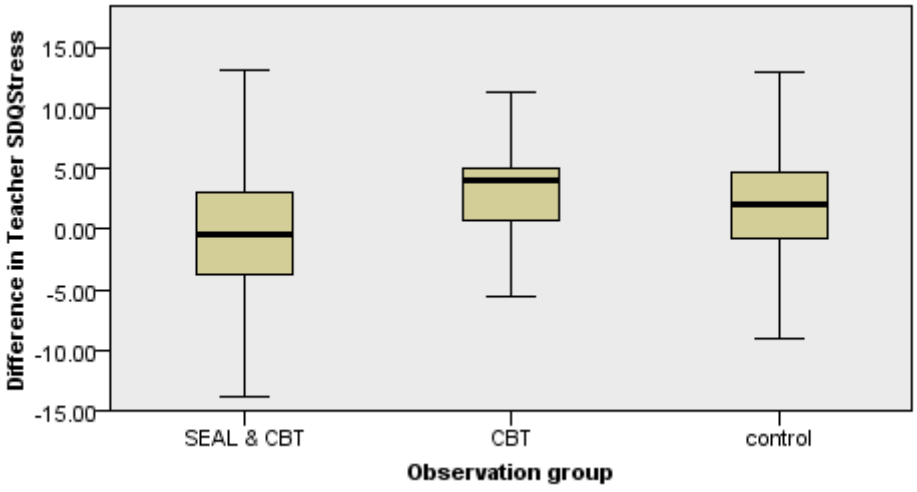
Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Teacher-rated: Total' is statistically significant (p< 0.05).

In order to locate the exact place of the difference, M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 1 (SEAL & CBT) and experimental group 2 (CBT) is statistically significant ($p<0.016$), and also the difference between experimental group 1 (SEAL & CBT) and group 3 (Control) group is statistically significant ($p<0.016$).

In relation to experimental null hypothesis 1, results indicate that for Teacher-rated: total, the difference between the group receiving CBT training and the control group receiving no training is not significant. Therefore the null hypothesis is retained and experimental hypothesis 1 cannot be accepted.

In relation to experimental null hypothesis 2, results indicate that for Teacher-rated: total, the difference between the group receiving SEAL & CBT training and the group receiving CBT training alone is significant. Therefore the null hypothesis can be rejected. However, although a significant difference is observed, the boxplot median values in conjunction with data in table 5.10 illustrate that this is not in the expected direction and that negative change is observed. Consequently, it seems that experimental hypothesis 2 cannot be accepted.

Figure 5.12: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Teacher-rated: overall stress'



Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named ‘Difference in Teacher-rated: overall stress’ is statistically significant ($p < 0.05$).

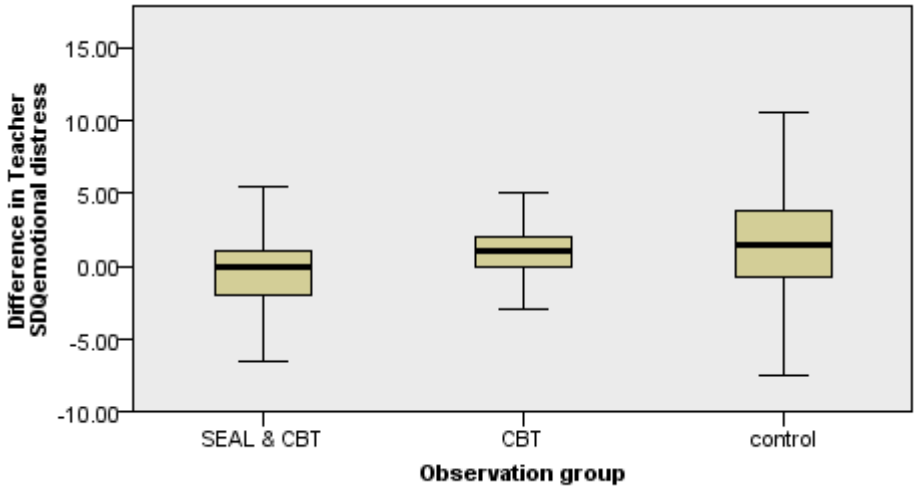
In order to locate the exact place of the difference, M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 1 (SEAL & CBT) and experimental group 2 (CBT) is statistically significant ($p<0.016$).

In relation to experimental null hypothesis 1, results indicate that for Teacher-rated: overall stress, the difference between the group receiving CBT training and the control group receiving no training is not significant. Therefore the null hypothesis is retained and experimental hypothesis 1 cannot be accepted.

In relation to experimental null hypothesis 2, results indicate that for Teacher-rated: overall stress, the difference between the group receiving CBT + SEAL training and the group receiving CBT training alone is significant. Therefore the null hypothesis can be rejected. However, although a significant difference is observed, the boxplot median values in conjunction with data in table 5.11 illustrate that this is not in the expected direction and that negative change is observed. Consequently, it seems that experimental hypothesis 2 cannot be accepted.

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Figure 5.13: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Teacher-rated: emotional distress'



Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Teacher-rated: emotional distress' is statistically significant ($p < 0.05$).

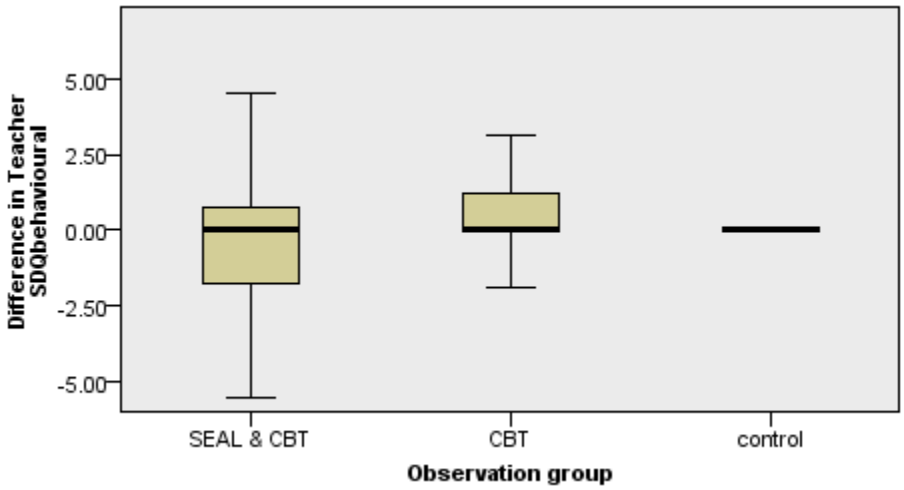
In order to locate the exact place of the difference, M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 1 (SEAL & CBT) and experimental group 2 (CBT) is statistically significant ($p<0.016$).

In relation to experimental null hypothesis 1, results indicate that for Teacher-rated: emotional distress, the difference between the group receiving CBT training and the control group receiving no training is not significant. Therefore the null hypothesis is retained and experimental hypothesis 1 cannot be accepted.

In relation to experimental null hypothesis 2, results indicate that for Teacher-rated: emotional distress, the difference between the group receiving CBT + SEAL training and the group receiving CBT training alone is significant. Therefore the null hypothesis can be rejected. However, although a significant difference is observed, the boxplot median values in conjunction with data in table 5.11 illustrate that this is not in the expected direction and that negative change is

observed. Consequently, it seems that experimental hypothesis 2 cannot be accepted.

Figure 5.14: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Teacher-rated: behavioural difficulties'



Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Teacher-rated: behavioural difficulties' is statistically significant ($p < 0.05$).

However, M-W test with Bonferroni correction could not detect any difference between the groups when with the critical value is set for p value to be less than 0.016.

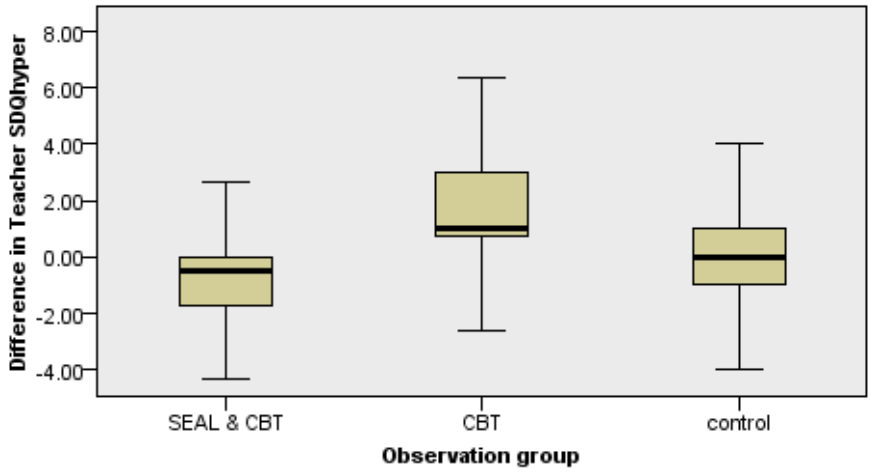
This would suggest that Teacher-rated: behavioural difficulties scores are not significantly different between the three groups over the intervention period.

In relation to experimental null hypothesis 1, results indicate that for Teacher-rated: behavioural difficulties, the difference between the group receiving CBT training and the control group receiving no training is not significant. Therefore the null hypothesis is retained and experimental hypothesis 1 cannot be accepted.

In relation to experimental null hypothesis 2, results indicate that for Teacher-rated: behavioural difficulties, the difference between the group receiving CBT +

SEAL training and the group receiving CBT training alone is not significant. Therefore the null hypothesis is retained and experimental hypothesis 2 cannot be accepted.

Figure 5.15: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Teacher-rated: hyperactivity and concentration difficulties'



Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Teacher-rated: hyperactivity and concentration difficulties' is statistically significant ($p < 0.05$).

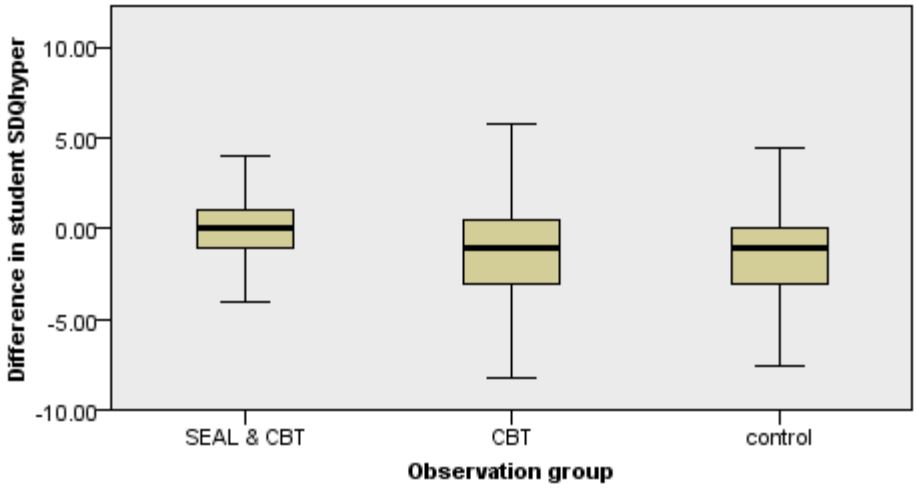
In order to locate the exact place of the difference, M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 1 (SEAL & CBT) and experimental group 2 (CBT) is statistically significant ($p<0.016$), and also the difference between experimental group 2 (CBT) and group 3 (Control) is statistically significant ($p<0.016$).

