

An Evaluation of a Targeted Group Intervention delivered to Year 8 Pupils and broadly based on Cognitive-Behavioural Approaches.

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## **Abstract**

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This thesis describes the evaluation of a targeted group intervention that is broadly based on cognitive-behavioural approaches. The intervention incorporates aspects of social skills training and anger management training, and utilises the concepts of cognitive behavioural therapy. The intervention aims to promote emotional literacy and behavioural change and to impact upon school exclusions in secondary school pupils.

The theoretical and historical underpinnings relating to cognitive-behavioural approaches, the methods of cognitive-behavioural approaches, and emotional literacy are described and explored. The literature considering these areas within the educational context is highlighted. Further exploration of the literature presents a systematic literature review of secondary school-based studies using cognitive behavioural approaches in targeted group interventions; these studies aim to promote behavioural change and prevent school exclusion.

The evaluation of the targeted group intervention employs a pre/post-test randomised controlled trial. The methodological implications of such a study are described and discussed. The study involves a mixed group of N=43 (20=experimental; 23=control) Year 8 pupils who were identified as having some behavioural needs. The study did not demonstrate any statistically significant impact on the participants' behaviour or emotional literacy, and exclusion rates between the groups were equal. The findings of this study are discussed considering the methodology, measures used, and data analysis employed. How this study contributes to knowledge and research is explained and the implications the study may have for policy makers and educational psychologists are described.

## **Introduction**

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The incorporation of emotional health and well-being as a key component of a child's education was described in the Every Child Matters Framework (DfES, 2004). This resulted in government-backed initiatives to promote behaviour, attendance and emotional development. Since its publication, a number of targeted interventions have been implemented across the country. This research will contribute to the evidence base of targeted interventions aimed at improving behaviour and promoting the development of emotional literacy.

### **1.1 Background to research – personal and professional interest**

The researcher is a Trainee Educational Psychologist, whose interest in contributing to the evidence base of targeted interventions in schools developed from working in settings that promoted positive behaviour for learning. Through working with children with behavioural, emotional and social difficulties, the researcher identified a clear need for specific short-term intervention in the school setting. Developing and implementing interventions that are effective, consistent, targeted, and preventative could impact upon a student's ability and capacity to improve behaviour for learning in school.

As a professional working in the educational context, the researcher has found that the evidence base in secondary schools relating to targeted interventions promoting positive behaviour and developing emotional literacy is limited. Having worked within the secondary setting, the importance of working with young adolescents in this area is apparent. This has also been identified by professional bodies and demonstrated in legislation (Every Child Matters, DfES, 2004; Improving behaviour and attendance in secondary schools, Ofsted, 2005; Removing barriers to learning, DfES, 2004).

## 1.2 Key Stakeholders

### ***Development and Research (D&R) Collaborative Programmes in Educational Psychology'***

This research makes a distinctive contribution to the 'Development and Research (D&R) Collaborative Programmes in Educational Psychology'. The aim of this programme is to aggregate the nationally collected collaborative programme data in four key areas. These areas were identified by Principal Educational Psychologists reflecting both local and national priorities that can be related to the five outcomes of Every Child Matters (DfES, 2004). The research contributes to a key area by answering the following research question posed by the D&R programme:

*Under what circumstances might targeted academic intervention, social skills, self-esteem or anger management groups in schools prevent exclusion?*

This research contributes to the distinctive perspective educational psychologists have. The measures that will be available to the National D&R Programme will be:

- Pupil outcomes (from pre and post measures)
- Demographic information
- Precise descriptions of interventions
- Precise descriptions of (systemic) contexts.

### ***Local Authority***

This research was carried out in the East of England and the outcomes also contributed to the Local Authority's (LA) Children's Services department. The Local Authority promotes and encourages robust research that contributes to the evidence base.

*Every child has the right to expect that anyone involved in practice decisions about them, and their family knows what is most likely to work – thereby increasing the likelihood of achieving positive results and also making sure that time and money is not wasted on things that have little, no, or even a negative effect.*

(Research in Practice: Firm Foundations, 2006; p.15)

The LA adheres to a Research Governance Framework supported by the Department for Children, Schools and Families (DCSF). This research also adheres to the guidelines set out by this framework and gained panel approval from the stakeholders before commencement. The research has the following characteristics:

- Relevant to local needs, the local context and service delivery priorities.
- Purposeful and undertaken in accordance with a clear brief.
- Actionable, resulting in clear recommendations or implications for policy or practice change.

The outcomes of this research will inform intervention planning within the LA; the LA intends to develop evidence-based interventions focusing on students with behavioural needs. This evidence-base will contribute to the local and national focus on behaviour and attendance, and better inform the authority in terms of effective targeted interventions to prevent exclusion.

### **Schools**

The two high schools involved in this research are interested in gaining evidence to support their intervention planning. The schools also hope to gain a member of staff who has been trained in the delivery of the 'Over to You' intervention. The staff member who will be trained will be the Teaching Assistant who delivers the course with the researcher.

### **1.3 Rationale and aims of the research**

This research will investigate the impact of a targeted group intervention broadly based on cognitive behavioural approaches. The intervention incorporates aspects of social skills training and anger management training, and utilises the concepts of cognitive behavioural therapy (Burton, 2006). In addition to targeting behavioural needs, the researcher believes that developing a student's emotional literacy through a targeted intervention based on cognitive behavioural approaches is an important and relevant area of focus.

The aim of this research will be to evaluate the impact of the 'Over to You' intervention on emotional literacy and behaviour. The research will target year 8 pupils who have been identified as having behavioural needs

Within this thesis the research conducted will be described in detail. The experimental design and methodological considerations will be made explicit, the findings will be presented, analysed and discussed in terms of the hypotheses made. The research makes a distinctive contribution to the developing body of evidence in the key area promoted by the D&R Collaborative Research Programme. The research will be described in relation to both current and historical literature relating to cognitive behavioural approaches and emotional literacy. There will be particular focus on the systematic literature review of targeted interventions in secondary schools.

### **1.4 Overview of the thesis**

This thesis will be presented in six chapters, details of the sub-sections, and the tables and appendices can be found within the contents page. The following outline gives a brief overview of the contents of each chapter:

#### *Chapter 2: Literature review*

The literature review will provide an overview of the key areas relevant to this research. A systematic literature review will then be described leading on to the

rationale for this research. The research aims and research questions will then be outlined. An overview of the contents is as follows:

- Cognitive behavioural approaches;
- Emotion literacy;
- Groups, and group work in education;
- Systematic review of group intervention studies;
- Rationale for this research;
- Research aims and questions.

### *Chapter 3: Methodology*

The methodology chapter will describe the design and implementation of the research project. An overview of the contents is as follows:

- Epistemological paradigms.
- Fixed, flexible and multiple designs.
- Final research design.
- Implementation of randomised control trial.
- Intervention.
- Procedure.
- Ethical consideration.
- Instruments.

### *Chapter 4: Results*

The results chapter will present the data collected from the pre/post test randomised control trial. A descriptive analysis of the results will be followed by the relevant statistical analysis to identify any statistical significance of the findings.

### *Chapter 5: Discussion*

The research findings will be discussed in relation to:

- Research questions.
- How the research contributes to knowledge and research.
- Methodological implications.
- Instruments used.
- Data analysis and interpretation.
- Implications of the research.

### *Chapter 6: Conclusion*

The concluding chapter will identify the key points that have been identified from the research.

# Literature Review

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## 2.1 Introduction

Ever since the government launched the Social Exclusion Unit in 1997, there has been an increased focus within education on reducing exclusions and improving behaviour in schools. The publication of the Every Child Matters Framework (DfES, 2004) and the incorporation of emotional health and well-being as a key factor of a child's education resulted in government-backed initiatives to promote emotional development.

Children who demonstrate early onset behavioural and conduct problems are more likely to experience social isolation from classmates and peer rejection (Hartman et al., 2003); many leave school without qualifications, and over a third become young offenders (Farrington, 1995). Behavioural and conduct difficulties can lead to difficulties in adulthood, such as substance abuse, criminality and relationship difficulties (Scott et al., 2001). A number of targeted interventions to promote behaviour and emotional literacy have been implemented across the country. These interventions range from anger management training (Kellner and Bry, 1999), social skills training (Squires, 2001), emotional literacy support (Humphrey et al., 2009), multi-agency intervention, and group work. As highlighted in the previous chapter, this research considered the impact of a targeted intervention in a school setting.

## 2.2 Overview of this research

There have been a number of different approaches to group work aimed at promoting behavioural change in children. These groups have various timescales and a number of different psychological theories that underpin them (Burton, 2006).

Burton (2006) developed the 'Over to You' group work intervention. The intervention is based on the principle that working with young people to change their own behaviour can encourage the young person to develop further qualities such as personal motivation, self-reflection and empowerment. The purpose of Burton's study was to evaluate the impact of a group work

intervention, designed to promote individual responsibility for behaviour, on a number of secondary school pupils identified as having behavioural needs.

The intervention described by Burton (2006) was delivered by an Educational Psychologist and consisted of group sessions. The aims of the sessions were for the participants to:

- reflect on personal strengths and difficulties;
- set and work towards their own personal targets;
- increase awareness of how their thinking may affect their feelings and behaviour;
- recognise the impact of their communication styles on others;
- practice using assertive strategies for resolving conflicts.

The purpose of the intervention is to assist young people at risk of exclusion to reflect on and change their behaviour. In this study, the pupils reduced their conflicts with teachers and successfully avoided exclusion. Burton (2006) describes the intervention as adopting a broadly cognitive behavioural approach to behavioural change.

The literature reviewed here explores cognitive behavioural interventions. The researcher wanted to find out about the underpinning theories surrounding these approaches in order to consider whether implementing such an intervention is relevant to the real world.

In addition to considering cognitive behavioural approaches the researcher was also interested in finding out about literature that can be linked to the aims of the 'Over to You' intervention described by Burton (2006). The aim of the intervention is to develop personal motivation, self-reflection and empowerment. Therefore, the concept of emotional literacy as described by Faupel (2003) may be seen to encompass these areas. Literature considering the theoretical underpinnings of emotional literacy is explored in detail. The literature reviewed further described the construct of emotional literacy and group work in schools aimed at developing it.

The researcher also wanted to consider group work in education, more specifically, group work that is also underpinned by a cognitive behavioural approach, and group work that is aimed at improving behaviour and preventing school exclusion. In order to do this a brief review of the literature considering groups and group work in education was conducted. This led the researcher to recognise the need for a more detailed review of group work in schools. This resulted in a systematic literature search considering targeted interventions in secondary schools. The systematic search focused on cognitive behavioural interventions aimed at improving behaviour and preventing school exclusion. The search also considered studies aimed at either promoting emotional literacy or employing tools aimed to measure any changes in emotional literacy.

It is necessary to acknowledge that the scope of this literature review is focused on cognitive behavioural methods of targeted interventions. Other theories that claim that the concept of interpretation can result in different actions, responses and feelings could be considered such as Solution Focused Brief Therapy (De Shazer, 1985), Neural Linguistic Programming (Bandler and Grinder, 1985) and, historically, Personal Construct Psychology (Kelly, 1955). These theories will not be described here due to the scope of this research. However, they are important bodies of work that should be acknowledged.

The limitations of the systematic review must also be acknowledged. The systematic review focused on studies conducted in secondary schools using cognitive behavioural methods of intervention. Considering other age ranges and interventions could have enhanced the review. However, the researcher wanted to explore this particular area in order to ascertain whether there were any gaps in the research and knowledge.

The literature reviewed provides an overview of the key areas relevant to this research. A systematic literature review is described leading on to the rationale for this research. The research aims and research questions will then outlined.