In relation to experimental null hypothesis 1, results indicate that for Teacher-rated: hyperactivity and concentration difficulties, the difference between the group receiving CBT training and the control group receiving no training is significant. Therefore the null hypothesis can be rejected. In addition, the boxplot median values in conjunction with the data in table 5.11 illustrates that this

significant difference is due to positive change. Consequently, experimental hypothesis 1 is accepted.

In relation to experimental null hypothesis 2, results indicate that for Teacher-rated: hyperactivity and concentration difficulties, the difference between the group receiving CBT + SEAL training and the group receiving CBT training alone is significant. Therefore the null hypothesis can be rejected. However, although a significant difference is observed, the boxplot median values in conjunction with data in table 5.11 illustrate that this is not in the expected direction and that negative change is observed. Consequently, it seems that experimental hypothesis 2 cannot be accepted.

Figure 5.16: A boxplot illustration for the comparison of participants in different groups for the variable 'Difference in Student self-report: hyperactivity and concentration difficulties'



Using the K-W test, it was revealed that the difference between the research groups in terms of the mean rank for the variable named 'Difference in Student self-report: hyperactivity and concentration difficulties' is statistically significant ($p < 0.05$).

In order to locate the exact place of the difference, M-W test with Bonferroni correction was undertaken, which indicated that the difference between experimental group 1 (SEAL & CBT) and group 3 (Control) is statistically significant ($p<0.016$).

In relation to experimental null hypothesis 1, results indicate that for Student self-report: hyperactivity and concentration difficulties, the difference between the group receiving CBT training and the control group receiving no training is not significant. Therefore the null hypothesis is retained and experimental hypothesis 1 cannot be accepted.

In relation to experimental null hypothesis 2, results indicate that for Student self-report: hyperactivity and concentration difficulties, the difference between the group receiving CBT + SEAL training and the group receiving CBT training alone is not significant. Therefore the null hypothesis is retained and experimental hypothesis 2 cannot be accepted.

5.6 Summary of Results

The results section has outlined the process of data collection and management including a description and associated execution of the statistical tests employed to test the research questions and associated hypotheses against a dataset provided by experimental group 1 (SEAL & CBT), experimental group 2 (CBT) and group 3 (Control).

The dataset was obtained by using measures from the SELR and the SDQ across all pre and post data from the experimental and control groups.

The two experimental hypotheses and associated null hypotheses have been tested in order to explore significant differences between the three groups receiving the specific intervention method.

The following summarises the steps taken to achieve the final conclusions observed in this particular research.

Initially, S-W and K-S tests were applied to the recorded dataset to determine if the distribution of data was normal or non-normal. Results showed that the dataset is not normally distributed as the Sig (p) value is less than or equal to 0.05 for both tests.

Attempts were made to transform data to make its distribution normal, such as the application of logarithm. However, the new computed variables did not satisfy the statistical tests.

Another approach was utilised in order to affect the distribution of data using SPSS to transform the data for the rank and calculate the Blom normal scores. However, again, the transformed variables did not satisfy normality tests.

Having established that the data is non-normally distributed, this meant that non-parametric statistical tests were to be used to analyse the data.

As there are 3 or more research groups within this current research, the K-W test was chosen. This is a non-parametric test for one-way analysis of variance by ranks. The 31 variables as measured in the SELR and the SDQ were compared between the three research groups using this test.

The K-W test provides evidence that there are statistically significant differences between the three research groups for some variables but not all. Variables where a significant difference is observed are:

Using SELR

- Difference in Parent-rated motivation
- Difference in Teacher-rated self-awareness
- Difference in Teacher-rated self-regulation
- Difference in Teacher-rated motivation
- Difference in Teacher-rated empathy
- Difference in Teacher-rated social skills
- Difference in Teacher-rated total.

Using SDQ

- Difference in Teacher-rated overall stress
- Difference in Teacher-rated emotional distress

- Difference in Teacher-rated behavioural difficulties
- Difference in Teacher-rated hyperactivity and concentration difficulties
- Difference in Student self-report hyperactivity and concentration difficulties.

The mean rank was then obtained for each of these identified variables for the 3 research groups. In order to locate the exact place of the difference in the above variables, the M-W test was undertaken comparing the groups two by two.

The M-W test is a non-parametric statistical test that can be used to determine if the mean of two groups are different from each other. It is the non-parametric equivalent of the independent samples t-test and should be used when data is not normally distributed and when that data cannot be transformed to a normal distribution by the use of relevant statistical transformation methods. Bonferroni Correction was also undertaken in order to avoid inflating error type 1.

The resulting statistical observations were then displayed graphically using Boxplots. These describe the mean rank difference between research groups for the variables that have been identified to show a significant difference.

Deeper analysis identified that where a significant difference was observed thus enabling rejection of the null hypotheses, in certain circumstances and predominantly when comparing group 1 (SEAL & CBT) with group 2 (CBT) (and also comparing group 1 with group 3), the boxplot median values in conjunction with data in tables 5.10 and 5.11 illustrate that the significant difference is not in the expected direction and that negative change is being observed. This means that the associated hypotheses cannot be accepted.

Following the above quantitative statistical analysis, in line with the research design and hypotheses being tested, the observed results can be summarised as illustrated in tables 5.14 and 5.15 below.

Table 5.14: A table to show results of the research hypotheses being tested using SELR

Name of the variable identified as having significant difference between research groups	**Hypothesis 1** **Significant greater gains observed between Experimental Group 2 (CBT)** **vs.** **Group 3 (Control)**	**Hypothesis 2** **Significant greater gains observed between Experimental Group 1 (SEAL & CBT)** **vs.** **Experimental Group 2 (CBT)**
Difference in Parent-rated: motivation	YES	NO
Difference in Teacher-rated: self-awareness	NO	NO
Difference in Teacher-rated: self-regulation	YES	NO
Difference in Teacher-rated: motivation	NO	NO
Difference in Teacher-rated: empathy	NO	NO
Difference in Teacher-rated: social skills	NO	NO
Difference in Teacher-rated: EL total	NO	NO

Table 5.14: A table to show results of the research hypotheses being tested using SDQ

Name of the variable identified as having significant difference between research groups	**Hypothesis 1** **Significant greater gains observed between Experimental Group 2 (CBT)** **vs.** **Group 3 (Control)**	**Hypothesis 2** **Significant greater gains observed between Experimental Group 1 (SEAL & CBT)** **vs.** **Experimental Group 2 (CBT)**
Difference in Teacher-rated: overall stress	NO	NO
Difference in Teacher-rated: emotional distress	NO	NO
Difference in Teacher-rated: behavioural difficulties	NO	NO
Difference in Teacher-rated: hyperactivity and concentration difficulties	YES	NO
Difference in Student self-report: hyperactivity and	NO	NO

concentration difficulties		

Interestingly, although significant differences were observed when comparing group 1 with group 2, all of these differences indicated negative change and therefore in each case, hypothesis 2 could not be accepted.

However, when comparing group 2 (CBT) with group 3 (control), where significant differences were observed, these showed positive change thus enabling hypothesis 1 to be accepted.

The above results and their implications are further discussed in the next section of this research.

6. Discussion

6.1 Discussion introduction

The following chapter includes a detailed critical reflection on the findings described in the previous Results chapter. The contribution of the current research to existing published literature is considered. Methodological strengths and limitations are discussed, and suggestions for future research are made. Potential implications for local authorities, schools and teachers are also discussed. Lastly, the role(s) of educational psychologists in relation to children and young people's mental wellbeing is explored.

The chapter is composed of the following sections:

- Discussion of the research questions and associated hypotheses
- Research's unique contribution to knowledge and research
- Methodological critique with implications for future research
- Implications for local authorities and schools
- Implications for educational psychologists.

Research questions will be addressed in turn with reference to how such results link with theory and studies cited within the Literature Review in light of the hypothesis under exploration. Further studies are needed to incorporate some of the issues raised in order to foster future evaluations of CBT programmes in the current climate of promoting mental health and wellbeing in the UK.

6.2 Overview of Results findings

Research hypotheses were explored using the data collected from teachers, parents and through child self-report, relating to the 13 variables pertaining to the SELR, and the 18 variables pertaining to the SDQ. This equates to 31 variables in total. These 31 variables were collected at pre-intervention (T1) and again at post intervention (T2). The difference (T2 – T1) in variables collected at pre and post intervention was then determined, yielding 31 difference variables.

The resulting data set was found to be non-normally distributed. Brace et al., (2009) indicate that statistical analysis approaches for non-normally distributed data might be considered to lack statistical power. This is something that should be considered as part of the overall interpretation of the research findings.

The most appropriate non-parametric statistical test was deemed to be the Kruskal-Wallis test, since this test did not assume a normal population and there were three groups involved within the research. This test indicated that of the 31 different variables, statistically significant differences between pre to post measures were found in only 12.

It is worth noting that 7 of the variables showing statistically significant difference pertained to the SELR (out of a total of 13 variables) and 5 to the SDQ (out of a total of 18 variables).

In addition, with reference to the variables showing statistically significant differences from pre to post testing, 10 were seen in data collected through teacher responses, with only one from parent data, and one from child self-report data.

Having identified if any significant differences were observed after intervention, this research subsequently analysed differences between groups. To achieve this, the Mann-Whitney U Test was used, also being a non-parametric statistical test. With the Mann-Whitney U test being utilised 3 times per variable (due to there being 3 groups), in order to increase the rigor of the test and to avoid type one error, Bonferroni Correction was used. This meant that the p-value sought to indicate significance was reduced from <0.05 to <0.016.

With reference to tables 5.12 and 5.13 in the Results section, significant differences were found mainly between experimental group 1 (group receiving both CBT and SEAL) and experimental group 2 (receiving CBT alone). Also, some significant differences were identified between experimental group 2 and group 3 (control group without CBT nor SEAL access). This analysis provides the major finding of the current research. In addition, it is interesting to observe that

some significant differences exist between experimental group 1 and control group 3.

Although significant differences are observed, it is also crucial to determine if these are a result of positive change as opposed to negative change.

A combination of boxplot graphical representation, and consideration of the mean rank values shown in tables 5.10 and 5.11 is used to identify key features of the findings, and informs what inferences can then be drawn.

Significant differences were mainly observed when comparing group 1 (SEAL + CBT) with group 2 (CBT). However, all of these significant differences show a negative change such that significant greater gains were reported for group 2 when compared to group 1 which was receiving both SEAL and CBT interventions.

In addition, although not part of this research, significant differences were observed when comparing group 1 with the control group. Again, this was predominantly as a result of negative change such that significant greater gains were reported for the control group compared to the group receiving both SEAL and CBT.

However, when comparing the group receiving CBT alone with the control group, the observed significant differences were as a result of positive change.

In relation to the research questions posed, the following summarises the main research findings subsequent to the analysis of the data collected:

- **Relating to research question 1:**

CBT group v CONTROL group = 3 out of 12 difference variables showed a significant difference. These were also showing ***positive change***.

- **Relating to research question 2:**

SEAL + CBT group v CBT group = 9 out of 12 difference variables showed a significant difference. However, these were showing ***negative change***.

- **Statistical tests also identified the following:**

SEAL + CBT group v CONTROL group = 6 out of 12 difference variables showed a significant difference. However, 5 of the 6 were showing negative change.

6.2.1 Research question 1 findings

The following relates to the results observed specifically in relation to research question 1. For the benefit of the reader, the research question with the associated hypothesis and null hypothesis are repeated below:

- Research question 1

  What is the impact of a six week whole class programme promoting the acquisition of CBT principles using the 'Think Good, Feel Good' resource on the emotional literacy and more broadly mental wellbeing of Year 5 pupils?

- Hypothesis in relation to research question 1.

  Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' will make significantly greater gains than Control Group participants.

- Null hypothesis in relation to research question 1.

  No significant differences will be found between the scores achieved by Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' and control group participants. Any differences found might be explained by chance.

The results of the research suggested that delivering a CBT based intervention using the TGFG resource yielded some significant improvements in the emotional

literacy and mental wellbeing of Year 5 children, as measured using the SELR and SDQ resources.

These significant differences were found in the following areas:

- Difference in parent-rated motivation
- Difference in teacher-rated self-regulation
- Difference in teacher-rated hyperactivity and concentration difficulties.

Areas relating to the SELR measure indicate the following:

- Parental responses highlight a perceived increase in their child's motivation
- Teacher's responses highlight a perceived development in children's self-regulation skills.

With reference to the SDQ measure:

- Teacher rated perceptions of children's hyperactivity had lessened and concentration difficulties were reported to have improved.

The positive significant differences identified above are now explored in relation to the research literature used.

6.2.1.1 Parent-rated assessment of child motivation

In relation to the positive significant difference observed via parent-rated assessment of child motivation, several contributing factors should be considered.

The validity of parental responses to their own-child questionnaires could be questioned. A parent could understandably have a biased interest in their child being highly thought of at school and so the impartiality of responses could be compromised so that the results become distorted (Jinnah & Walters, 2008). This

however would suggest that more than the child motivation variable alone would be shown to make positive significant improvements over the research period, which is not the case. It can therefore be concluded, with caution, that this significant difference has some validity.

An additional observation is that whereas teachers and children benefitted from regular focussed class time relating to the research, this was not the case for parents. It could be argued that parents were not as engaged in the process or research as teachers or children and the importance of accurately responding to the measures was diluted.

Research has also shown that while teachers provide useful information in relation to child behaviours, it is parent observation that could be more useful as the length of observation time outside of school is greater and is able to be in many more contexts (McConaughty, 1993). Research has shown that parents are good at observing and reporting for some types of problems (Bird, Gould, Rubio – Stipec, Staghezza, & Canino, 1991) but less so with others. Parents appear to be generally good at reporting behaviour and conduct problems (Dollinger, 1992) but less useful in relation to depressive symptoms (Apter, Orvaschel, Laseg, Moses & Tyano, 1989) where parents tended to under-report such symptoms. Although not directly related to variables and measures within this research this does indicate that parental responses to SDQ and SELR measures needs further research and scrutiny.

6.2.1.2 Teacher-rating of child self-regulation

CBT aims to promote positive application of thoughts, feelings and behaviour, and since children's self-regulation skills require the control of thought, emotion and behaviour. A positive link could be proposed between CBT and the promotion of children's self-regulation. In relation to the positive significant difference observed via teacher rated assessment of child self-regulation, this concurs with the research of other CBT oriented programmes e.g. Gourley, (2000) & Squires, (2001) who, through the use of a programme based on CBT principles yielded positive outcomes regarding children's increased self-control in the classroom.

6.2.1.3 Teacher-rating of child hyperactivity

The positive significant difference observed via teacher-rated assessment of diminished children's hyperactivity following a CBT intervention concurs with research conducted through the use of universal delivery of PATH in the UK by Norgate (2007) and Whalen et al., (1985) through targeted support using CBT techniques. This could also the positive significant difference observed via teacher assessment of child hyperactivity, this is potentially linked with teacher rated improvements in children's self-regulation highlighted above.

Consideration of the potential impact of taught relaxation techniques within the TGFG programme, together with teacher and child enjoyment and engagement of this could have been partly responsible for the significant differences noted. In addition, lessons on problem solving and cognitive restructuring of negative automatic thoughts could also have a potentially positive impact on this area.

Not only did the TGFG programme promote children's self-regulatory behaviours but also the psychological experiences of the teachers participating in promoting the children's self-regulation potentially yielded lower levels of observed hyperactivity and increased concentration.

This could suggest that the teacher's perception of these constructs could have been affected by the Hawthorne effect (Cohen et al., 2007).

6.2.1.4 Summary of question 1 findings

The results appear to show that the TGFG resource used as a universal intervention programme with Year 5 pupils can yield some slight, though significant and positive benefits compared to when no intervention is delivered. These observations are specifically in the areas of parent rated child motivation, teacher rated child self-regulation and teacher rated hyperactivity and concentration skills.

In addition, the research appears to support the fact that primary aged pupils (Year 5) are able to access a CBT based programme. This would support evidence that questions the cognitive capacity demands required by CBT

programmes with children (Grave & Blissett, 2004) and concurs with Friedberg et al., (2000) and Stallard, (2005) regarding the ability of children above 7 years to respond positively and effectively engage in child focussed CBT.

However, whilst some areas indicated a positive statistical significance, it could be argued that there is insufficient evidence to conclude that the TGFG programme had a direct result on promoting EL & MW. This is further explored later in this section in the discussion of the many methodological flaws associated with this research.

The influence of potential confounding or mediating factors could challenge whether TGFG programme is directly related to the identified significant outcomes. Therefore is seems prudent to caution the reader that it may not be feasible to conclude a causal relationship between the universal delivery of a CBT based programme, TGFG on the emotional literacy and mental wellbeing of Year 5 children.

It may seem more prudent to propose that this research lends some evidence to the suggestion that Year 5 children taught CBT techniques are less likely to adopt less useful avoidant and non-productive strategies when faced with challenges.

6.2.2 Research question 2 findings

The following relates to the results observed specifically in relation to research question 2. For the benefit of the reader, a reminder of the research question with the associated hypothesis and null hypothesis are repeated below:

- Research question 2

  What is the impact of a six week whole class programme promoting the acquisition of CBT principles using the ‘Think Good, Feel Good’ resource on the emotional literacy and more broadly mental wellbeing of Year 5 pupils when this programme is completed alongside primary SEAL programme?

- Hypothesis in relation to Question 2.
  Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' alongside the SEAL curriculum will make significantly greater gains than Year 5 pupils receiving training in CBT principles alone.

- Null Hypothesis in relation to question 2.
  No significant differences will be found between the scores achieved by Year 5 pupils receiving training in CBT principles using resources from 'Think Good Feel Good' alongside the SEAL curriculum and Year 5 pupils receiving training in CBT principles alone. Any differences found might be explained by chance.

The results in relation to research question 2 require a deeper consideration, given that all significant differences showed negative change. In addition, the boxplot graphs indicate that data received from the group receiving both SEAL and CBT generally covered a wider range of values and indicates that participants were less consistent in their perceived outcome of the intervention being delivered.

Of great importance is the fact that this researcher was only subsequently made aware that at the time when data were initially collected (pre-intervention, T1), SEAL was already being delivered to group 1, and had been for an unknown amount of time. Therefore a robust study of using both SEAL and CBT compared to the CBT and control groups was severely compromised.

It is plausible that as SEAL was already being delivered to group 1 at time T1, participants were already improved in areas measured by SELR and SDQ and so the potential for positive change at T2 was reduced. This could certainly have been a factor in the negative change observed when analysing significant differences between group 1 and group 2.

In addition, this researcher found that the support from participating schools was inconsistent and in the case of group 1 (SEAL + CBT), setting up the research in a thorough and rigorous manner was challenging - obtaining crucial knowledge of prior engagement with SEAL being one example. Again this could explain the more extreme results observed with this group if the set up and delivery of the study was not strictly adhered to.

One area of thought is that using CBT with SEAL could actually prove counterproductive for certain outcome variables. Instead of providing a coherent and cohesive approach, using both methods could actually confuse participants, thus undermining the strength of the usefulness of the planned intervention.

Although it would be logical to expect that using a multi-modal (SEAL + CBT) approach would be beneficial, this may not actually be the case. This is an important consideration which warrants further research.

In addition, it is also felt that the research question warrants further study whereby SEAL and CBT are both initiated at the same time (T1), and to participants that have not received previous training in related disciplines.

Findings within this research are in contrast to published research using multi-modal intervention studies which aim to promote mental wellbeing through adopting a universal, whole class delivery and which yield positive outcomes (e.g. Barrett & Turner, 2001; Domitrovich et al., 2007).

6.2.3 Additional Results findings

In addition to the findings related to the research questions, significant differences were also observed when a multi-modal intervention programme (SEAL + CBT) was used compared to when no intervention was delivered (control). However, as with findings in relation to research question 2, nearly all (5 of the 6) of the significant differences were as a result of negative change.

Similar inferences can be drawn here as those described above for question 2. Certainly this researcher would expect that group 1 would show significant

greater gains over the intervention period compared to group 3, but this is not observed meaning that contributing factors may have been at play.

In addition to observations relating to the school which provided group 1, group 2 and group 3 were comprised from the same school. It could be possible that as participants share break times, other classes and out of school experiences, learning from participants of group 2 could quite easily have been transferred to participants in the control group 3, albeit in a diluted fashion. Added to the complexities and inconsistencies outlined and associated with group 1, this could explain the negative changes observed between group 1 and group 3. This could also influence findings in relation to research question 1.