An overview of the contents is as follows:

- Cognitive behavioural approaches;
- Emotion literacy;
- Groups, and group work in education;
- Systematic review of group intervention studies;
- Rationale for this research;
- Research aims and questions.

The aim of this research was to evaluate the impact of the 'Over to You' intervention on emotional literacy and behaviour. The research targeted year 8 pupils who had been identified as having behavioural needs.

### **2.3 Overall search strategy**

This literature review employed both an overall search strategy and a systematic literature search.

The overall search strategy considered the historical and theoretical underpinnings of:

- cognitive behavioural approaches;
- emotion literacy;
- groups, and group work in education.

The electronic databases searched were UNLOC, PsycINFO, ASSIA, ISI Web of Knowledge, and ERIC.

The databases were searched for the terms shown in Table 2.1.

**Table 2.1** The terms searched for in the electronic databases.

<b>Target population terms</b>	School-age / secondary school / child / pupil
<b>Search terms</b>	Cognitive behavioural / cognitivism / behaviourism / emotional literacy / emotional intelligence / self-regulation / self-awareness / anger / behaviour / EBD / BESD / social skills

Information was gathered from predominantly original sources allowing a comprehensive overview of the areas mentioned above. The researcher feels that an overview of these areas is relevant as it establishes the rationale for this research. The systematic literature review aimed to identify group interventions with secondary aged pupils; this focused on interventions aimed at preventing school exclusion, improving behaviour, and promoting emotional literacy, as well as interventions based on cognitive behavioural approaches.

## **2.4 Cognitive Behavioural Approaches**

As the fundamental premise on which this research is based is that behaviour is seen to be more likely to change if it is addressed in the context of thoughts and feelings (Sharp and Herrick, 2004; Burton, 2004), the work surrounding cognitive behavioural therapy is key to outlining the theoretical underpinnings of this research.

*CBT combines elements of both psychotherapy and behavioural therapy by requiring an empirical investigation of automatic thoughts, inferences and conclusions by formulating hypothesis that can be tested in a systematic way.*

Squires (2001)

The structure of this part of the literature review is based on the work of McGuire (2000) *An Introduction to Theory and Research – Cognitive*

*Behavioural Approaches.* McGuire's work has been reviewed and expanded upon throughout section 2.4 to include studies more pertinent to this research.

Beck and Emery are credited with founding the Cognitive Behavioural Therapy (CBT) approach (Beck et al., 1979, 1990; Beck, 1985; Emery, 1985). The approach was developed as Beck et al. (1979) were developing a brief form of psychotherapy and attempting to validate certain aspects of depression. Beck found that depressed patients tended to avoid situations that involved disapproval or rejection; this is contrary to the psychoanalytic theory that depressed patients needed to suffer. Applying logic and the search for evidence, CBT was based around the application of techniques to correct cognitive distortions. Williams et al. (1997) suggest that one of the major ambiguities in Beck's theory is whether cognitive distortions are present when a person is in the relevant emotional state or whether they are present beforehand and contribute to the development of the emotional condition.

The general principle of a cognitive behavioural therapy is that thinking precedes feelings, and feelings precede behaviour. Because of this, if we can alter the cognitions, then both the feelings and behaviour will change (Squires, 2001). CBT has an emphasis on collaborative empiricism; the interaction between the therapist and the client is intentional. CBT focuses on the 'here and now', requiring the active participation of the client and the collaborative testing of hypotheses (Beck et al., 1979). Beck et al. (1990) describe the purpose of CBT as being to encourage the client to:

- acknowledge and distinguish the correlation between cognition, affect and behaviour;
- develop a greater awareness of their own thoughts and become able to recognise cognitive distortions and distorted automatic thoughts;
- develop responses to distorted thoughts using logic, reasoning and empirical testing;
- replace distorted cognitions with more balanced thoughts adapting long-held dysfunctional assumptions and underlying major concerns;
- develop action plans to acquire new patterns of thought.

After giving consideration to the purpose of CBT it is also necessary to consider the development of the approach. Meichenbaum (1995) described cognitive behavioural therapy as having three key stages in its development. These evolutionary stages can broadly be generalised to cognitive behavioural approaches as a whole. The three stages are conditioning, information processing, and constructive narrative.

Behaviourists originally viewed cognitive events as concealed methods of conditioning. As the field developed, these constructs were seen as too rigid and were thought not to acknowledge individual differences and the complexity of the operational factors. Beck et al. (1979) described cognitive events as major factors influencing individuals and their difficulties. Theories about these cognitive events or patterns led to research considering how information processed from those events can support feelings and behaviours that are seen to be dysfunctional.

The CBT approach draws aspects from behaviourism. Targets are specific; decisions are made regarding how best to meet these targets and how to measure progress towards the targets, facilitating the provision of feedback. Examining CBT and other approaches, Emery (1985) compared psychoanalytic therapy with CBT. One strength of CBT was found to be that it is brief and time limited, lasting between 5 and 20 sessions (Sherman, 1999). Westling and Ost, (1999) found that as the therapy is time limited, it has to be delivered at a quick pace; thus, it needs to be task-orientated, with a clear agenda for each session, and focus on problem-solving. However, this study focused on a very brief two day intensive CBT intervention on patients with panic disorders.

Ellis (1955) and Neenan and Dryden (2000) outlined the importance of developing in a client the idea that their beliefs rather than the activating events can determine the emotional and behavioural consequences that occur. Altering the way an event is interpreted may lead to a different emotion, or a lessening of a particular emotion, which may lead to different behaviour. Squires (2002) describe this as faulty thinking resulting in misinterpretations of situations.

The idea of event interpretation is furthered in the 'Over to You' intervention (Burton, 2006) aimed to allow the pupil to understand the links between thoughts and behaviour. Therefore pupils would become more self-aware and develop responses to any distorted thoughts. When considering an intervention that incorporates these concepts, the researcher was led to ask about the evidence base supporting this method. The majority of the research carried out to assess the effectiveness and uses of CBT has been carried out with adults in a therapeutic setting. For example, Andrews (1996) found CBT to be more effective than psychotherapy or other counselling methods. CBT has been used in the therapeutic field to treat a variety of conditions.

To summarise briefly, CBT has been used for reducing anxiety, depression and panic attacks (Westling and Ost, 1999); improving coping strategies and reducing symptoms with schizophrenics (Sherman, 1999); reducing unwanted intrusive thoughts in those suffering from obsessive compulsive disorders (Shafran, 1999); reducing depression and anxiety in adults with learning disabilities; and improving self-esteem and anger management (King et al., 1999).

CBT has been criticised by practitioners favouring a more psychoanalytic approach. Leader (2008) claims CBT is simplistic and the focus on positive thinking does not account for a persons history or previous life experiences. Aharonovich et al. (2003) described a limitation of CBT as being the cognitive demands it places on patients. For example, patients are asked to learn a range of new concepts and skills, and implement the new skills learnt while in stressful situations. Taking the criticisms and limitations into account there is still considerable evidence supporting the use of CBT for the treatment of traumatic stress-related psychological symptoms (Cohen, 2003; Cohen et al., 2004; Wells and Sembi; 2004). However, these studies were all conducted on an adult population.

When working with children, Squires (2001) found significant improvements in participants' self-control and improved classroom behaviour measured by teacher ratings when using CBT as a basis for small group work in schools.

Stallard et al. (2007) also examined CBT group work with children. Stallard et al. (2007) reviewed the implementation of FRIENDS, a ten session cognitive-behavioural intervention aimed at children with established anxiety disorders. This large study employed a randomised control trial and demonstrated significant post intervention reductions in anxiety following FRIENDS (Barrett & Turner, 2001). This work offers sound empirical evidence supporting the use of CBT with children with anxiety disorders. This researcher would like to examine the effectiveness of CBT approaches with children who are displaying behavioural symptoms. Therefore a review of group intervention studies in schools later in this chapter will further consider and offer critical reflections relating to the research carried out with children and young people.

As a researcher exploring the theoretical underpinnings of an intervention based on cognitive behavioural therapy, it became apparent that there was not one single method or theory developed, but rather a number of methods that utilised similar principles and beliefs. It is these methods of cognitive behavioural approaches that will be described in the following section. The researcher feels that considering these methods will allow for a more in depth exploration of the topic which in turn may offer more scope and opportunities for implementation in schools.

In schools, a variety of intervention methods are implemented to work with children who are experiencing difficulties within the school setting (Humphrey et al., 2008). Interventions aimed at targeting difficult behaviours, improving social skills and developing emotional well-being are becoming commonplace. In addition to utilising the concepts of cognitive behavioural therapy the 'Over to You' intervention incorporates behavioural and cognitive strategies as well as aspects of social skills training and anger management training. In order to explore this area further the evidence base surrounding these strategies will be outlined in the following sections.

### **2.4.1 Behavioural Strategies**

The strategies that utilise the principles of behaviourism are outlined by Ayers et al. (1995). They describe a range of behavioural strategies that are commonly used in school settings, particularly with children who present as having emotional and behavioural difficulties. One of the key strategies described by Ayers et al. (1995) is positive reinforcement. This is offering some sort of reward or praise following the desirable behaviour with the aim of increasing the future occurrence of the desirable behaviour. For example, Houghton et al. (1988) concluded that a positive letter home to parents was seen as a significant incentive. Houghton et al. (1988) also described the importance of sincerity when using positive reinforcement. The evidence collected in this study was compiled from gathering student opinions regarding the effectiveness of various forms of punishment as well as various forms of rewards. The data could have been further enhanced by also gathering the opinions of parents and teachers (Miller et al., 1998).

In addition to examining behavioural strategies at the individual level, it is also necessary to examine whole school behavioural strategies, such as 'assertive discipline' (Canter and Canter, 1992). This focuses on making classroom rules and procedures clear and on implementing consistent rewards and sanctions. The 'assertive discipline' approach can be seen to be reliant on external reinforcement rather than developing intrinsic motivation in students to shape behaviour. The implication is that the teacher must be present for appropriate behaviour to occur and that no transference of behavioural skills is promoted. Furthermore, assertive discipline does not address the reason for the problem behaviour; it simply focuses on consequences for behaviour (Ferguson & Houghton, 1992). However, the approach has a lot of support from practitioners and has been shown to have some impact on the frequency of negative behaviours (Nicholls and Houghton, 1995).

Strategies that may promote more intrinsic motivation are those that aim to promote the identification of the feelings that are linked to behaviours. These cognitive strategies are examined in the following section.

## **2.4.2 Cognitive Strategies**

The use of cognitive strategies, such as identifying the feelings that are linked to behaviours, may help change a pupil's ability to think and problem solve effectively about the situations they encounter. It may also allow for a change in their self-perceptions and the ways in which they attribute meaning to events (Frederickson and Cline, 2002). Among others, Reid and Borkowski (1987) showed that attribution retraining can have a positive impact on pupil behaviour and motivation. In their study they examined the impact of a short-term intervention on hyperactive children and compared the outcomes to children in a control group. The study also showed a reduction in hyperactivity after a ten month follow-up.

Reid and Borkowski (1987) also argued that it is important to consider that when utilising cognitive strategies aimed at promoting behavioural change the pupil must recognise that they have a problem and wish to find a solution. When considering pupil behaviour and motivation, it is also important to be aware that the impact of their behaviours may serve other purposes, for example, status within a peer group, this should be considered when planning an intervention (Elliott and Place, 1998).

It is that consideration of others, and pupil's interactions with others that leads to the examination of how social skills can be developed and promoted. This is an area that has received a lot of interest from both the press and practitioners alike. The SEN Code of Practice (Department for Education and Skills, 2001) also reflects a focus on social skills development.

## **2.4.3 Social Skills Training**

The SEN Code of Practice (Department for Education and Skills, 2001) expanded the term 'emotional and behavioural difficulties' to include 'behaviour, emotional and social development'; the guidance advises practitioners to develop a pupil's social skills as well as managing a pupil's behaviour.