6.2.3.1 CBT resource: Think Good Feel Good (Stallard, 2002)

'Think Good … Feel Good: A Cognitive Behaviour Therapy Workbook for Children and Young People' written by Paul Stallard, (2002) was utilised as the sole resource in the intervention to provide Year 5 pupils with the principles of cognitive behaviour therapy. A detailed description of the activities can be found within the methods section of this research.

The initial reasoning that prompted the adoption of this resource was that it provides resources in the form of activities and exercises in a logical and sequential way. In addition to this, website access is provided to teaching materials that can be used on white boards to form a complimentary presentation.

It is acknowledged that Stallard, (2002) reported that the resource was not intended as an intervention, but rather as a collection of resources. However, there has been some use of the resource in this fashion as noted by McNamara, (2004) suggesting that '*Whilst Think Good Feel Good was not intended to be delivered systematically as a package in a standardized 10 session course, I have used it very much in that fashion with satisfaction and success, finding that the structure appealed to this age group'* (p. 2) albeit with single cases.

It is the researcher's opinion that the use of the TGFG resource was facilitated by its clear structure and user friendliness. Clear resources and activities were

engaging for the pupils. The resources were set out in a sequential fashion and easy to follow. Accompanying the resource is a visual presentation which aids teaching core areas. Such aspects are far from inconsequential. Dusenbury et al., (2003) reported that characteristics such as simple structured format, ease of administration and a user friendly manual with clear instructions enhance programme fidelity.

This researcher also acknowledges the limitations of using such a resource as follows:

- A very limited literature and evidence base regarding the use of the TGFG resource
- Difficulties determining appropriate age range as the efficacy of using CBT with children is suggested to be the most beneficial for children of a particular level of cognition. However, for the purposes of this research, Stallard, (2002) points out that '*children at least 7 years of age will be able to engage in CBT … The intervention needs to be pitched to the cognitive developmental level of the child'* (p. 16).

On reflection, future research concerning the implementation of 'Cool Connections with Cognitive Behavioural Therapy' (Seiler, 2008), a resource seemingly informed by the American 'Coping Cat' and the Australian 'Friends' programmes might also be useful, and this approach might have proved an interesting alternative to the TGFG resources adopted here. The author, Laurie Seiler, has attempted to closely link this resource with the National Curriculum (Personal, Social and Health Education - PSHE) with key stage 2 (7-11 year olds) and key stage 3 (11- 14 year olds). The programme has been run with up to 14 participants. This researcher notes that it would be interesting to explore the use of this resource in whole class delivery environments.

In summary, whilst there is limited literature and evidence base pertaining to the effectiveness of the TGFG resource, this research provides some tentative support for its potentially positive contribution as an intervention tool for whole

classes of Year 5 pupils, as well as for small groups and individuals. Further to this, given that TGFG was designed as a set of resources for use within clinical setting and not as has been adopted in this research as a linear CBT programme the researcher cautions the reader in generalising TGFG to other CBT oriented programmes that have specifically been written for universal delivery.

6.2.4 Findings relating to the TGFG resource used as a universal intervention

This section discusses the potential findings relating to the usefulness of a TGFG, CBT universal programme with primary aged children.

The outcomes of this study tentatively support those of other UK studies in relation to the universally delivered FRIENDS programme (Stallard et. al., 2005;2007;2008) in that there have been some significant positive impacts noted on mental wellbeing following a CBT based programme.

In the literature review chapter, concerns were raised regarding the connection between the age range and cognitive capacity of children and their ability to engage with the techniques taught within the programme. On reflection, it appears that Year 5 children were perceived to effectively engage with the strategies seated within the programme. It should be noted though that it was not feasible to report on the generalisability of the taught skills beyond the sessions and measures employed. This concurs with suggestions questioning whether CBT based programmes result in cognitive modifications and restructuring or are as a result of behavioural reinforcement techniques (Stallard, 2002).

When considering that CBT programmes mainly target ‘internal’ personal and behavioural factors (Stallard, 2010), and through adopting a universal programme in promoting EL and MW, it was suggested that there could be wider ‘external’ environmental impact. As such, the programme may boost protective factors which could support children when encountering personal and environmental risk factors during their course of life (Newman, 2004).

A notable difficulty in exploring impact within universally delivered programmes is that of 'floor' effects for those children who already hold age consistent EL and MW skills, given their scores are likely to confound the strength of impact on those whose skills require development (Briesch et al., 2010). Whilst this research did not yield many significant variables, in light of the above this could be deemed unsurprising.

Universally delivered programmes could be seen as advantageous when compared to targeted support given they avoid the potential stigma of being singled out as requiring support (Frederickson et al., 2009). Such adoption of whole class programmes provides opportunities for peer support, shared experiences and therefore the potential to reinforce the development of skills (Barrett, 2004). Weare, (2004) proposes that the greater the amount of children within a class / school who hold emotional and social competence, the easier it could be for them to assist their peers in furthering their skills.

Including, supporting and managing challenging behaviour within school was a major concern for education over the years and the control group whose focus was on managing externalising behaviours unlike the experimental groups could potentially lend some weight to the importance of promoting emotional literacy and mental wellbeing at a universal level.

6.3 Methodological critique

The potential strengths and limitations of the methodology adopted by this research will now be considered.

Alternative methodological suggestions will also be explored, providing suggestions for future research within this area.

6.3.1 Pilot study

The research used a pilot study to assess the appropriateness of the SELR and the SDQ as pre and post data tools. The pilot study also afforded time for the researcher (implementer of intervention) to become familiar with the resource materials.

As covered in the Methodology section, the pilot study informed modifications to the following:

- Research timescales
- Flexibility and appropriateness of resources
- Ease and familiarity of the deployment of the research
- Fine tuning of the research procedure.

A pilot study can be defined as a ‘smaller version of a larger piece of research’ that is conducted to amend and improve the design so as to benefit the main research.

Haralambos & Holborn, (2000, p. 998) argued that making inferences from a pilot study to a large scale research can often be considered unrealistic, mainly because smaller scale research often presents with more favourable conditions than its larger counterpart. This seems congruent with the current research since the pilot study was conducted solely with one participant. Although statistical analysis was not feasible, the delivery of resources was achievable in the time allotted and it was possible for the researcher to deliver the intervention without support. The pilot study was indeed very helpful in assisting the researcher in developing skills in the use of TGFG as a resource to assist in determining its appropriateness for use as a CBT programme, in data collection and in the associated scoring of both the SELR and SDQ measures. Future research could consider utilising a pilot study which is a more accurate scaled down version of the main research.

6.3.2 Design

As outlined in the Methodology chapter, a quasi-experimental (fixed) design conducted within a real world setting was deemed most suitable for this research. However, this also created limitations to the research, which are explored below.

Fixed designs, from positivist origins require researchers to manipulate the independent variable (the TGFG programme) whilst accommodations are made to control variables that can impact upon the response to intervention and that can consequently pose a threat to the validity of the findings, so as to investigate the effect it has on the dependent variables under investigation (here, measures using the SELR and SDQ) (Robson, 2002). On reflection, this research ultimately revealed many variables which were unforeseen and therefore were not fully accommodated. These extraneous variables will be discussed later in this section. The research gathered quantitative data from teachers, parents and pupil self-reports. The researcher, who delivered the TGFG programme and was supported by each class teacher, also noted in conversations rich qualitative information that could have significantly provided further insight into the research.

What the researcher noted that appeared highly valuable during the programme delivery period was the following:

- Year 5 pupils reporting their responses to the activities and sharing their views of how they have interpreted and used the intervention topic areas for their own gain, supported each other through the application of the skills
- Teacher report of what differences they had also observed during class and playtimes (which some shared at the end of sessions with the researcher)
- Parental reports of some pupils using their newly developing skills at home.

Qualitative data has its foundation within a constructionist perspective whereby information collection might incorporate interviews and case studies. This is information that will provide the researcher with the underlying meaning of the research participants, rather than drawing statistical meaning from closed questionnaire type responses. From a positivist stance, this form of information collection is considered to be less reliable. However, there appear to be considerable rewards to be gained by utilising qualitative data by increasing the

strength of research validity, and by providing a rich detailed description within the area of research (Haralambos & Holborn, 2000).

Robson, (2006) indicates some research utilises a hybrid of qualitative and quantitative research approaches which is termed a mixed-method design. On reflection, the researcher wonders whether future research in this area should consider adopting a mixed method design and that it might have been beneficial to the current undertaking, in that such a design may have captured the subtleties of the Year 5 teacher and pupil responses to intervention in addition to teacher and parental views. Qualitative data might have been gathered and analysed in order to gain a fuller picture than was ultimately offered by the measures adopted alone. Adopting a mixed-method design relative to this area of research (e.g. Lowry-Webster, Barrett & Lock in 2003) has been reported to have been useful.

6.3.3 Research integrity

This section will reflect upon the following questions:

- Is this research trustworthy?
- Is it useful?
- Will the research findings be consistently observed over time and by other researchers?
- Does the research instrument do what it is designed to do, thereby being a valid and appropriate measure?

6.3.3.1 Research reliability

Key factors which were initially addressed but which posed a threat to the current research's reliability are outlined below, along with the researcher's reflections:

6.3.3.2 Observer error

- A negotiated allocation of time within the teaching day was gained for the teacher to complete both pre and post measures with minimal distraction in a quiet room

- Parental questionnaires were sent out so that they could provide responses in a considered manner.

Also worthy of note, scheduled lessons being at the beginning and end of the week could also impact upon both teacher and pupil engagement in the intervention content. For example, fatigue during the Friday afternoon class and pre-occupation with the recently departed weekend at the beginning of the school week during Monday's session could be contributing factors to possible unreliable resource responses.

It is suggested that the above factors are further accounted for when developing new research.

6.3.3.3 Observer bias

The following was not taken into account until after this research was complete:

- Teacher emotions and their wellbeing may have contributed to their perceptions and attributions formed during the research thereby impacting on individual responses to pre and post measures.

Additionally, this research could be at further risk of diffusion or distortion through the researcher being assisted in the delivery of intervention by the class teacher who:

- Could have limited knowledge regarding the intervention
- May not fully endorse the planned intervention.

Additionally, support from teachers may not have been fully consistent for all groups.

Researcher impact upon the delivery of the interventions to the different experimental groups could additionally be considered a threat to this research. Variables such as interpersonal interactions with the pupils and class teachers

can all introduce inconsistencies. Navigating classroom social and organisational dynamics could have further impacted upon pupil and teacher engagement, the development of their knowledge and skills, and subsequent responses to the researches measures.

With regard to parental responses gathered using the two measurement tools, caution is needed in interpreting this data since the degree of parental knowledge, understanding and interest in the intervention their child is receiving could introduce validity and reliability issues into the research.

When conducting future research, it is worth considering the following three suggestions that introduce success in research group designs:

- Two facilitators ideally should be used
- Time for adequate training should be provided for the facilitators who should ideally have basic counselling skills
- Adequate space and time should be allocated (Tierney & Dowd, 2000 p 28).

The research of Humphrey et al., (2008) further highlights that it would be beneficial for those who implement the intervention to have sufficient time to develop a secure rapport with participants, and that they should also display appropriate and effective social and emotional skills themselves.

Future research might consider training teachers, in addition to parents, to develop emotional literacy skills which may improve upon outcome sustainability.

6.3.3.4 Participant error

The following factors which were identified during the research, and which the researcher attempted to address, were as follows:

- Intervention delivery was scheduled on a Monday and Friday afternoon consistently which could potentially affect participant engagement in the intervention
- To facilitate maximum attention and learning, the classrooms in both experimental groups were arranged in a horseshoe fashion.

6.3.3.5 Participant bias

The following factors which were initially identified and attempted to be addressed are as follows:

- The researcher provided the same verbal statement to all those contributing to the pre and post data to ensure consistency

6.3.4 Validity

The following reflections relate to the exploration of the causal relationships between the intervention and the outcomes. In short, does the intervention - training Year 5 pupils in cognitive behaviour principles have an actual impact on measures derived from the SELR and the SDQ?

Factors anticipated as a potential threat to the internal validity of the research are outlined below. Further reflections on internal validity following the completion of the research are also presented:

6.3.4.1 History and maturation

- The research intervention was for a short period of 6 weeks and does not constitute a lengthy period
- Selection maturation could have impacted on the data since the groups were found to demonstrate non-normal distribution. Therefore some Year 5 pupils could be more or less advanced cognitively, socially, emotionally and behaviourally, reflecting differing levels of need and thereby differing starting points. Campbell & Stanley, (1963) suggest this element to be a typical weakness of a non-normal sample.

Humphrey et al., (2008) suggest that the length of intervention should warrant consideration when conducting future research reporting that regular and longer times rather than short interventions are advantageous.

Additionally, Humphrey et al., (2008) report that where shortened longitudinal research is the only option, caution is needed when considering the likelihood of long term gains.

Given the short timescales restricting this research so that the TGFG resource was delivered twice weekly over only a six week period, it could be argued that children would benefit from further time to practise and apply their newly learnt skills before demonstrating mastery of these to a level of significance (Usher & Pajares, 2008). Future research should consider a more lengthy intervention period with increased follow up measures

It is also worthy to note for future studies that the adoption of cross-sectional research design alleviates potential history effects. Also, with normally distributed populations, a control group would suffice in alleviating the two above threats.

6.3.4.2 Testing

In this current research, the measures employed pre and post intervention were the same (being the SELR and SDQ). Although delivered in a consistent manner, a potential threat is that the participant's perspective may have shifted, and indeed their circumstances may have changed outside of the research, thereby providing a skewed response to the same question within the measure.

It is worth noting for future studies that the adoption of structured interviews to explore changes in personal circumstances could aim to alleviate potential testing effects. Alternatively, adopting a post-test only design could be considered.

6.3.4.3 Diffusion of treatment

This research used two different schools and comprised two different experimental groups and one control group. It is pertinent to exercise caution regarding diffusion effects in the school that provided experimental Group 2

(CBT) and the control group. As such there could have occurred incidental skill transference with pupils interacting during free play and during joined up classes for particular subjects during the school thereby posing a threat to the internal validity of this research.

Within this research's design, the researcher was unable to 'blind' participants (Year 5 pupils) to the purpose of this research. This can cause confounding variables commonly associated with the design adopted (Mertens, 2010) and as such poses a threat to this research's validity. Pupils were aware that they were part of the class that would firstly be taught CBT skills and that the purpose was to enhance their social, emotional and behavioural skills. This awareness could well have elicited the Hawthorne effect and through the adoption of the pre and post questionnaires, they were exposed to the constructs on which they were being measured (Cohen et al., 2007) and as such could potentially impact post-test responses.

Further to this, Ranganathan, (2000) reported that primary age pupils tend to congregate and socialise in sex segregated groups. Given this, by teaching the whole class in a 'horseshoe' design which was the case in this research, such organisational configuration of genders could mean that participants may not have felt in their comfort zone. There is a possibility that this could make participants feel less open, consequently impacting on their success rates or commitment to engage.

It is worth noting that for future studies, further consideration into the allocation of participant sampling in order to address the above skill transference is desirable.

6.3.4.4 Mortality effects

It was agreed that those participants who had incomplete pre and post measure returns in the self-report, parent and teacher responses would not be included within this research.

An exploration to determine whether the results from excluded subjects is considered to be different from those that remain in the research should be

undertaken to alleviate the potential of skewed data relative to this particular consideration.

6.3.4.5 Selection effects

Whilst every effort was made to broaden the scope of those schools who would be interested in taking part in this research, response was considered to be poor. Only 2 schools, from a total of 13 invited, agreed to be involved with this research thereby restricting the design and the selection of Year 5 pupils. The research participants within both experimental groups and the control group comprised 85 Year 5 children. Of these, 48 were male and 37 were female.

Sukhodolsky et al., (2004) reported that research involving participants of both genders tends to yield greater effect sizes than studies with only male participants. Casey and Burman, (1985) and Weisz et al., (1995) found that studies with a greater proportion of female participants generated significantly higher values of effect sizes.

When considering further research of this type, groups encompassing large sample sizes with a randomised assignment of participants are most desirable, as is the identification of the cognitive levels of those participants in order to avoid the success rates of the intervention being potentially skewed.

In summary, this research design, whilst seemingly the most feasible given the context to which it was initiated, is potentially compromised due to the restricted sample choice and non-normal distribution. Therefore, it is suggested that the research may be vulnerable to threats to internal validity which could be avoided with the adoption of randomised control trials. The consequence of this is an important one in that the findings which identified significant differences could be as a consequential response to factors other than those being studied. Indeed, where significant differences were observed, specifically in relation to research question 2, this was as a result of negative change. This highlights potential research study methodology challenges relating to group 1 which received both SEAL and CBT interventions.

Campbell & Stanley, (1963) propose that researchers should be mindful of possible alternative explanations that may have led to their results. With this in mind, it is prudent to note that this researcher's incidental statistical calculations posed further questions (these are further explored later) consequently casting a shadow of doubt regarding the validity of the research findings.

6.3.4.6 External validity

Generalisable data lends itself to robust external validity (Robson, 2006) which is desirable to determine the appropriateness of delivering principles of CBT across schools. In this research, obtaining generalisable data was hampered due to research scale (only 2 schools from 13 invited opted to be included in this research) and a non-normal distribution of data collected. Therefore, the generalisability of this research is potentially affected.

Future studies could consider increasing the number of participants in a random, cross-culture, wider demographic area. Although being mindful that internal validity from certain standpoints is of greater value (Kazdin, 2003), the impact of elevating internal validity could consequently compromise the research's external validity in addition to the research not measuring what it is intended to (Roth & Fonagy, 1996).

6.3.4.7 Construct validity

On reflection, following the execution of this research's methodology and statistical analyses, this researcher explores the validity of the measures used in relation to the research. Advantageously both measures are useful in identifying aspects of emotional literacy and mental wellbeing functioning, they are administered easily and also take a short timeframe to complete. However, it is important to note that it is recommended to re-test using the SDQ after a six month period and this research took a post-test measure after a mere 6 weeks. It could be suggested then that the data collected may not be fully representative of changes over the suggested period of re-test.

6.3.5 Intervention delivery

This researcher made attempts to keep constant the administration of the intervention through adopting a consistent and structured approach in the delivery of the interventions, session by session, with as much adherence as possible to providing consistent verbal instructions. This researcher does acknowledge Wheeler, Baggett, Fox & Blevins', (2006) suggestions that 68% of published treatment relating to school based intervention for children did not measure the accuracy of intervention implementation. Direct observation by the class teacher of the researcher delivering the TGFG programme within each group was employed. However, caution should be exercised in relation to individual teacher ratings possibly being influenced either by interpersonal or environmental contexts. For example, the teacher could feasibly rush through and 'sign-off' that he / she has witnessed a particular activity. Similarly if there are resources remaining and still requiring completion with the class in the absence of the researcher and not covered within the intervention time span, or alternatively the teacher may have signed off an activity missed by researcher with the intention of being helpful. This concurs with Gresham, (1998). He advises caution as to the possibility of teacher / researcher reactivity, in which the presence of the rater leads to inflated integrity levels.

Another potential explanation for a limited impact of the CBT programme could be that the programme was covered within a limited, 6 week period. Mertens, (2010) indicates that the amount of intervention offered could have a proportionate bearing on the degree of impact on recipients. This research is in contrast to other research (Barrett & Turner, 2001; Domitrovish et al., 2007) in that they also adopted a short time span of programme delivery yet yielded more positive outcomes. Conversely it should further be noted that Durlack et al., (2011) meta-analysis is suggestive that longer term programmes to promote mental wellbeing have yielded improved efficacy. This could be a possible explanation for a lack of noted significant change in both the SELR and the SDQ.

Within future research, consideration should be given to determining the most effective method to establish treatment integrity. The use of self-reports were found to be more efficient than direct observation in some research. However,

potential limitations of the self-report process, particularly teachers self-reports were unrelated to observational measures of treatment integrity thereby indicating incongruence of consistency between the two measures and posing a potential threat to treatment integrity (Noell, 2007).

6.3.5.1 Impact of SEAL on validity of research

As highlighted in the Methods section, it is highly pertinent to note that the researcher subsequently (after initiation of the CBT intervention) became aware that the school which included experimental group 1 had already previously initiated teaching SEAL as part of their PHSE programme. This was not the case for the school which provided experimental group 2 (CBT) and the control group. The SEAL programme was therefore included within this research's exploration as an additional component to the research but it was not initiated at the same time as the CBT intervention. Several attempts were made to ascertain the exact planning, topics and resources used under whole class SEAL but these were not fully forthcoming from the school. The researcher acknowledges the consequent significant threat to validity this poses to the current research and specifically to research question 2.

6.3.6 Pre and post intervention measures

This research attempted to use well-constructed questionnaires with a known evidence base in order to explore relationships between variables as well as identify important differences.

Further advantages of utilising questionnaires within research include their low cost, speed of administration and that they are straightforward by design (Dillman, 2000; McQueen & Knussen, 1999). However, McQueen & Knussen, (1999) proffered the notion that it is pertinent for the researcher to be aware that the chosen questionnaire measures the respondent's thoughts about what they are observing / doing / believing and that this may not be what is actually happening.

6.3.6.1 The Southampton Emotional Literacy Resource (Faupel, 2003)

Upon reflection, the use of the SELR was found to be a useful measure. However, given the researcher's awareness of the qualitative information that was available

but not collected surrounding this research, it could be suggested that this resource is not sensitive enough to pick up on the subtleties of the majority of typically developing children's emotional literacy within the whole class intervention environment.