Considering the DfES acknowledgement of the importance of social factors, and taking into account the integration of cognitive and behaviourist approaches, methods of intervention have been developed that go beyond the behavioural and cognitive strategies described in sections 2.4.1 and 2.4.2. These interventions incorporate the principles historically outlined by social learning theory (Bandura, 1977). Social skills training often focuses on teaching specific actions that help pupils change what they say and the way they communicate (Sue and Sue, 1990). However, this alone is not sufficient, as cognitive components, such as social perception and knowledge, are also required. For example, a pupil can be taught to give eye contact, but being able to decide when this is appropriate requires cultural knowledge and complex social judgements (Sue and Sue, 1990). Cognitive approaches to social skills focus on social perception and problem solving skills. Frederickson and Cline (2002) state that to be socially skilled a pupil needs to be able to:

- precisely ascertain the behaviour of other pupils and adults;
- comprehend feedback that is given from others and understand what it tells them; about the way that others see them;
- consider a range of alternative ways to respond;
- consider the consequences of each particular action that they might make;
- be able to make a decision on what to say and do.

Taking behavioural and cognitive approaches into account, it is generally suggested that a combination of behavioural and cognitive approaches be used, as they can promote the development of the skills described above (Spence, 1983; Beck and Forehand, 1984). The study by Beck and Forehand (1984) described the clinical merits and limitations of implementing social skills training. However, it did not draw conclusions about the relative effectiveness of the treatment strategies explored. Spence (1983) drew conclusions after a review of the literature surrounding social skills training, with a particular focus on the impact the intervention had on groups of children in school.

As social skills training is often conducted in a group, and we operate in social situations (Frederickson and Cline, 2002), another factor that must be

considered is the impact of other people. Dodge et al. (1986) suggest an interactive model of social skills that considers the circular chains of causality and interactions between individual and environmental influences, as well as behavioural and cognitive factors. This is an important concept to consider when planning a group intervention in a school setting.

Social skills training considers the theoretical models describing social-interactive problems (Denham et al., 2006); however, broadly speaking, most social skills training incorporate the following elements: reinforcement, shaping and modelling; coaching; and social problem solving (Gresham and Elliott, 1993). These elements will not be described in depth here, the reader is encouraged to consider the work of Denham et al. (2006); Gresham and Elliott (1993); and Oden (1986) for more detailed descriptions.

It is also important to examine any negative effects social skills training may have. Appello (1994) examined schizophrenic patients who had undergone social skills training and found in some cases the patients were confronted with not only skills-deficits, but with the loss of social relations, and the inability to maintain conversations. Therefore, this training imposed a lot of stress upon them. Appello (1994) also noted that during the social skills training the patients did not suffer from skills-deficits, but from social anxiety. Whilst this study was conducted on a small scale and the results were compiled from narrative accounts from the patients and researchers they are important points to acknowledge. McFalls (1982) stated that skills training should only be applied in case of a shared opinion regarding incompetence. This would support the notion of voluntary participation in any intervention.

After looking at studies describing the elements of social skills training and both positive and negative impact, this researcher feels that a key area of research that needs to be considered is how these skills can best be taught. It is recommended that the three methods of social skills training: reinforcement, shaping and modelling; coaching; and social problem solving (Gresham and Elliott, 1993) be used collaboratively (Denham et al., 2006). When working with children with emotional and behavioural difficulties, social skills training has

become a primary intervention (Rutherford et al., 1996). Zaragoza et al. (1991) suggested that despite the popularity of social skills training, only modest effects may be demonstrated when working with children with emotional and behavioural difficulties.

Considering the popularity of social skills training led the researcher to further question the evidence base surrounding the effectiveness and efficacy of social skills training packages. Quinn et al. (1999) also considered this and analysed social skills interventions, finding that targeted interventions that teach specific social skills have a greater effect than more global interventions. Quinn et al. (2006) looked at 35 studies, however all of these studies were based in the US and none were from the UK.

Studies by Denham et al. (2006) were conducted in the UK. They considered social skills interventions in the primary setting and found it a valid approach to promoting social inclusion. They also identified the effect the educational psychologist can have on its implementation and intervention. This study, however, did not employ a control group, so this researcher feels that causality of gains should be viewed with caution. Denham et al.'s (2006) study employed an educational psychologist as an implementer. The effect an implementer can have on an intervention is an interesting point. For example, if a researcher implements an intervention, it is important to consider the complexities involved in learning social competences and potentially how difficult it is for students to master these skills (Elksnin and Elksnin, 1998).

Another review of social skills studies conducted by Erwin (1994) concluded that social skills training produced significant improvements on pupils' levels of social interaction, socio-metric status and problem-solving skills. Erwin (1994) analysed 43 studies that utilised the methods described by Gresham and Elliott (1993). These methods are coaching, interpersonal cognitive problem solving, and modelling. However, no training technique produced a significantly greater improvement than either of the others.

When examining techniques Bierman and Furman (1984) found that having an opportunity to role-play situations and practice with classmates increases the chances of success of coaching programmes and reduces social rejection. The pupils that were involved in this study were identified as being disliked by their peers or deficient in conversation skills. The follow-up to this study indicated that some of the skills taught were not generalised into the classroom.

A consistent criticism of social skills training is that of generalisability, that is, the implementation of the skill used in other contexts (Furnham and Argyle, 1981; Gresham and Elliott, 1993). Gresham et al. (2001) also suggested that social skills training objectives should be focused on developing competencies on specifically identified areas of deficit.

Considering the evidence base described, it would seem that whilst social skills training is supported (Denham et al., 2006; Erwin, 1994), there are questions raised surrounding the mastery and generalisation of these skills (Gresham and Elliott, 1993; Elksnin and Elksnin, 1998). Another intervention method which is also used in schools is anger management training, this can be seen as stand alone or incorporated with social skills packages (Gansle, 2005). The following section will consider this method and the evidence base surrounding it.

#### **2.4.4 Anger Management Training**

Researchers have investigated the needs of children and young people with anger difficulties (Feindler, 1991; Goldstein, 1988). There has been a focus on the development of cognitive-behavioural interventions aimed at building skills to manage anger. A decrease in behaviours that are anger related is likely to increase students' opportunities to access education (Fesbach, 1983). Feindler and Ecton (1986) describe a typical anger management training course as including the following aspects:

- to give the participants information on the cognitive and behavioural components of anger;
- to teach cognitive and behavioural techniques to manage anger;
- to enable the facilitation of the skills that the participants have acquired.

The specific skills that are taught will incorporate self-instruction, self-evaluation, problem-solving and assertiveness. The key strategy used in anger management training is that the participants will learn to identify the triggers of anger, and then the rehearsal of self-statements will enable participants to think about a situation in a way that is less likely to induce anger (Beck and Fernandez, 1998).

Furthering the evidence base examining the strategies used in anger management training. Deffenbacher et al. (1996) found that pupils who received instruction on cognitive coping skills and social skills showed a reduction in inappropriate anger expressions and an increase in controlled anger expression. Nugent et al. (1997) also reported positive results when teaching techniques to manage anger. Gansle (2005) conducted a meta-analysis of studies of anger interventions based in a variety of settings, and found effects to be in the moderate range (Beck and Fernandez, 1998; Sukhodolsky et al., 2004). It must be acknowledged however that of the twenty articles reviewed by Gansle (2005) only two measured treatment integrity and only a small number of studies reported follow-up effects.

Similar to the research considering social skills training criticisms of anger management techniques focus largely on the maintenance of any beneficial effects (Feindler and Ecton, 1986; Nugent et al., 1997). With a particular focus on the lack of support to promote continued use of the skills learned. Kellner and Bry (1999) consider the difficulty children and young people may have in applying these skills in situations with peers or family. Again similar to social skills training, giving participants the opportunity to practise and role-play are common characteristics of an anger management intervention (Fernandez and Beck, 2001; Golden & Consorte, 1982).

After identifying triggers and practising responses, consideration must be given to the process by which an individual will change their behaviour. The overarching aim of the interventions described is to promote behavioural change. This led the researcher to acknowledge that in order to establish how

this change can be implemented and maintained, some consideration of change processes is required.

#### **2.4.5 Change processes**

Prochaska and DiClemente (1994) described a cycle of change model that was originally conceptualised with reference to stopping smoking. This model claims to be 'trans-theoretical' and applicable across many different types of intervention. It is also commonly referred to in relation to motivational interviewing, which is a strategic approach developed by Miller (1983). The cycle of change contains the following stages:

- *Pre-contemplation* – those who have only limited awareness of their problems, or refuse to recognise them, and see no reason to change.
- *Contemplation* – persons who have recognised some problem and are pondering what to do about it, but need help to decide on a course of action.
- *Determination*– those who have made up their minds on some course of action, but require assistance to make a definite choice from amongst a range of possibilities.
- *Action*– those who have embarked on a course of change and need help to get through the most difficult phases of early progress and the establishment of a new pattern of behaviour.
- *Maintenance*– individuals who have achieved some progress, but are not yet free of their problems, still experience a day-to-day struggle, and need support to avoid a relapse.

Questions may be raised relating to how the participants move through the cycle of change and at what point the participants may exit the change process. Prochaska and DiClemente (1994) suggest that the cycle can be exited at three points:

- *Exit 1* - Choosing not to change.
- *Exit 2* - Giving up trying.
- *Exit 3* - Achieving stable, successful change.

This describes a stage-based intervention. However Adams and White (2004) argue that these may not be effective due to the complexity of behaviour and the determinants of changing behaviour. Nevertheless this researcher feels that considering change in stages is a useful trans-theoretical tool in intervention planning.

#### **2.4.6 Summary - Cognitive Behavioural Approaches**

There are a number of paradigms that offer different psychological perspectives when describing behaviour. This literature review focuses on both cognitive and behavioural approaches. Other approaches that can be referred to are psychodynamic approaches that define children's behaviour problems as the 'outward and visible symptoms of internal and invisible conflict' (Dave, 1986, p.6), systemic approaches (for example, Miller, 1996) and biological-level influences (e.g., Rizzo and Zabel, 1988). These will not be described here, but should be considered alongside the literature described in this review

The review of the literature surrounding the methods of cognitive behavioural approaches enabled the researcher to investigate the theoretical underpinnings of specific elements of the 'Over to You' intervention.

Some of the key areas highlighted from the review are how consideration must be given to causality with an interactive model of social skills (Dodge et al., 1986). The research supporting the use of role-play to increase the internalisation of skills (Bierman and Furman, 1984) has also answered some questions relating to the suitability of some of the activities involved in the 'Over to You' intervention. For example the use of role-play.

Interesting issues to be discussed within the context of the findings of this research are those of generalisability (Furnham and Argyle, 1981; Gresham and Elliott, 1993) as well as the difficulties participants may have in gaining mastery of the skills taught (Elksnin and Elksnin, 1998). The review of anger management techniques raised questions about the maintenance of any beneficial effects (Feindler and Ecton, 1986; Nugent et al., 1997) and the support that may be required to promote the use of the skills learned.

Sukhodolsky et al. (2004) reviewed interventions based on cognitive-behavioural approaches and found that multimodal treatments and skills training were more effective in improving social skills and reducing aggressive behaviours. The 'Over to You' intervention is a multimodal intervention utilising elements from the theory and interventions described. Behavioural strategies, cognitive strategies, anger management training and social skills training are all incorporated within the intervention.

The intervention is aimed at promoting behavioural change, promoting inclusion, and developing social skills. This research considers that these social skills can be linked to emotional literacy as a target area for intervention. Part of the focus of this research is how the intervention affects emotional literacy.

The following part of the literature review will consider emotional literacy and the theoretical underpinnings of the concept, why emotional literacy is important, and research into emotional literacy in schools. In order to do this it is first necessary to examine what emotion actually is and what is the social function of emotion?

## **2.5 What is emotion?**

After reviewing the early literature the work of Schachter and Singer (1962) is relevant to this research. Schachter and Singer (1962) described emotion in two stages; the first is the perception of a stimulus, which creates a physiological response, and the second is the process of interpreting that response within a context. This will then lead to the cognitive act of labelling that response as an emotion, so the labelling of emotions depends upon the identification of the cause of physical change. Schachter and Singer (1962) claimed that, depending on the external context, the same physiological response may lead to the attribution of different emotions. The methodology of this work has been criticised as Schachter and Singer (1962) observed participants without consent and those who did participate were students who were offered extra credit for participation. Having said that the data analysis yielded significant results.

These early studies concentrated on the physiology of emotion. Questions have also been asked about what is the purpose of emotion, what role it plays in our existence, and what the social functions of emotion are.

Keltner and Haidt (2001) developed two theories to describe the social functions of emotion. This theory was developed to amalgamate two theoretical perspectives. The first theory Keltner and Haidt (2001) considered was the work of Ekman (1992), who stated that the function of emotion is to solve social problems. Emotions form a system that has evolved to combat threats to survival ('primordial' emotions). The second theory was that offered by Averill (1980), who took a social constructivists' viewpoint, believing that emotions are socially constructed and culturally specific ('elaborated' emotions).

Ekman (1992) also considered the findings of cross-cultural studies of emotions that do not occur in all cultures, as well as emotions that are common across cultures. From the work of Ekman (1992), we can conclude that culture has an impact on the emotions that are displayed and our interpretation of them can vary dependent on our background and expectations. This is a point to consider when implementing an intervention aimed at promoting emotional literacy and behavioural change. Is the intervention suitable to be used after considering the cultural norms of the society in which it is intended to be implemented?

Furthering research into the social function of emotion, Keltner and Haidt (2001) incorporated the social function of positive emotions into their research; traditionally research has been limited to the function of negative emotions (Bonanno and Mayne, 2001). They also stated that emotions serve social functions that promote adaptive behaviours. Research that considers positive emotion stems from the earlier work of Seligman, who developed positive psychology as a strategy to overcome 'learned helplessness.' By scientifically studying what has gone right rather than wrong in both individuals and societies, positive psychologists seek to nurture talents rather than treat and respond to difficulties (Seligman & Csikszentmihalyi, 2000).

Positive psychology is an interesting concept when considering both the content and the function of a targeted intervention. The meta-learning and the behavioural strategies employed within the mechanics of a targeted intervention should be considered in addition to thinking about the purpose of the intervention itself. From the literature reviewed the concept of emotion and the theories describing the social function of emotional seem to evolve into describing the constructs of emotional intelligence and emotional literacy. It is these constructs that will be further described and explored in the following section.

## **2.6 Emotional Intelligence and Emotional Literacy**

This section will consider the constructs of emotional intelligence and emotional literacy. It will first state definitions of the terms and a rationale for language use. Models of emotional intelligence (Goleman, 1995; Salovey and Sluyter, 1997) and emotional literacy (Faupel, 2003) will be described and discussed. This part of the literature review will then reflect upon the emerging body of research evidence.

### **Definitions**

#### ***Emotional Intelligence***

*The ability to perceive accurately, appraise and express emotion; the ability to access and/or generate feelings which facilitate thought; the ability to understand emotion and emotional knowledge; the ability to regulate emotions to promote emotional and intellectual growth.*

(Salovey and Sluyter, 1997:10)

#### ***Emotional Literacy***

*We prefer the term emotional literacy not only to avoid some of the negative associations of the word 'intelligence', but also because some aspects of emotional literacy relate to the concept of literacy as we normally use the word.....the first task of an emotionally literate person*

*is to be able to read and decode signs and symbols – physiological signs within ourselves and also facial expression, other non-verbal aspects of communication and the general ethos of personal situations.*

(Southampton Psychology Service, 2003, p.3)

The term 'emotional intelligence' is used predominantly in research and theories from the US. More recently, researchers have been using the term 'emotional literacy', which is more prevalent in work from the UK (Weare and Gray, 2003). Whilst the researcher acknowledges some differences between the terms, within this section of the literature review the terms 'emotional intelligence' and 'emotional literacy' will be true to the original authors' use; this is to aid the flow of the section. Reviewing the literature and considering the developing argument establishes this researcher's interpretation of the constructs.

## **2.6.2 Emotional Intelligence**

This section and section 2.6.3 describes the constructs, emotional intelligence and emotional literacy. Outlining the descriptions given by key researchers in the field of emotional intelligence (Goleman, 1995; Salovey and Sluyter, 1987) and emotional literacy (Steiner, 1997; Faupel, 2003). Section 2.6.4 will then describe the evidence base considering the research looking at whether the constructs can be developed and measured, as well as the debate surrounding the differences between them.

'Emotional intelligence' was a term popularised by those whose definition focused on its cognitive and behavioural aspects. In earlier work, the term 'emotional intelligence' appeared within academic literature; however, limited attention was given to defining it (Greenspan, 1979, Leuner, 1966; Payne, 1986). Greenspan (1979) referred to emotional intelligence as a Piagetian stage of development.

Salovey and Mayer (1990) also described the concept of 'social intelligence', which they characterised as the understanding of group dynamics, social status, political relationships, interpersonal activities and leadership. Expanding on this work, Gardner et al. (1995) stated that the construct that is emotional

intelligence incorporates more factors than previously described, including conventional intelligence, personal intelligences and intrapersonal and interpersonal intelligences.

The construct of emotional intelligence was further outlined by Goleman (1995), who claimed that emotional intelligence mattered more than IQ as a predictor of success. Goleman (1995) defined emotional intelligence as:

- knowing one's own emotions;
- managing emotions;
- motivating oneself;
- recognising emotions in others;
- handling relationships.

Although Goleman's theories have been influential, they have not gone without criticism. Several critics, including Salovey and Sluyter (1997) have claimed, among other things, that Goleman's research was not sufficiently rigorous.

Salovey and Sluyter (1997) developed a four tiered model of emotional intelligence with each tier organised in increasingly psychological complexity. The model is outlined in Table 2.2.

The model describes emotional intelligence as containing four different elements:

- reflective regulation of emotions to promote emotional and intellectual growth;
- understanding and analysing emotions: employing emotional knowledge;
- emotional facilitation of thinking;
- perception, appraisal, and expression of emotion.

**Table 2.2** The four tiered model of emotional intelligence as described by Salovey and Sluyter (1987).

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
<b>EMOTIONAL INTELLIGENCE</b>	<b>Reflective regulation of emotions to promote emotional and intellectual growth</b>			
	Ability to stay open to feelings, both those that are pleasant and those that are unpleasant	Ability to reflectively engage or detach from an emotion depending upon its judged informativeness or utility	Ability to reflectively monitor emotions in relation to oneself and others, such as recognising how clear, typical, influential or reasonable they are	Ability to manage emotion in oneself and others by moderating negative emotions and enhancing pleasant ones without repressing or exaggerating information they may convey
	<b>Understanding and analysing emotions: employing emotional knowledge</b>			
	Ability to label emotions and recognise relations among the words and the emotions themselves, such as the relation between liking and loving	Ability to interpret the meanings that emotions convey regarding relationships, such as that sadness often accompanies a loss	Ability to understand complex feelings – simultaneous feelings of love and hate, or blends such as awe as a combination of fear and surprise	Ability to recognise likely transitions among emotions, such as the transition from anger to satisfaction, or from anger to shame
	<b>Emotional facilitation of thinking</b>			
	Emotions prioritise thinking by directing attention to important information	Emotions are sufficiently vivid and available that they can be generated as aids to judgement and memory concerning feelings	Emotional mood swings change the individual's perspective from optimistic to pessimistic, encouraging consideration of multiple points of view	Emotional states differentially encourage specific problem approaches, such as when happiness facilitates inductive reasoning and creativity
	<b>Perception, appraisal and expression of emotion</b>			
	Ability to identify emotion in one's physical states, feelings and thoughts	Ability to identify emotions in other people, design, artwork etc. through language, sound, appearance and behaviour	Ability to express emotions accurately and to express needs related to those feelings	Ability to discriminate between accurate and inaccurate, or honest versus dishonest expression of feeling

These elements are not dissimilar to those described by Goleman (1995), but they employ more complex language in their descriptions. As discussed above, within each of these elements in the model described by Salovey and Sluyter (1997), the four levels that are outlined move through increasingly complex psychological actions; this can be best demonstrated when looking at the element describing perception, appraisal and expression of emotion. A person who is seen to be at level four can discriminate between accurate and inaccurate, or honest versus dishonest expressions of feeling; this is seen as being more complex than level one – the ability to identify emotion in one's physical states, feelings and thoughts.

This researcher feels that caution should be employed when attempting to describe emotion in such a linear fashion. As highlighted earlier, a number of factors may well impinge upon this; factors such as learning ability, environment factors, and cultural implications may all have a bearing on the outcome of a person's emotional intelligence when analysed using such a model.

As this research was conducted in the UK, it is important to explore how emotional intelligence is interpreted in the setting in which the research was carried out. As mentioned earlier, the use of the term 'emotional intelligence' is historically more prevalent in the USA while in the UK, Weare and Gray (2003) concluded that terms such as 'emotional literacy' were preferred by practitioners and were more commonly used. The next section will discuss and describe this in more detail.

### **2.6.3 Emotional Literacy**

Burton and Shotton (2004) state that the term 'emotional literacy' is preferable to that of 'emotional intelligence', as emotional literacy does not have the connotations of fixed levels of ability.

Emotional literacy has been defined as follows:

*...the ability to understand your emotions, the ability to listen to others and empathise with their emotions, and the ability to express emotions productively.*

(Steiner, 1997)

Whilst 'emotional literacy' may not have the negative connotations associated with 'emotional intelligence', and the concept of 'emotional literacy' is not one of a fixed ability, the research and theory pertaining to 'emotional intelligence' is relevant in this case, as the construct of 'emotional intelligence' incorporates those aptitudes described in 'emotional literacy' when defined as follows:

*Emotional literacy may be defined as the ability to recognise, understand, handle, and appropriately express emotions.*

Sharp (2001:1)

These definitions seem to be describing emotional literacy as more of a social construction than does the more individualistic definition of emotional intelligence.

The idea of emotional literacy being a social construction is furthered in the work of Faupel (2003), who devised and standardised a checklist to measure emotional literacy; the measure makes a distinction between personal competence and social competence. This instrument was used as a measure of impact in this research and will be fully discussed and described in the methodology section.

However, the constructs emotional intelligence and emotional literacy are still very much linked, as the checklist was based on Goleman's (1995) classification of the knowledge skills and competences that contribute to emotional intelligence. These are shown in Table 2.3. These competencies will now be briefly described, as they are skills that the 'Over to You' intervention aims to develop using the cognitive behavioural methods described in earlier sections.

**Table 2.3** *The distinction between personal and social competences (Faupel, 2003).*

<b>Emotional Literacy</b>	
<b>Personal Competence</b>	<b>Social Competence</b>
Self-awareness	Empathy
Self-regulation	Social skills
Motivation	

### **Personal Competence**

#### *Self-awareness*

Self-awareness is the foundation on which the rest of emotional literacy depends; it is the ability to recognise and understand our own emotions. Being able to label and name emotions enables us to recognise our emotions, which in turn allows us to be emotionally self-aware (Faupel, 2003).

#### *Self-regulation*

Self-regulation is the ability to control the powerful and physiological impulses that Goleman (1996) described as 'emotional hijacking'. Being able to understand and regulate these impulses allows appropriate expression of emotion, strengthening our sense of value in ourselves and in others.