Of pertinent note, Faupel, (2003, p. 33), reported that the majority of the subscales for teacher and parent were reliable. However, this was not the case for the child self-report. Reliability was found for the child, teacher and parent overall scores.

It is notable that the SELR is regarded as a self-report measure. This is a popular measure in the field of psychology and is reported to hold adequate normative and psychometric properties with significant student regulatory and classroom behaviour (Borgers et al., 2004).

What seems pertinent is the limited use of the SELR as a pre and post measure of intervention impact. During Humphrey et al., (2008) research, the same concern regarding the use of this measure was reported.

When considering future research, it is worthy to note that there can be many potential problems using such a measure. These include:

- Errors inputted by the respondent
- Potential response bias (Moskowitz, 1986)
- Self – perceptions can provoke biased responding (John & Robins, 1994)
- Paulhus, (1991) highlights '*a systematic tendency to respond to a range of questionnaire items on some basis other than the specific item content'* (p. 17).

This resource has been available for a relatively short time and so its use within research is limited. Consequently there are limited evaluations of its usage in a research context. It's inclusion in this research lends further to its developing evidence base.

6.3.6.2 The Strengths and Difficulties Questionnaire (SDQ). Goodman (1997, 2001)

The SDQ measure was designed to support the identification of conduct, hyperactivity, depressive and some anxiety disorders whilst being reported to be less effective in the identification of separation anxiety, specific phobias and eating disorders (Goodman et al., 2000a). However, it is pertinent to note that in this research, it was not utilised as a screening tool, but as a measure of intervention effectiveness.

The tool is also subject to the above self-report limitations highlighted within the SELR measure and so warrants caution in interpreting the statistical significance of the SDQ identifiers.

6.3.6.3 Data collection

The data collection that formed the pre-intervention baseline was achieved using the computerised version of the SELR for teacher and pupil input. A paper version was issued for completion by the parents. The same was re-administered at post intervention data collection phase. Teacher and pupil responses were easy to obtain, as were the pre-intervention data collection from parents following the researcher gaining any unreturned data at a timely parents evening. Significant issues were encountered for post-intervention data collection for parent responses. The researcher had minimal data (less than half) returned and was required to chase such data via phone calls. One should be aware of this context to the collection of parental data collection in that parents, receiving a prompting telephone call at home, may have felt they were ‘put on the spot’ to an extent, which may have led to skewed responses.

6.4 Considerations and implications regarding future research

The researcher acknowledges that the participant sample in this research is somewhat limited, being merely 85, Year 5 pupils from the same socio-demographic area, and with only two schools out of a possible 13 opting into the research programme. Delivery of the TGFG programme was also conducted over what is considered to be a short (6-week) time frame, and was not followed, in

this instance, by longer term data gathering that would have allowed for further exploration of the sustainability of programme effects.

When contemplating robust evidence-based research, the researcher suggests that future research in this area should consider the adoption of mixed-methods, large scale, country wide, RCT designs, with follow up measures, that would better facilitate a wider and more rigorous exploration of programme efficacy, building on the approach previously adopted by Norgate, (2007); Challen, Machin & Gillham, (2013); Stallard et al., (2005); Stallard et al., (2007); and Stallard et al., (2008) in their exploration of the Pen Resiliency Programme (PRP) and Promoting Alternative Thinking Strategies (PATH) & FRIENDS programmes. In addition, it is suggested those who deliver such universal CBT based programme should receive professional training.

It is proposed that future research in this area should consider the adoption of a multi-component approach that is both comprehensive and which also targets all pupils.

It is also suggested that following on from the delivery at a universal level, further accommodations towards offering enhanced therapeutic support should be additionally offered for those who present with a greater need (Weare & Murry, 2004). Thus, by offering universal interventions, it may potentially reduce a later need for targeted interventions to be employed. Such 'joined-up' approaches would require the full assistance from relevant stakeholders (Barry & Jenkins, 2007).

Future research might also consider examining the effects of teachers participating in the delivery of such programmes which, according to Wells et al., (2003), is a potentially important and as yet under-researched area.

6.4.1 Contribution of this research to wider published literature

The researcher suggests the findings reported here and their contribution to the wider field of knowledge, should, because of the aforementioned confounding variables and questions around internal validity and generalisability, be

interpreted with caution. Viewing the outcomes with appropriate objectivity, it is suggested that due to the degree of confounding factors, the findings of this research do not definitively indicate the success of the TGFG programme with regard to pupils' emotional literacy and mental wellbeing. However, the researcher maintains that the research still has much to offer, as outlined below.

This research adds to the following:

- Tentative support for the use of a CBT programme delivered at a universal, whole class level
- Further understanding regarding the impact CBT has on emotional literacy – as measured using a resource commonly found in schools (SELR) and a measure of mental wellbeing (SDQ) that holds good reliability and validity
- Further useful exploration of whether a school that uses SEAL resources (Wave 1) alongside the CBT intervention might positively enhance emotional literacy and mental wellbeing.
- Further exploration of a UK developed CBT resource – specifically the TGFG materials (Stallard, 2002) and support for adoption of the programme as a systematic approach to teaching primary children the principles of CBT at a whole class level.

6.4.2 Implications for educational psychologists

This researcher's ideology is congruent with authors Stallard, (2010); Mrazek & Haggerty, (1994); Weare (2010) and Durlak et al., (2011) in that the focus for effective promotion of mental wellbeing is better served by a universal, primary prevention focus. In addition, the researcher acknowledges the developing evidence base pertaining to the use of CBT with children and young people in the promotion of mental wellbeing. The implications for practising EPs will now be explored.

6.4.2.1 Educational psychologists as implementers of programmes

With reference to this research in lending some support for CBT programmes to be further considered as a primary prevention, it is anticipated that skilled implementers should be employed to execute such programmes. Educational psychologists are very well placed to step into this role since they bring a depth of understanding of psychological paradigms of child development, and of the theories that underpin CBT. They are also very familiar with the educational environment, have close links with the local authority and schools and are familiar with catchment areas (Rait et al., 2010) - arguably moreso than their colleagues from clinical psychology. MacKay, (2007) considers educational psychologists as a '*key therapeutic resource for young people'* stating the following reasons: *"They* (EPs) *are psychological professionals who are embedded in educational systems … Have the generic child and adolescent knowledge and skills … Are in ready supply in schools and therefore placed within public services".* MacKay, (2007, p. 16).

6.4.2.2 Educational psychologists undertaking a facilitative, supervisory role

A further role that could be fruitfully undertaken by the EP is one of 'critical' facilitative or supervisory friend. EPs could contribute to a consultative structure around the direct implementation of programmes.

In recent times the educational psychologist has reportedly contributed positively to systemic and strategic school development and EPs could play a distinctive supervisory role across the full organisational structures within a school or LA since they are able to draw on supportive networks and work to maintain effective delivery of programmes (Squires, 2010). In addition, EPs are able to contribute to organisational practice through their ability to build relationships and would also be mindful of psychosocial factors within the school environment. EPs could lend insight to inform organisational practices that may impinge on both staff and children's mental wellbeing such as supporting adults within the system to manage their affect when presented with emotionally challenging situations (Rait et al., 2010). Alternatively, educational psychologists could support schools in the identification and associated assessment of children, delivering themselves, or

co-delivering tailored interventions at a targeted or individual level (Squires, 2001).

6.4.2.3 Tensions within the EP profession regarding employing therapeutic practices

The history of the profession of educational psychology has noted a considerable transformation, with educational psychologists experiencing diminishing opportunities to provide services of a therapeutic kind. Whilst Barrett et al., (2004) did not find any difference between the effectiveness of a psychologist delivering a CBT intervention and a trained teacher, more contemporary evidence (Squires, 2009; Briesh et al., 2010) linked EPs with effective delivery of CBT in the promotion of mental wellbeing, suggesting that trained practitioners as implementers demonstrates double the rate of effectiveness as those employed by teachers or other school staff. Opportunities for EP work in this area were reported to be mostly affected by the vast legislative requirements pertaining to the educational psychologist's role in the statutory assessment process (MacKay, 2007).

This research demonstrated some potential positive impact of an intervention wherein the psychologist (in this instance a TEP) held the role of primary programme facilitator, supporter and trainer of the class teacher in delivering the CBT based TGFG programme. This illuminates how EPs can introduce new programmes to schools and support and deliver interventions that aim to foster the promotion of emotional literacy & mental wellbeing. In addition, the researcher also supported the schools to develop their knowledge, understanding and application of open access evaluation techniques (SERL & SDQ) to monitor, support and promote EL & MW development.

6.5 Summary

In light of the above, and in addition to considering the reported exacerbation of the difficulties experienced by children and young people who demonstrate emotional difficulties (Rutter & Smith, 1995) it seems wise to acknowledge that there lies an ideal opportunity for educational psychologists to contribute to the

promotion of mental wellbeing within school contexts through systemic and preventative initiatives at a macro-level (Prilleltensky & Nelson, 2000).

Since Educational Psychology seeks to embed evidence based practice, it seems feasible that it should continue to embrace and deploy appropriately evidenced therapeutic interventions. In recent times, a welcomed resurgence of the educational psychologist's role in delivering and supporting therapeutic practice is becoming more prominent and is steered by government policy and research (Barrett & Turner, 2011; DfEE, 2001; DfES, 2005).

7. Conclusion

It is suggested that this research lends some tentative contribution to an emerging evidence base in the field of employing universal CBT to promote emotional literacy and mental wellbeing.

This research explored the impact of universal, whole class delivery of the UK written CBT resource 'Think Good, Feel Good' (Stallard, 2002) on Year 5 pupils emotional literacy and mental wellbeing. The CBT programme was delivered in a systematic fashion as laid out in the resource.

This research aimed to contribute to the evidence base of CBT resources that are UK written, and to explore the TGFG's usefulness as a programme in itself as a CBT intervention.

The literature reviewed in Chapter 2 indicates that there is a limited evidence base surrounding the usage of universal CBT interventions with a noted absence at the time the literature search was undertaken of its potential promotion of emotional literacy and mental wellbeing in primary age pupils.

The presented literature suggests that there are few published studies that have been conducted at a whole class level within the UK and no published studies identified that either utilised a UK written CBT published resource and / or used measures of SELR and SDQ emotional literacy / mental wellbeing.

This research took place across two primary schools in the Stoke-on-Trent area. The impact of the programme was measured using the SELR and SDQ. This was done by collecting data prior to the intervention and then following the intervention. Data was derived from parents, teachers and pupils self-report.

Research question one was tested using data from experimental group 2. This group had been taught the CBT programme and compared to a control group which had not received the CBT programme. Of most noteworthiness were three significant differences identified between experimental group 2 and that of the control group. This identified that universally delivered CBT using the TGFG programme delivered within the classroom may have potentially contributed to

positive effects on the parental perception of child motivation, teacher perception of child self-regulation and teacher perception of decreasing levels of hyperactivity of child.

Since one school was already receiving SEAL as an intervention, this researcher took the opportunity to examine the effect of using a multi-modal intervention (SEAL & CBT) compared to CBT alone. This formed the second of the research questions.

In relation to research question 2, results yielded interesting findings, demonstrating negative regression for all identified significant differences when comparing experimental group 1, comprising SEAL & CBT with group 2 which comprised CBT programme only. Methodological limitations were highlighted and theories were extrapolated as to possible explanations for this.

Potential future research in this area should be refined in light of methodological limitations and the need in this research to use a non-parametric test and the associated adoption of further statistical manipulation commonly associated with this data set together with the methodology profile utilised. Signposts for suggestions for more robust future research design and implementation are located within the discussion and could be beneficial when conducting research within this field.

Therefore, this research may assist in the future development of improved valid, reliable and generalisable research for those who wish to broaden the literature base on the use of universally delivered CBT programmes to enhance emotional literacy and mental wellbeing.

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Appendices

Appendix 1 - Kruskal-Wallis test for comparison of all participants in different research groups

Hypothesis Test Summary				
	Null Hypothesis	**Test**	**Sig.**	**Decision**
1	The distribution of Difference in Parent self-awareness is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.213	Retain the null hypothesis.
2	The distribution of Difference in Parent self-regulation is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.176	Retain the null hypothesis.
3	The distribution of Difference in Parent motivation is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.037	Reject the null hypothesis.
4	The distribution of Difference in Parent empathy is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.290	Retain the null hypothesis.
5	The distribution of Difference in Parent social skills is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.776	Retain the null hypothesis.
6	The distribution of Difference in Parent TOTAL	Independent-Samples	.128	Retain the null hypothesis.

	is the same across categories of Observation group.	Kruskal-Wallis Test		
7	The distribution of Difference in Teacher self-awareness is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
8	The distribution of Difference in Teacher self-regulation is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
9	The distribution of Difference in Teacher motivation is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.035	Reject the null hypothesis.
10	The distribution of Difference in Teacher empathy is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
11	The distribution of Difference in Teacher social skills is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
12	The distribution of Difference in Teacher TOTAL is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.

13	The distribution of Difference in Student – self report score is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.343	Retain the null hypothesis.
14	The distribution of Difference in Parent overall stress is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.755	Retain the null hypothesis.
15	The distribution of Difference in Parent emotional distress is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.705	Retain the null hypothesis.
16	The distribution of Difference in Parent behavioural difficulties is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.929	Retain the null hypothesis.
17	The distribution of Difference in Parent hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.300	Retain the null hypothesis.
18	The distribution of Difference in Parent difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.456	Retain the null hypothesis.

19	The distribution of Difference in Parent kind and helpful behaviour helpful is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.976	Retain the null hypothesis.
20	The distribution of Difference in Teacher overall stress is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.025	Reject the null hypothesis.
21	The distribution of Difference in Teacher emotional distress is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.048	Reject the null hypothesis.
22	The distribution of Difference in Teacher behavioural difficulties is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.024	Reject the null hypothesis.
23	The distribution of Difference in Teacher hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
24	The distribution of Difference in Teacher difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.070	Retain the null hypothesis.

25	The distribution of Difference in Teacher kind and helpful behaviour is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.315	Retain the null hypothesis.
26	The distribution of Difference in Student overall stress is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.729	Retain the null hypothesis.
27	The distribution of Difference in Student emotional distress is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.487	Retain the null hypothesis.
28	The distribution of Difference in Student behavioural difficulties is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.480	Retain the null hypothesis.
29	The distribution of Difference in Student hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.034	Reject the null hypothesis.
30	The distribution of Difference in Student difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.197	Retain the null hypothesis.

31	The distribution of Difference in Student kind and helpful behaviour is the same across categories of Observation group.	Independent-Samples Kruskal-Wallis Test	.364	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.				

Appendix 2 - Mann-Whitney U test as Post hoc test of Kruskal Wallis to compare SEAL&CBT and the CBT group with Bonferroni correction

Hypothesis Test Summary				
	Null Hypothesis	**Test**	**Sig.**	**Decision**
1	The distribution of Difference in Parent self-awareness is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.404	Retain the null hypothesis.
2	The distribution of Difference in Parent self-regulation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.835	Retain the null hypothesis.
3	The distribution of Difference in Parent motivation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.727	Retain the null hypothesis.
4	The distribution of Difference in Parent empathy is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.531	Retain the null hypothesis.
5	The distribution of Difference in Parent social skills is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.539	Retain the null hypothesis.
6	The distribution of Difference in Parent TOTAL is the same across	Independent-Samples Mann-Whitney U Test	.950	Retain the null hypothesis.

	categories of Observation group.			
7	The distribution of Difference in Teacher self-awareness is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
8	The distribution of Difference in Teacher self-regulation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
9	The distribution of Difference in Teacher motivation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.013	Reject the null hypothesis.
10	The distribution of Difference in Teacher empathy is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
11	The distribution of Difference in Teacher social skills is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
12	The distribution of Difference in Teacher TOTAL is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.

13	The distribution of Difference in Student – self report score is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.138	Retain the null hypothesis.
14	The distribution of Difference in Parent overall stress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.906	Retain the null hypothesis.
15	The distribution of Difference in Parent emotional distress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.477	Retain the null hypothesis.
16	The distribution of Difference in Parent behavioural difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.814	Retain the null hypothesis.
17	The distribution of Difference in Parent hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.170	Retain the null hypothesis.
18	The distribution of Difference in Parent difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.589	Retain the null hypothesis.

19	The distribution of Difference in Parent kind and helpful behaviour helpful is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.792	Retain the null hypothesis.
20	The distribution of Difference in Teacher overall stress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.005	Reject the null hypothesis.
21	The distribution of Difference in Teacher emotional distress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
22	The distribution of Difference in Teacher behavioural difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.019	Retain the null hypothesis.
23	The distribution of Difference in Teacher hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
24	The distribution of Difference in Teacher difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.110	Retain the null hypothesis.

25	The distribution of Difference in Teacher kind and helpful behaviour is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.450	Retain the null hypothesis.
26	The distribution of Difference in Student overall stress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.490	Retain the null hypothesis.
27	The distribution of Difference in Student emotional distress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.799	Retain the null hypothesis.
28	The distribution of Difference in Student behavioural difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.424	Retain the null hypothesis.
29	The distribution of Difference in Student hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.044	Retain the null hypothesis.
30	The distribution of Difference in Student difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.086	Retain the null hypothesis.

31	The distribution of Difference in Student kind and helpful behaviour is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.565	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .016.				

Appendix 3 - Mann-Whitney U test as Post hoc test of Kruskal Wallis to compare SEAL&CBT and the control group with Bonferroni correction

Hypothesis Test Summary				
	Null Hypothesis	**Test**	**Sig.**	**Decision**
1	The distribution of Difference in Parent self-awareness is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.329	Retain the null hypothesis.
2	The distribution of Difference in Parent self-regulation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.119	Retain the null hypothesis.
3	The distribution of Difference in Parent motivation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.061	Retain the null hypothesis.
4	The distribution of Difference in Parent empathy is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.162	Retain the null hypothesis.
5	The distribution of Difference in Parent social skills is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.531	Retain the null hypothesis.
6	The distribution of Difference in Parent TOTAL is the same across	Independent-Samples Mann-Whitney U Test	.170	Retain the null hypothesis.

	categories of Observation group.			
7	The distribution of Difference in Teacher self-awareness is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
8	The distribution of Difference in Teacher self-regulation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.001	Reject the null hypothesis.
9	The distribution of Difference in Teacher motivation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.057	Retain the null hypothesis.
10	The distribution of Difference in Teacher empathy is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
11	The distribution of Difference in Teacher social skills is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
12	The distribution of Difference in Teacher TOTAL is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.

13	The distribution of Difference in Student – self report score is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.501	Retain the null hypothesis.
14	The distribution of Difference in Parent overall stress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.586	Retain the null hypothesis.
15	The distribution of Difference in Parent emotional distress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.460	Retain the null hypothesis.
16	The distribution of Difference in Parent behavioural difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.917	Retain the null hypothesis.
17	The distribution of Difference in Parent hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.605	Retain the null hypothesis.
18	The distribution of Difference in Parent difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.646	Retain the null hypothesis.

19	The distribution of Difference in Parent kind and helpful behaviour helpful is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.932	Retain the null hypothesis.
20	The distribution of Difference in Teacher overall stress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.258	Retain the null hypothesis.
21	The distribution of Difference in Teacher emotional distress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.042	Retain the null hypothesis.
22	The distribution of Difference in Teacher behavioural difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.701	Retain the null hypothesis.
23	The distribution of Difference in Teacher hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.178	Retain the null hypothesis.
24	The distribution of Difference in Teacher difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.039	Retain the null hypothesis.

25	The distribution of Difference in Teacher kind and helpful behaviour is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.126	Retain the null hypothesis.
26	The distribution of Difference in Student overall stress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.883	Retain the null hypothesis.
27	The distribution of Difference in Student emotional distress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.254	Retain the null hypothesis.
28	The distribution of Difference in Student behavioural difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.731	Retain the null hypothesis.
29	The distribution of Difference in Student hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.012	Reject the null hypothesis.
30	The distribution of Difference in Student difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.492	Retain the null hypothesis.

31	The distribution of Difference in Student kind and helpful behaviour is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.431	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .016.				

Appendix 4 - Mann-Whitney U test as Post hoc test of Kruskal Wallis to compare CBT and the control group with Bonferroni correction

Hypothesis Test Summary				
	Null Hypothesis	**Test**	**Sig.**	**Decision**
1	The distribution of Difference in Parent self-awareness is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.088	Retain the null hypothesis.
2	The distribution of Difference in Parent self-regulation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.089	Retain the null hypothesis.
3	The distribution of Difference in Parent motivation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.013	Reject the null hypothesis.
4	The distribution of Difference in Parent empathy is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.225	Retain the null hypothesis.
5	The distribution of Difference in Parent social skills is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.946	Retain the null hypothesis.
6	The distribution of Difference in Parent TOTAL is the same across	Independent-Samples Mann-Whitney U Test	.038	Retain the null hypothesis.

	categories of Observation group.			
7	The distribution of Difference in Teacher self-awareness is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.454	Retain the null hypothesis.
8	The distribution of Difference in Teacher self-regulation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.006	Reject the null hypothesis.
9	The distribution of Difference in Teacher motivation is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.483	Retain the null hypothesis.
10	The distribution of Difference in Teacher empathy is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.134	Retain the null hypothesis.
11	The distribution of Difference in Teacher social skills is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.201	Retain the null hypothesis.
12	The distribution of Difference in Teacher TOTAL is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.422	Retain the null hypothesis.