Kanfer and Schefft (1988) described self-regulation in three stages: self-monitoring (or self-observation), self-evaluation, and self-reinforcement. They stated that after the establishment of these processes, an individual will have a reduced reliance on both external sources and environmental factors as behavioural motivators.

## *Motivation*

Motivation can be described as our choice of goals and our determination to reach these goals. Pupils who enjoy learning can be seen as intrinsically motivated; however, the distinction between intrinsic and extrinsic motivation can be unclear (Faupel, 2003). This is a point that must be acknowledged when delivering an intervention aimed in part at developing motivation skills. Can these skills be developed through teaching or is it an intrinsic competency?

Dweck (1999) found that children can acquire two different views about themselves in relation to their learning. One view is that their ability is fixed, and the other is that ability can be developed with theory and practice; this view would support motivational development. McNamara (1998) concludes that motivation is a term used to summarise the effect of all factors, both internal and external, that may influence behaviour. In schools, behaviour may be partially under self-control (internal regulation) and teacher control (external regulation).

## **Social Competence**

### *Empathy*

Being able to understand the people around us and understand what they do affects the type and quality of our relationships and the types of emotions and emotional stresses we experience. Being able to attend and listen to the messages others are giving us are the foundations of empathy (Faupel, 2003).

### *Social skills*

There is no fixed definition of 'social skills'; however, the following show the progression of definition over time:

*Social skills refer to children's ability to organise cognitions and behaviours into an integrated course of action directed towards culturally*

*acceptable social or interpersonal goals. Also included is the propensity to continuously assess and modify goal directed behaviours so as to maximise the likelihood of reaching one's goals.*

(Ladd and Mize, 1983)

*On a general level social skills might be defined as socially acceptable behaviours that enable a person to interact effectively with others and avoid socially unacceptable responses from others.*

(Gresham and Elliott, 1993)

To further this review, the researcher will now consider the research surrounding emotional literacy and emotional intelligence, describing some of the debate and criticisms surrounding the constructs and consider the construct that is most relevant to this research.

#### **2.6.4 Emotional Intelligence and Emotional Literacy - Research and Debate.**

Although the concept of emotional literacy (EL) (or emotional intelligence (EI) as it is referred to in most US studies) has become common place and popularised by the press, the body of research in the area is limited and the research that exists has attracted a great deal of criticism to the concept (Petrides et al., 2004; Matthews et al., 2004; Mayer et al., 2004). In contrast, Zeidner et al. (2004) stated that as it is a new construct, the body of research and evidence is in its preliminary stages and will develop over time.

The criticisms of EI focus on two main aspects: the lack of empirical evidence and inconsistency in the definition of the construct. Woodruffe (2001), who questioned the popularity of the concept of emotional intelligence in both the education and business worlds, claimed it was neither proven nor new. This claim was rebutted by researchers in the field (Goleman, 2001; Dulewicz and Higgs, 2001).

Researchers who have considered the concept of EI have come to differing conclusions; Mayer et al. (1999) viewed the construct as an ability, whilst

Goleman (1998) viewed it as competencies based. Mayer et al. (2004) also argued that as the construct is so early in its development, differing definitions and interpretations of the construct are inevitable at this stage and more concrete definitions will be developed over time.

Some further definitions have been offered. Petrides and Furnham (2001) have defined two emerging constructs within the field of EI as 'trait EI' and 'ability EI', arguing that many of the definition discrepancies can be allayed when using the two constructs.

Mayer et al. (2004) defined the 'ability' model of EI as an ability or competency to perceive and identify correctly one's own emotions in addition to the emotions of others. Having this knowledge allows the generation of informed, socially appropriate and desirable responses. They described 'ability' EI as a trait that can be taught through training and measured in terms of competencies.

'Trait' EI has been found to correlate with personality traits (Brackett et al., 2004; Caruso et al., 2002; Conte, 2005), which are generally considered to be 'relatively enduring styles of thinking, feeling, and acting' (McCrae and Costa, 1997). 'Trait' EI is generally measured via self-reports that are designed to measure emotional abilities and positive social behaviours such as the Emotional Quotient Inventory (EQ-I; Bar-on, 1997).

Considering the developing evidence-base and theoretical debate, this researcher views the constructs of emotional intelligence and emotional literacy as abilities that can be developed. This leads to questions about what is the evidence-base to show this development. This is pertinent to this research, which investigates the impact the 'Over to You' intervention has on emotional literacy. So considering whether the construct can be developed is a key point.

The evidence in this area would suggest that EI is a developable trait or competency (Goleman, 1996; Steiner, 1997; Hopfl and Linstead, 1997; Cooper, 1997; Martinez, 1997). However, there are differing views on the extent to which it can be developed (Higgs and Dulewicz, 1999).

Dulewicz et al. (2003) conducted a study looking at changes in EQ-i scores for participants who had attended a course promoting EI. They found improvements in areas defined as self-awareness, motivation, interpersonal sensitivity and conscientiousness. These areas can be conceptually linked to the areas of emotional literacy described by Faupel (2003) in section 2.6.3 and it is these areas that are measured in this research.

When considering the implementation of an intervention aimed at promoting emotional literacy, it is also necessary to consider what stage of development is most amenable to change. Goleman (1996) raised some questions about the capacity for development later in life. The evidence would suggest that childhood is the most receptive time for change (Goleman, 1996; Salovey and Mayer, 1990). This would support carrying out an intervention in an educational setting.

After establishing evidence supporting the development of the construct, the next question is how this development can be measured. Matthews et al. (2004) published an overview of the reflections upon the construct of EI, and found that different models of EI with different definitions have led to the development of a range of assessment tools measuring different clusters of abilities. Considering the range of assessment tools further, Brody (2004) stated that, as many of the abilities defined are closely linked to personality traits, they may not relate to an intelligence of the emotions. In order to further enhance assessment tool development, Matthews et al. (2004) concluded that further research is required to develop clarity and consistency surrounding the construct of emotional intelligence.

An example of a tool to measure EI is the Emotional Competency Inventory (ECI). This is based on Goleman's model and assesses competencies in four clusters: self-awareness, self-management, social awareness, and relationship management. Also based on Goleman's model is the Nfer Nelson Emotional Literacy Checklist (Faupel 2003) developed by Southampton EPS; this is a self-report measure that assesses self-regulation, self-awareness; motivation,

empathy, and social skills. This measure is increasingly popular in the UK, and it is this measure that was used in this research.

### **2.6.5 Summary - Emotional Intelligence and Emotional Literacy - Research and Debate.**

As the literature shows, there is clearly debate across the entire field; questions have arisen regarding the concept of EI, about the terminology used to describe it, and about the tools that are used to measure it (Dulewicz and Higgs, 2004).

The theories reviewed above indicate that the models (Goleman, 1995; Salovey and Sluyter, 1997; Faupel, 2003) have some cohesion in their description of the components of emotional literacy. However, inconsistencies in the definition of the construct are still the prevailing issue for practitioners and researchers. The lack of empirical evidence is another key issue with the emerging research in this field.

Research indicates that social and emotional skills are associated with success in many areas of life, including effective teaching, student learning, quality relationships, and academic performance (Brackett et al., 2004; Mayer et al., 2004; Sutton and Wheatley, 2003). Education can be seen to have become broader and to incorporate the teaching of social and emotional skills (Greenberg et al., 2003). It is a combination of both social and emotional skills that this researcher would describe as emotional literacy.

For the purposes of this research, emotional literacy is seen as incorporating emotional intelligence as one of the range of abilities that make up emotional literacy. Emotional literacy takes on a broader perspective that considers both personal and social competencies.

This section has briefly critiqued some of the principal components of research in the relevant areas. This has highlighted an area that requires further exploration in the context relevant to this research. The following section discusses why emotional literacy matters and explores the research pertinent to emotional literacy in education.

## 2.7 Emotional Literacy in Education

The researcher felt it was necessary to consider what studies and research have been carried out in the field of education. The publication of the Every Child Matters Framework (DfES, 2004) and the incorporation of emotional health and well-being as a key factor of a child's education led to government backed initiatives to promote emotional development. Emotional health and well-being can be defined as:

*Emotional and spiritual resilience that enables us to enjoy life, survive pain, disruption and sadness and cope successfully with change. It is a positive sense of well-being and an underlying belief in our own dignity and worth.*

(MIND 1998)

Sharp (2001) commented on the over-emphasis on and growing disenchantment with IQ and cognitive skills, stating that education should be reconsidered from a more holistic viewpoint.

Greenberg et al. (2003) viewed education holistically and claimed that high-quality education should enable young people to develop skills facilitating their ability to act in socially skilful and respectful ways, and to develop positive, safe, and healthy behaviours. A person who demonstrates a high level of emotional literacy will have the capacity to reflect upon their interactions with others, be able to manage setbacks and challenges, and be aware of how their responses can influence others. A co-ordinated programme of academic, social and emotional learning is seen as vital to allow this. Rowling (2005) viewed emotional literacy as an important part of mental health, which considers capacity building and sustainability.

Traditionally, academic success has been linked to cognitive processes and personality factors. Humphrey et al. (2007) stated that cognitive and emotional processing cannot be separated. Therefore, when considering rational thought, it is necessary to consider emotional processing. Historically, questioning predictors for academic success has been on researchers' agendas. Using this

research is crucial for developing educational interventions and identifying pupils that may need additional assistance to achieve academically. With the spotlight increasingly being shone on the predictive validity of EL, a developing body of research is being published in this area.

If the developing body of research supports the predictive validity of EL on academic success, then interventions that aim to promote EL, such as the intervention used in this study, may also be seen as promoting academic success. However, studies in the US have provided conflicting evidence. Zeidner et al. (2002) criticised Goleman's (1995) claims that emotional intelligence can predict academic success better than can traditional measures of intelligence, stating that there is currently insufficient research to justify those claims.

Poulou (2005) found that teachers believed that developing students' emotional literacy would promote more positive behaviour in schools. This is also an area that would benefit from further investigation, as there seems little evidence to support this belief. This research aims to do this by considering teacher perceptions of participants' emotional literacy and behaviour.

### **2.7.1 Summary - Emotional Literacy in Education**

After looking at why emotional literacy matters and emotional literacy in education, questions as to why such importance has been placed on developing emotional literacy in schools are extremely important given the evidence base, which can be seen to be sparse (Humphrey et al., 2007).

National strategies, such as the Social and Emotional Aspects of Learning (SEAL) intervention, which is a whole-school approach to promoting social and emotional skills, claim to promote effective learning, positive behaviour, regular attendance and emotional well-being (Department for Education and Skills, 2005). Within the systematic review of group interventions, the evidence base measuring the impact of such interventions will be explored further.

Within the context of this research, measuring the impact the group intervention has on emotional literacy will expand the evidence base and allow future practitioners to assess how emotional literacy is linked to academic success and behavioural change.

Before moving on to the systematic literature review of group interventions, the author will briefly acknowledge and consider some of the relevant theory pertaining to group work and consider some research on group interventions.

## **2.8 Groups, and group work in education**

When implementing a group intervention, it is necessary to consider the historical and theoretical underpinnings that relate to groups. This will not be described in great detail here and the reader is directed to the work of Hare (1962) and Jex and Britt (2008) for further information. However, the researcher feels that it is necessary to provide a brief overview describing what a group is, evidence supporting group work in schools, and group work promoting emotional and behavioural change.