13	The distribution of Difference in Student – self report score is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.446	Retain the null hypothesis.
14	The distribution of Difference in Parent overall stress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.476	Retain the null hypothesis.
15	The distribution of Difference in Parent emotional distress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.835	Retain the null hypothesis.
16	The distribution of Difference in Parent behavioural difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.676	Retain the null hypothesis.
17	The distribution of Difference in Parent hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.228	Retain the null hypothesis.
18	The distribution of Difference in Parent difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.173	Retain the null hypothesis.

19	The distribution of Difference in Parent kind and helpful behaviour helpful is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.960	Retain the null hypothesis.
20	The distribution of Difference in Teacher overall stress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.151	Retain the null hypothesis.
21	The distribution of Difference in Teacher emotional distress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.347	Retain the null hypothesis.
22	The distribution of Difference in Teacher behavioural difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.019	Retain the null hypothesis.
23	The distribution of Difference in Teacher hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.004	Reject the null hypothesis.
24	The distribution of Difference in Teacher difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.250	Retain the null hypothesis.

25	The distribution of Difference in Teacher kind and helpful behaviour is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.432	Retain the null hypothesis.
26	The distribution of Difference in Student overall stress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.506	Retain the null hypothesis.
27	The distribution of Difference in Student emotional distress is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.376	Retain the null hypothesis.
28	The distribution of Difference in Student behavioural difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.241	Retain the null hypothesis.
29	The distribution of Difference in Student hyperactivity and concentration difficulties is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.784	Retain the null hypothesis.
30	The distribution of Difference in Student difficulties getting along with other children is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.232	Retain the null hypothesis.

31	The distribution of Difference in Student kind and helpful behaviour is the same across categories of Observation group.	Independent-Samples Mann-Whitney U Test	.158	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .016.				

Appendix 5 - Meta-analysis and systematic reviews of school based mental health & wellbeing promotion

Research	Aim	Findings	Suggestions
Wells et al., (2003) Systematic review of school based programmes	Aim: To explore the potential impact of adopting universal school located intervention programmes which promote mental health 17 controlled studies were reviewed	Universal mental health promotion programmes found to have significant positive effects when the promotion of mental health and wellbeing is targeted not the prevention of mental illness. In addition, when a whole school approach is adopted and implementation of such programmes are supported for more than one year group with follow up.	The promotion of positive mental health and wellbeing at a universal, whole school and class level in order to support all pupils are likely to be most successful. Evidence for the usefulness of longer term, curriculum based programmes
Tennant et al., (2007) A systematic review of reviews on interventions to promote mental health and prevent mental health problems in children and young people	Aim: Review of reviews regarding interventions which aim to promote mental health and prevent mental health problems in children and young people 27 systematic reviews were included	Pre-school programmes aimed at improving self-esteem and behaviour and which included strong parental component were found to be most effective	Mental Health & Wellbeing programmes proved more effective than the adoption of prevention programmes
Adi et al., (2007) A systematic review of the effectiveness of interventions to promote mental wellbeing in children in primary education	Aim: To review of the effectiveness of interventions in the promotion of mental wellbeing in children within primary education 31 studies were reviewed	A universal, whole class approach which included both teacher and parent training yields most effectiveness. Mental health & wellbeing programmes that are aimed at promotion rather than prevention are reported to be most effective.	Universal, whole class approach to promotion of mental wellbeing. Teacher and parental component supported with training. Need for further research on content / delivery of programmes and more robust designs
Shucksmith et al., (2007) Mental wellbeing of children in primary education (targeted / indicated activities)	Aim: To examine the effectiveness of targeted / indicated interventions aimed at promoting the mental wellbeing of children 32 studies reviewed	CBT interventions which are delivered over a short period seem to reduce children's anxiety and some depressive symptoms and lend a preventative effect on potential development into disorders Short (6 week) programmes demonstrate better improvements for emotional problems than conduct problems Multi-component programmes demonstrate more positive effects in	Short / brief CBT based programmes can be effective in the promotion and prevention of mental well-being. Non-English based CBT oriented anxiety prevention programmes have yielded positive impact in the UK. Co-morbid conditions make intervention delivery difficult

		children's social problem solving and in the development of increased positive peer relations	Outcomes have mainly not been reported in the longer term and this calls for further research Engaging parents in programmes either through attendance or reporting feedback is problematic.
Durlak et al., (2011) The impact of enhancing students' social and emotional learning: a meta-analysis of school based universal interventions	Aim: Meta-analysis used to exploration into the impact of school based programmes across multiple social and emotional learning outcomes 213 social & emotional learning programmes which were school based.	Positive effect on targeted social and emotional competencies were reported as follows: Reduction in internalising problems / Increases in pro social behaviour / Improved emotional recognition / Improved stress management, Development of empath / improved problem solving and decision making / Reduction in reported conduct problems / Improved reported attitudes about self, others and school / Improvements in academic skills	Programmes which aim to promote aspects of social and emotional development and are delivered within school yield greater benefits.

Appendix 6 – Strengths and difficulties questionnaire

Strengths and Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of the child's behaviour over the last six months or this school year.

Child's Name ..... Male/Female

Date of Birth .....

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children (treats, toys, pencils etc.)	☐	☐	☐
Often has temper tantrums or hot tempers	☐	☐	☐
Rather solitary, tends to play alone	☐	☐	☐
Generally obedient, usually does what adults request	☐	☐	☐
Many worries, often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, down-hearted or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often lies or cheats	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often volunteers to help others (parents, teachers, other children)	☐	☐	☐
Thinks things out before acting	☐	☐	☐
Steals from home, school or elsewhere	☐	☐	☐
Gets on better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Sees tasks through to the end, good attention span	☐	☐	☐

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

Parent/Teacher/Other (please specify:)

Thank you very much for your help

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Appendix 7 – Southampton Emotional Literacy Resource

Emotional Literacy Pupil Checklist

Ages 7 to 11

First name ..... **Surname** .....

Date ..... **Year group** ☐ **Boy** ◯ **Girl** ◯

Here are some questions about you. Please try to answer them as honestly as you can. Read each question and then put a tick in one of the boxes. Make sure you do each question.

Here is an example of how to answer the questions. If you do not think you are shy at all, you would tick the box 'not like me at all'.

	Very like me	*Quite like me*	*Only a bit like me*	*Not like me at all*
I am a rather shy person.				✔

Now please answer the rest of the questions.

	Very like me	*Quite like me*	*Only a bit like me*	*Not like me at all*
1 I try to help people when they are unhappy.				
2 I often forget what I should be doing.				
3 I know what things I'm good and bad at.				
4 I often lose my temper.				
5 A lot of people seem to like me.				
6 I get annoyed when other people make mistakes.				
7 I often leave it to the last minute to do my school work.				
8 I can describe how I am feeling most of the time.				
9 I get upset if I do badly at something.				
10 I find it difficult to make new friends.				

Please turn over

	Very like me	Quite like me	Only a bit like me	Not like me at all
11 I know when people are starting to get upset.				
12 I carry on trying even if I find something difficult.				
13 I am easily hurt by what others say about me.				
14 I calm down quickly after I have got upset.				
15 I am usually included in other children's games.				
16 I laugh at other children when they get something wrong.				
17 I make a good effort with most of my school work.				
18 I am good at many things.				
19 I am usually a calm person.				
20 I spend too much time on my own.				
21 I try to help someone who is being bullied.				
22 I find it easy to pay attention in class.				
23 I worry a lot about the things I'm not good at.				
24 I can wait for my turn.				
25 I can make friends again after a row.				

Thank you for filling in this checklist.

Emotional Literacy Teacher Checklist

Ages 7 to 11

Pupil's name ..... **Completed by** .....

Date ..... **Year group** ☐ **Boy** ◯ **Girl** ◯

Please look at each statement and put a tick in the box that best describes how this pupil generally is. There are no right or wrong answers. Please ensure you answer all the questions.

	Very true	*Somewhat true*	*Not really true*	*Not at all true*
1 Listens to other people's point of view in a discussion or argument.				
2 Gives up easily when faced with something difficult.				
3 Is aware of his/her own strengths and qualities.				
4 Loses temper when loses at a game or in a competition.				
5 Laughs and smiles when it is appropriate to do so.				
6 Is intolerant of people who are different from him/her.				
7 When starts a task or assignment, usually follows it through to completion.				
8 Finds it hard to accept constructive criticism and feedback.				
9 Is liable to sulk if doesn't get his/her own way.				
10 Makes the right kind of eye contact when interacting with others.				
11 Is insensitive to the feelings of others.				
12 Leaves things to the last minute.				
13 Can recognise the early signs of becoming angry.				
14 Remains calm and composed when loses or 'fails' at something.				
15 Is disliked by many of his/her peers.				
16 Is very critical of others' shortcomings.				
17 Does things when they need to be done.				
18 Can name or label his/her feelings.				
19 When things go wrong, immediately denies that it is his/her fault or blames others.				
20 Has a sense of humour and fun that is used appropriately.				

Emotional Literacy Parent Checklist

Ages 7 to 11

Child's name ..... **Date** .....

School ..... **Year group** ☐ **Boy** ◯ **Girl** ◯

Please look at each statement and put a tick in the box that best describes how you think your child generally is. There are no right or wrong answers. Please make sure you answer each question. Your responses will be treated in strictest confidence.

	Very true	*Somewhat true*	*Not really true*	*Not at all true*
1 Listens to other people's point of view in a discussion or argument.				
2 Gives up easily when things aren't perfect.				
3 Can name or label his/her feelings.				
4 Is quick tempered and aggressive.				
5 Spends too much time alone.				
6 Is tolerant of people who are different from him/her.				
7 Seems able to shut out distractions when needs to focus.				
8 Tends to have feelings of self-doubt/insecurity.				
9 Is liable to sulk if doesn't get his/her own way.				
10 Finds it difficult to make new friends.				
11 Is insensitive to the feelings of others.				
12 When starts a task, usually follows it through to completion.				
13 Can recognise the early signs of becoming angry.				
14 When things go wrong, immediately denies that it is his/her fault or blames others.				
15 Is liked by a lot of people.				
16 Is very critical of others' shortcomings.				
17 Leaves things to the last minute.				
18 Is aware of his/her own strengths and weaknesses.				
19 Rushes into things without really thinking.				
20 Can make friends again after a row.				
21 Gets annoyed when other people get things wrong.				
22 Keeps trying even when faced with something difficult.				
23 Is easily hurt by what others say about him/her.				
24 Is a bad loser.				
25 Mixes with other children.				