### **2.8.1 What is a group?**

Lewin (1948) looked at different aspects of the group process. He found that nearly all groups were based on interdependence among their members. He stated, "It is not similarity or dissimilarity of individuals that constitutes a group, but interdependence of fate" (Lewin, 1948, p.165). Forsyth (2006) defined groups as the bringing together of three elements: the number of individuals involved, connection, and relationship. One of the simplest and most relevant definitions of 'group' was provided by Brown (1988), who stated:

*A group exists when two or more people define themselves as members of it and when its existence is recognised by at least one other.*

(Brown (1988, p.2)

When implementing a group intervention it is also necessary to have an awareness of the benefits and possible issues around the running of a group. This point is relevant to this research, as the intervention was to be delivered to

groups of children. Questions regarding the effectiveness of group work, and the benefits and difficulties of group work in schools are relevant to this research. The following section will consider the evidence supporting working with groups in schools.

### **2.8.2 Group Work in Schools**

After considering the theoretical underpinning around groups, the researcher considered the evidence supporting working with groups in schools. Dodge (1983) published a model of Social Exchange that suggested that a student's behaviour will have an impact on his peers' perceptions and judgements about him. This will eventually have an impact on his understanding of his behaviour and his actual behaviour towards himself and his peers. For this research, participants in the intervention had the opportunity to implement their newly acquired skills in the group and in the wider classroom context. According to Dodge (1983), the likelihood of success is increased by involving peers who have also participated in the intervention. However,

Dodge's (1983) work only offered observational analysis. It did not employ a control group which could have enhanced this piece of work. The study used in this research does employ a control group, and as the participants are in the same year group, this study may provide evidence furthering Dodge's (1983) work considering the impact of peer relationships.

The generalisation of the skills taught is an issue that was raised earlier in the literature review. Being a member of a group may provide 'naturally occurring communities of reinforcers' (Maag and Kotlash, 1994), which may increase the possibility of the generalisation of newly acquired skills.

Another consideration for the researcher was whether to run the intervention in the school setting or elsewhere. Coppick and Dwivedi (1993) found that groups in school provide both opportunities for the improvement of the mental health of pupils with emotional and behavioural difficulties and a minimisation of the stress that arises from attending a clinic in an unfamiliar setting. This supported the researcher's decision to conduct the intervention in the school setting.

Future considerations for expanding the intervention to the whole school level would be in keeping with emergent evidence in the literature linking the effectiveness of targeted interventions with provision at the whole school level (Adi et al., 2007). However at this point, it is necessary to focus on the literature relating group work and interventions that promote emotional and behavioural change.

### **2.8.3 Group Work Promoting Emotional and Behavioural Change**

For educational psychologists to be effective practitioners, it is important they have a clear understanding of the evidence base around these interventions. For example, is there any evidence showing that these interventions can improve young peoples' behaviour in school? In order to ensure that any intervention an educational psychologist may suggest is appropriate, it is crucial to be clear on whether the intervention can stand scientific rigour and is not just a popular choice at the time.

The subsequent section 2.9 will provide a systematic search of the literature surrounding targeted group intervention studies. These studies utilise experimental and control groups and offer pre/post test measures. The purpose of this section is to offer a broader overview of some examples of studies that investigate group interventions, without the constraints of the systematic search criteria.

When looking at research outside the educational setting, there is support for small group work, in particular using small group work to develop cognitive behavioural approaches (for example, Harrington et al., (2007); King et al., 1999; Lindsay, 1999). The reader is directed to the listed authors, as this research will not be discussed further here. When investigating small group work in a school setting, Squires (2001) demonstrated some success with small groups using cognitive behavioural approaches.

Squires (2002) compared group work to individual work and concluded that group work can help participants to see that they are not the only ones who can feel a certain way, and this can help normalise feelings. A group can also

demonstrate different ways of acting and offer alternative viewpoints. Working in a group can also allow for peer support, which can be present both within the group and outside of the group sessions. Squires (2002) identified the conditions needed for successful group interventions as follows:

- The client and therapist to work in partnership in exploring issues.
- Unconditional positive regard towards the client.
- Confidentiality.
- Non-judgemental.
- Therapist to show empathy, genuineness and warmth.

As the researcher in this study is delivering the intervention, it will be important to consider the conditions outlined above in order to promote its successful implementation.

After examining the conditions needed for successful group interventions it is important to examine the evidence base considering whether group interventions are effective. There are a number of studies that have investigated the impact of group work on emotional and behavioural change. For example, Canham and Emanuel (2000) ran a psychoanalytical psychotherapy group for six children. The children were aged between 4 – 8 years old and the aim of the group was to chart the children's relationship to the group leaders. Positive outcomes were reported for most of the children who received the treatment.

Another example of a group intervention is the work of Titherage and Turpin (2001), who spent two terms in a school working with children aged 8 – 9 years old in a group of five. The aim of this group was to help children develop more successful conflict-management strategies. The group leader used art activities to observe and comment upon the group dynamics. The results of this study found there was an increase in the self-esteem score for the group and the pupils involved reported that they found participating in the group enjoyable.

Although studies were on a relatively small scale, they still offer evidence supporting the implementation of group interventions in schools. As developing conflict-management strategies and promoting emotional and behavioural

change are key aims of the intervention used in this research, the studies also offer some support to the evidence base for the 'Over to You' intervention. After considering studies such as these, the researcher wanted to discover what other studies and reviews had been carried out.

On a larger scale than the above examples, the National Institute for Health and Clinical Excellence (NICE) was asked by the Department of Health (DH) in August 2006 to develop guidance for schools aimed at promoting good mental health among children. Shucksmith et al. (2007) conducted an independent systematic review of targeted interventions. This review covered a broad remit and was aimed at the primary phase, and predominantly at research from the US. It reviewed intervention work with both children at risk of, and children already displaying mental health problems. This review offered some interesting conclusions that are pertinent to this research. They concluded that:

- The interventions with the most effective content were those that offered a mix of cognitive-behavioural therapy (CBT), social skills training, attribution training, and training of parents and teachers in reinforcement and discipline.
- Most interventions offer weekly sessions; while this review mainly considered long-term interventions of over 1 year, it provided some evidence to support brief interventions (8-10 weeks).
- School staff are rarely utilised other than to rate pupil's behaviours. The interventions are typically delivered by psychologists.

These conclusions will be further reflected upon when describing the rationale for this research.

#### **2.8.4 Summary – Groups, and group work in education**

This brief overview of groups and group works in schools considers some of the benefits of their use, such as increased opportunities for generalisation (Maag and Kotlash, 1994) of group work, in addition to some of the issues found when delivering group work, such as student behaviour and peer perception (Dodge, 1983).

In order to develop this knowledge and avoid repetition, this issue will not be further expanded upon here, but will lead the reader into the systematic review of group interventions. It is necessary to conduct a systematic review of the research literature, comprehensively investigating studies and articles that provide the evidence base from which educational psychologists can draw information.

## **2.9 Search Strategy for Systematic Review of Group Intervention Studies**

This systematic review uses the systematic review stages designed by Pettigrew and Roberts (2006) and described in the Table 2.4.

**Table 2.4** *The systematic review stages described by Pettigrew and Roberts (2006).*

1. Clearly define the review question in consultation with anticipated users.
2. Determine the types of studies needed to answer the question.
3. Carry out a comprehensive literature search to locate these studies.
4. Screen the studies found using inclusion criteria to identify studies for in depth review.
5. Describe the included studies to 'map' the field, and critically appraise them for quality and relevance.
6. Synthesise studies' findings.
7. Communicate outcomes of the review.

The electronic databases searched were UNLOC, PsycINFO, ASSIA, ISI Web of Knowledge, and ERIC. The databases were searched for the terms shown in Table 2.5.

**Table 2.5** *The terms searched for in the electronic databases*

<b>Target population terms</b>	School-age / secondary school / child / pupil
<b>Outcome terms</b>	Emotional literacy / self-regulation / self-awareness / anger / behaviour / EBD / BESD / social skills
<b>Intervention terms</b>	Small group / targeted intervention / cognitive behavioural / school exclusion / experimental design

### **Inclusion criteria**

In order to be considered for this review, studies had to meet the following inclusion criteria:

- Participants - Secondary school-age children.
- Settings - School, any country.
- Intervention - A group intervention in school aimed at changing behaviour; emotional literacy and/or preventing school exclusion; using cognitive behavioural approaches.
- Study design - Experimental design with control / experimental group. Pre/post test measures.

The abstracts of the articles returned by the systematic search were reviewed. Those that met the criteria were included in the systematic literature review of group intervention studies found in section 2.10.

The rationale for conducting a systematic literature review to consider only pre/post test studies is the evidence-based focus that this research has taken. In order to position this research within the evidence base, it is necessary to identify specific studies that meet the inclusion criteria and offer an experimental design methodology. The review will also acknowledge other broader systematic reviews.

## **2.10 Systematic Review of Group Intervention Studies**

A systematic literature review was conducted of group intervention studies. The purpose of the review was to identify studies that investigated group interventions with the aim of improving emotional and behavioural development. To be included within this review, the study had to be based on a pre/post test experimental design.

A further layer of this review considered interventions that met the inclusion criteria and aimed to prevent school exclusion, and interventions that met the inclusion criteria and used cognitive behavioural approaches within the intervention.

A limitation of this review is that of the 'file drawer problem' (Rosenthal, 1979), which suggests that studies that demonstrate significant gains are those that are most likely to be considered for publication, and ultimately are the ones published within the field.

### **Other systematic reviews**

This section will briefly identify other systematic reviews that have looked at school-based interventions and cognitive-behavioural approaches. This is not intended to be a review of all the published reviews, but aims to direct the reader to additional publications and highlight areas investigated.

Five reviews were found that reviewed cognitive behavioural interventions with children and young people (Cartwright-Hatton et al., 2004; Curry, 2001; Compton et al., 2004; James et al., 2005; and Kavanagh et al., 2009). Only one of these were school based (Kavanagh et al., 2009). Further investigations of published reviews identified another six reviews of school-based interventions, which judged the reviewed interventions to be effective, with a variation in their recommendations (Durlak and Well, 1998; Durlak and Wells, 1997; Harden et al., 2001; Hoagwood and Erwin, 1997; Merry et al., 2004; Wells et al., 2003). However, none of these reviews focused solely on secondary schools.

The review most relevant to this research is that of Kavanagh et al. (2009), who conducted a systematic review of secondary school-based cognitive behavioural interventions. They identified 17 studies and found that CBT delivered to young people in secondary schools can reduce the symptoms of depression and anxiety. This very recent review was unable to identify any evidence that assessed the impact of CBT on behaviour; the authors considered sample size within their criteria for the review.

The following section will describe a summary account of each of the studies that were reviewed in this systematic literature search. The review is divided into sections:

- Behavioural change and preventing school exclusion;
- Cognitive behavioural approaches;
- Research on improving Emotional Literacy.

A brief outline of the methodologies will be described, along with a section describing the findings and limitations of each study. A summary of the articles reviewed can be found in Table 2.6. A chart showing the flow of literature can be found in Appendix 2.1.



### **2.10.1 Behavioural Change and Preventing School Exclusion**

Whilst there seems to be a number of studies reviewing targeted interventions, there seems to be very little research that has attempted to measure their effects in terms of school exclusions. After the abstracts of the four articles had been reviewed (Hawken and Horner, 2003; Panayiotopoulos et al., 2007; Burton, 2006; Bagley and Pritchard, 1998), they were all deemed suitable for inclusion in this review, as they were all research studies with pre and post-test measures. Two articles were included as they measured the number of problem behaviours displayed by pupils who had been identified as at risk of exclusion. Three of the studies actually measured exclusion rates or days excluded from school. An outline of the studies can be found in Table 2.5. The methodologies of the studies will be outlined below along with a section describing the findings and limitations of each study.

#### **Methodologies**

Panayiotopoulos et al.'s (2007) study was conducted over a two-year period. A randomised controlled trial was used; 124 participants were selected randomly from 239 cases of primary children who were being excluded from school in Greater Manchester. The intervention group received a multidisciplinary team intervention of specialist support. Data were collected at three assessment points by using three clinical measures and one semi-structured interview schedule: Strengths and Difficulties Questionnaire (SDQ), Health of the Nation Outcome Scale for Children and Adolescents, General Health Questionnaire (GHQ), and Excluded and Suspended Children Interview Schedule .

The only other pre/post-test control trial was conducted by Bagley and Pritchard (1998). One secondary and one primary school were compared with two control schools (one primary and one secondary) over three years. Pre and post-test measures were collected on the following variables: socio-economic status and demographic background factors, delinquent or deviant behaviours, and school exclusions.

The staff members worked directly and intensively with troubled children

referred by teachers, supported teachers, counselled children and visited families, ensuring the maximum interagency coordination. The staff members worked with children who were being considered for exclusion, working with the child and family trying to reduce negative behaviour, and introducing scholastic and behaviour modification programmes in the classroom.

Using a pre/post test opportunity sample, Burton (2006) collected data from five year 8 pupils: the school staff selected two girls and three boys, as they were frequently in trouble as a result of their behaviour in school. The pupils took part in the 'Over to You' programme throughout a six-session course. The course was delivered by an Educational Psychologist and consisted of group sessions that aimed to have the participants reflect on personal strengths and difficulties, set and work towards their own personal targets, increase awareness of how their thinking may affect their feelings and behaviour, recognise the impact of their communication styles on others, and practise using assertive strategies for resolving conflicts.

Finally, Hawken and Horner (2003) conducted the study in a rural middle school in the USA. Six students were selected for participation, and four produced full datasets for analysis. The students were selected for participation if they had received at least five office discipline referrals, were not already receiving individualised behaviour support, and were nominated by instructional staff to receive additional behaviour support.

The participants took part in the Behaviour Education Program This study provides a fine-grained analysis using a multiple baseline across students design with the targeted intervention as the independent variable, and both classroom problem behaviour and academic engagement as dependent variables.

### **Findings and limitations**

Panayiotopoulos et al. (2007) found that the index group showed a reduction in the number of excluded days between the two phases, while the control had a

slight increase on the same variable. Despite the fact that this result did not reach statistical significance, it could be argued that in clinical terms this multidisciplinary intervention had a better outcome in relation to the primary hypothesis.

The cases that complied with this new multidisciplinary intervention had significantly better results than the control group. The impact of the intervention compared with the routine treatment was measured as significant by parents and other agencies. Although there was no improvement with statistical significance, the authors felt that study supported early intervention and inter-agency collaboration. They stated that long-term problems need long-term intervention rather than short-term solutions.

This study considered a large sample and used a control group; however, due to the lack of significance achieved with the results, drawing any inferences from this work should be done with caution.

Measuring exclusion on a whole school level was done by Bagley and Pritchard (1998). Their results were measured by looking at students transferred in with learning or behavioural difficulties, students excluded, and net gain/loss in retaining 'difficult students'. The primary project school did not exclude any students over the course of the project; however, the secondary school excluded one more student than the control school did. Both of the experimental schools were able to accept many more 'difficult students'.

The authors stated that a good school can be seen as one in which new pupils can be accepted despite the challenges they present. Overall, this study did not show any significant differences between the schools when it came to exclusion rates. This study was a longitudinal study conducted over three years; because of the timescales, ensuring treatment fidelity was difficult because staff were not adhering to a specific frame of work.

On a much smaller scale is the work of Burton (2006), who found all of the pupils increased their self-rating scores, and all the cumulative teacher ratings

increased. After seven months, the pupils had maintained behavioural improvements and none of them had been excluded from school. The purpose of the course was to assist young people at risk of exclusion to reflect on and change their behaviour. In this study, the pupils reduced their conflicts with teachers and successfully avoided exclusion.

This study was conducted on a small scale as a pilot for the 'Over to You' intervention. There are a number of limitations to the scope of this research. The sample size was small, as only five pupils took part; the sample group was selected by school staff; and there was no control group comparison. This raises questions about the internal validity of the findings. In the current research, the researcher endeavours to address these limitations and conduct an evaluation of the 'Over to You' intervention on a larger scale. This will be discussed in detail in the following chapter.

Another small study reviewed was by Hawken and Horner (2003); their results suggest a reduction in the variability of problem behaviour coupled with some decrease in the level of problem behaviour. While overall levels of problem behaviour were reduced following the intervention, the larger effect was that students became more consistent in participating in class without problem behaviour.

As the results were not tested for statistical significance, it is difficult to interpret the results scientifically. In addition, the sample was very small; only four full datasets were analysed. The multiple baseline analysis documents a modest functional relationship between the implementation of the intervention and the reduction in problem behaviour. However, the results do demonstrate that the Behaviour Education Program is a simple, cost-efficient system that increases the prompts for appropriate behaviour and increases the likelihood of contingent adult praise improving the pattern of problem behaviour.

### **2.10.2 Summary - Behavioural Change and Preventing School Exclusion**

Four articles were reviewed that met the inclusion criteria pertaining to group interventions targeting behavioural change and preventing school exclusion.

Two utilised pre/post-test control trials (Panayiotopoulos et al., 2007; Bagley and Prichard, 1998), and two smaller studies used pre/post opportunity samples (Burton, 2006) and a multiple baseline design with an opportunity sample (Hawken and Horner, 2003). Of the studies, only the work of Burton (2006) identified statistically significant results. The studies demonstrate a number of limitations described within the section; lack of randomisation in all but one study (Panayiotopoulos et al., 2007) creates issues relating to validity.

### **2.10.3 Cognitive Behavioural Approaches**

The systematic search returned eight articles that met the inclusion criteria (Burton, 2006; Humphrey and Brooks, 2006; Wignall, 2006; Robinson et al., 2002; Squires 2001; Dwivedi and Gupta, 2000; Kellner and Bry, 1999; DeAnda, 1999). There seems to be a number of studies examining the effectiveness of cognitive-behavioural group interventions in settings other than schools; however, they will not be discussed here. After reviewing the abstracts of the studies, six were identified as being pre/post opportunity sample designs, three of which were conducted in the UK, and two were treatment and control experimental designs; neither of these were conducted in the UK. The study by Burton (2006) was described in the previous section looking at studies promoting behavioural change. Again, an outline of the studies can be found in Table 2.5. The methodologies of the studies will be outlined below along with a section describing the findings and limitations of each study.

#### **Methodologies**

Humphrey and Brooks (2006) conducted their study in a UK secondary school in the north-west of England. The sample comprised 12 pupils with a mean age of 14 years 2 months. They were selected as they had been referred for anger problems. The participants completed six one-hour sessions over a period of four weeks. A phase change design was used (baseline, intervention, follow-up). Impact was measured using the Revised Rutter Scale for Teachers alongside observations and interviews with participants.

The other reported study that investigated an anger management intervention was the work of Kellner and Bry (1999); their group consisted of seven pupils aged 14–18 years old who were referred to the group by teachers and clinicians. They completed 10 thirty-minute sessions focusing on the physiology of anger and the signs of anger arousal. Further sessions focused on identifying and discussing triggers and anger management techniques. The design was a pre/post test design; the Connors Teacher Rating Scale was used as a measure, and was completed by parents and teachers.

Wignall (2006) conducted the study in Australia using a pre/post test design, 17 pupils with a mean age of 14.24 years, took part in 11, 55-minute sessions of a modified Adolescents Coping with Emotion program (ACE; Wignall et al., 1998). Impact was measured using self, teacher and parent checklists.

The work of Robinson et al. (2002) employed more scientific rigour by conducting an experimental versus control design; 41 pupils aged between 11-15 years were matched on age, race and behavioural ratings. The pupils received 10, 50-minute sessions and 5 50-minute practice sessions over a 10-week period. Impact was measured using self and teacher completed checklists alongside semi-structured interviews with teachers and pupils.

Of the project based studies, Squires (2001) measured three groups of six to nine pupils in Year 5 to Year 8 who received the intervention over six one-hour sessions. The pupils that were involved were selected by their teachers, as they were acting out and withdrawn; Squires (2001), however, avoided pupils who were at risk of exclusion. Measures were taken of teacher ratings of behaviour and pupil ratings of self-control. Dwivedi and Gupta's (2000) group consisted of 15 year 9 pupils who received 8 40-minute sessions. The impact was measured qualitatively using a self-report completed by the participants to explain what they did, and why and when they felt angry.

The larger project-based study conducted by DeAnda (1999) used a pre/post test design, and involved 157 pupils aged between 14-18 years in a US High

School. The pupils received 10 sessions and impact was measured by self-report checklists.

### **Findings and limitations**

Of the studies reviewed, six found statistically significant gains (DeAnda, 1999; Humphrey and Brooks, 2006; Kellner and Bry, 1999; Robinson et al., 2002; Squires, 2001; Wignall, 2006).

The study conducted by Humphrey and Brooks (2006) found significant gains in a measure of overall total difficulties. Specific significant gains were also measured in pro-social behaviour, emotional outbursts and behavioural conduct. These were not all maintained after a four-week follow up. The intervention was seen as a success despite research design limitations, as it showed that the cognitive-behavioural intervention programme had a significant impact in the short-term. However, this study did not directly measure number of pupils that are excluded.

The results of this particular study are limited in their generalisability, as it consisted of only a small sample of 12 pupils. The study would have been further improved if the pupils had been selected using a particular screening tool rather than being referred for anger problems, as they were then subject to the perceptions of the referrer.

The results collected by Kellner and Bry (1999) showed significant impact on the teacher-report conduct sub-scale, and a six-month follow up showed significant effects on the parent-report conduct sub-scale and incidents of physical aggression. Having follow-up data strengthened this study's findings; however, as the study was conducted in a specialist setting questions could be raised about the generalisability of the findings. The authors concluded that although the majority of students remained in the clinical range on the conduct sub-scales, positive change occurred. They suggested anger management group work be incorporated within the classroom to provide a more intensive intervention (Kellner and Bry, 1999).

Robinson et al. (2002), who took a measure of anger and aggression, found significant gains. No effect was found for internal responses and only effects for anger control were maintained at follow up.

Whilst this design took steps to promote treatment integrity, more so than Humphrey and Brooks (2006) and Kellner and Bry (1999), by training implementers and providing case supervision, it would have been useful to employ independent observers to code and observe the sessions. The design used a matched design and, again, a more randomised allocation would have promoted internal validity.

Wignall (2006) found significant improvements in depression, externalising behaviour, negative automatic thought, empathy and negative problem-solving. The author concluded that an early intervention approach using CBT principles showed promise as an effective intervention for the specific problem of comorbid adolescents in a real world setting (Wignall, 2006).

Although this study adhered to a pre/post test design, the results were not compared to a control group who did not receive the intervention; therefore, the study is subject to threats to internal validity. Whilst the results yield positive effects, it would have more scientific rigour if it could more clearly demonstrate that the effect of the intervention was responsible for change. In addition, the study was done on a small scale to pilot the intervention and a larger scale randomised control trial would provide a greater weight of evidence.

Squires (2001) found significant improvements in pupil self-control. Squires (2001) also found that there was a change in teacher attitudes. Like Dwivedi and Gupta (2000), Squires (2001) also used qualitative measures. These indicated that pupils were more aware of their emotions and their reactions to them after the intervention. This study did not have a comparison group, and the sample was chosen by school staff; both of these factors reduce internal validity. Treatment fidelity was also compromised because of the flexibility of the course delivery; however, this study offers a basis for future research into small group work using cognitive behavioural approaches.

DeAnda (1999) found a significant impact on pupils' sense of safety in the school environment, attitudes toward violence, and overall pupil behaviour. There was no follow up conducted for this study. Although this study collected data from a large sample, the sample was an opportunity sample, which may raise questions regarding the internal validity of the findings. Furthermore, the study lacked a comparison control group.

Finally, Dwivedi and Gupta's (2001) data were qualitative, so no statistical analysis was used; however, improvements were noted in reaction to anger-provoking situations, behaviour during an incident, and anger felt during an incident. This study has limitations due to the nature of its data collection; the sample was an opportunity sample and no control comparison was used. However, the authors stated that the 'group intervention did have at least a short-term positive effect, over and above the predominant behaviourist approach in the school' (Dwivedi and Gupta, 2000, p.80). The qualitative data could have been further enhanced by incorporating objective data provided by the school on the number of incidents the participants were involved in before and after the intervention.

#### **2.10.4 Summary - Cognitive Behavioural Approaches**

Seven articles were reviewed that met the inclusion criteria pertaining to group interventions in secondary schools utilising cognitive behavioural approaches. None of the reviewed articles used pre/post-test randomised controlled trials, and only one used a matched pairs controlled trial (Robinson et al., 2002). The other reviewed articles all utilised a pre/post-test opportunity sample. The findings showed that six found statistically significant gains (DeAnda, 1999; Humphrey and Brooks, 2006; Kellner and Bry, 1999; Robinson et al., 2002; Squires, 2001; Wignall, 2006), whilst Dwivedi and Gupta (2000) offered qualitative data noting improvements in behaviour.

The limitations of the studies are described within this section and, as in the studies considering behavioural change and preventing school exclusion) the focus is on issues pertaining to validity, generalisability and treatment integrity.

The researcher will endeavour to reflect upon and address these issues within the design of this research.

### **2.10.5 Research on Improving Emotional Literacy**

The systematic literature search did not yield any results that both met the inclusion criteria and investigated the impact of group interventions on emotional literacy. As this research aimed to take steps to fill some of the gap in the research literature regarding emotional literacy, the researcher thought it prudent to include some studies that looked at the impact of group interventions on emotional literacy. These did not meet the inclusion criteria of the original search, as they did not meet the experimental design criteria; the following studies employed case studies and qualitative data gathering. This section will also consider research conducted in the Primary phase due to the small number of papers relating to the Secondary phase.

This section will consider small group projects aimed at improving pupils' emotional literacy that have been introduced into UK primary and secondary schools; these groups usually incorporate anger management or conflict-resolution strategies (Faupel et al., 1998). Sharp (2001) described these projects as experiments in emotional literacy. To aid the flow of this section, the studies, findings and limitations will be viewed concurrently.

#### **Emotional Literacy – studies, findings and limitations**

Most recently, Humphrey et al. (2009) furthered their body of work and conducted a study to look at the most effective model of implementation of the SEAL intervention. The SEAL small group interventions (Department for Education and Skills, 2006a) should be run over a seven-week period with one lesson per week. This is a similar timescale to the 'Over to You' intervention, so this implementation study is quite relevant to this research. Case studies were conducted at five UK primary schools and success was found to be dependent on a number of factors, ranging from the skills and experience of the group facilitator to the availability of space. Participants experienced more success if

achievable targets were set, desirable behaviours constantly reinforced, and opportunities provided for the verbalisations of emotional experiences.

As this research used a case-study design, the data were collected by interviews, observation and document analysis. As the SEAL intervention is prescriptive in nature, observers were able to validate a high level of treatment fidelity. This study offers a differing perspective from that of the researcher, as it wholly advocates the effectiveness rather than efficacy model of intervention research (Humphrey et al., 2009).

Antidote (2003) describes a number of small interventions within the UK, and although these demonstrated success in some areas, the claims are vague and largely subjective. Weare and Gray (2003) reported that a number of Local Education Authorities (LEA) were developing their emotional literacy interventions with a direct link to their behaviour support. Southampton LEA implemented a holistic approach to incorporating the developments of emotional literacy into their schools; they found a 60% reduction in permanent exclusions between 1997 and 2001. However, the strategies that were used developed both emotional literacy and a range of other social competencies.

Although there has been a great deal of research into the teaching on social, emotional and behavioural skills (e.g., Parton and Manby, 2009), the evidence base measuring outcomes is not as vast (Humphrey et al., 2008), and the findings that have been reported display methodological difficulties that may confound the results (Qualtner et al., 2007; Zeidner et al., 2002). This identifies a clear need to investigate further the impact of emotional literacy and its use as both a targeted and whole-school intervention.

#### **2.10.6 Summary - Systematic Review of Group Intervention Studies**

Of the articles reviewed, three attempted to measure exclusion rates whilst two measured the amount of negative or problem behaviours that may increase a pupil's likelihood of being excluded. Of the studies that measured exclusion, Panayiotopoulos and Kerfoot (2007) found a reduction in the number of excluded days in the experimental group; however, this result did not reach

statistical significance. Burton (2006) found that of the pupils that increased their self-rating scores, after seven months these pupils had maintained behavioural improvements and none of them had been excluded from school. Bagley and Pritchard (1998) found the primary project excluded fewer pupils than did the control group, but this was not the case in the secondary project group; however, both schools increased their acceptance of 'difficult students'.

The studies that measured negative or problem behaviours after a targeted intervention found significant improvements in behaviour were observed as a result of the intervention; however, this was not found after the four-week follow up (Humphrey and Brooks, 2006). Hawken and Horner (2003) found a modest functional relationship between implementation of the intervention and reduction in problem behaviour. Overall, the results are promising if not particularly significant in support of the effectiveness of the interventions reviewed.

The articles that investigated the impact of cognitive-behavioural interventions all demonstrated short-term effects directly after the intervention; this is according to the criteria set by each piece of research and the research questions posed. All of the interventions showed significant short-term reductions in measures of aggression and anger.

Four of the articles were studies that included a long-term follow-up ranging from four weeks to six months; all of them showed significant gains made after the review. However, Humphrey and Brook (2006) demonstrated gains only in the conduct measure rather than the overall score.

### **Methodological considerations**

Because of the nature of the research, it is difficult to assign participants randomly, as the interventions are targeted at particular students who are experiencing difficulties. Only two of the articles have a control and experimental group, namely, Panayiotopoulos (2007) and Bagley and Pritchard (1998), and in this particular case it was the whole school rather than individual pupils that was targeted by the intervention.

In terms of sample size, the studies ranged from a sample of 4 participants to 157 participants (excluding the whole school trials). All except two of these studies used an opportunity sample: one employed a matched pairs design, and one used randomly allocated participants. Of the studies, two employed no statistical analysis. All of these studies raise methodological questions including questions relating to sample, experimental design, and results interpretation.

The search relating to group intervention aiming to promote emotional literacy did not find any studies that employed pre/post experimental design; this indicates a gap in the research.

### **2.10.7 Conclusion - Systematic Literature Review of Group Intervention Studies**

From the articles reviewed it can be concluded that cognitive-behavioural interventions can be seen to have a positive impact on pupils with identified behavioural difficulties, in particular with managing anger-related difficulties. Of the articles reviewed, there was a gender imbalance favouring males, with female exclusion rates rising (Osler et al., 2002). Further research is required to address this imbalance. The evidence supporting the use of cognitive-behavioural interventions to promote behavioural change encouraged this researcher to implement a targeted group intervention within the Secondary phase. The question of gender is a topic in itself and whilst it is an important topic, it will not be further explored here due to the limits of the scope of this particular research.

Consideration must also be given to group dynamics and the impact that these may have on the outcomes of any group intervention studies (Martsch, 2005).

It is very difficult to use an experimental design to measure the impact of an intervention in terms of reducing school exclusions. Bagley and Pritchard (1998) measured overall exclusion rates after a whole school intervention. They compared numbers of children excluded to that of a control group. However, this cannot be used as definitive evidence that the intervention reduced exclusions, as each pupil is an individual and cannot be compared directly to

another, as too many factors can affect that child. Panayiotopoulos et al. (2007) used a randomised control trial to compare the number of days excluded from school; they found no significant results, and discussed the complexity of factors that could affect inclusion and exclusion.

With the studies looking at individual children or groups of children, it is impossible to prove that an intervention stopped them from being excluded; however, it is clear that the research can show a change or reduction in behaviours that are commonly accepted as likely to cause school exclusion.

With the high amount of press and government interest in this subject area, it is surprising to find such a small body of research attempting to measure how targeted interventions impact upon school exclusion. Although impact upon school exclusion is difficult to measure, there is a clear need for further investigation and research in this area.

Equally surprising is the lack of empirical evidence investigating the effect of promoting emotional literacy in school. There is a clear need to develop research in this area in order to establish an evidence base considering the usefulness of the direct teaching of emotional literacy. The findings of this research will offer evidence to the developing field.

## **2.11 Rationale for this Research**

As described earlier, Burton (2006) developed the 'Over to You' group work intervention. The intervention is based on the principle that working with young people to change their own behaviour can encourage the young person to develop further qualities such as personal motivation, self-reflection and empowerment. The aim of the group is for the participants to reflect on personal strengths and difficulties, set and work towards their own personal targets, increase awareness of how their thinking may affect their feelings and behaviour, recognise the impact of their communication styles on others, and practise using assertive strategies for resolving conflicts.

The researcher is not aware of any research other than the article stated above that investigates the efficacy of this intervention. It may be that research has been conducted, but has been susceptible to the 'file drawer problem' mentioned previously (Rosenthal, 1979).

This research aims to increase the evidence base around the 'Over to You' intervention and provide information to schools and researchers on evidence-based behavioural interventions. The fundamental premise on which this research is based is that behaviour is seen to be more likely to change if it is addressed in the context of thoughts and feelings (Sharp and Herrick, 2004; Burton, 2004).

The researcher reflected upon the specific components of the 'Over to You' intervention and considered how the different elements of the intervention adopt a range of methods. This led the researcher to agree with Burton (2006), who describes the intervention as one that is broadly based on cognitive behavioural approaches. The intervention used in this research utilises the fundamental principles that have been discussed; it encompasses a range of approaches that consider the links between thoughts, feelings and behaviour.

In addition to contributing to the body of knowledge surrounding the umbrella term of cognitive-behavioural approaches. This research can contribute to the body of knowledge surrounding multi-modal interventions. As described in section 2.4, Sukhodolsky et al. (2004) reviewed interventions based on cognitive-behavioural approaches and found that multi-modal treatments and skills training were more effective in improving social skills and reducing aggressive behaviours.

Hazelwood et al. (2002) argued that there is no clear definition of the term 'multi-modal'. Subsequently, NICE (2009) published the following definition. To be classified as multi-modal, an intervention needs to be composed of the following:

- *A treatment programme where two or more specific psychological interventions were combined in a systematic and programmed way, and*
- *The intervention was conducted with the specific intention of producing a benefit over and above that which might be achieved by a single intervention alone.*

(NICE, 2009)

Whilst the multi-modality of the 'Over to You' intervention is not as clear-cut as an intervention combining, for example, social skills training and family therapy. This researcher believes that the 'Over to You' intervention can be defined as a multi-modal intervention as it utilises elements from the theory and interventions described within this literature review. These interventions are combined within the intervention, they are done so in a systematic way and each element can be clearly identified. Behavioural strategies; cognitive strategies; cognitive-behavioural therapy; anger management training and social skills training are all incorporated within the intervention.

Examining the specific interventions. This researcher feels that there is an opportunity to contribute to the evidence-base in the area of social skills training. The 'Over to You' intervention incorporates the three methods of social skills training into the sessions: identifying problems, target settings, and considering consequences. Quinn et al. (1999) considered this and analysed social skills interventions, finding that targeted interventions that teach specific social skills have a greater effect than more global interventions. It is this targeted teaching of social skills that the 'Over to You' intervention will demonstrate; sessions focus on co-operation through game playing and social problem solving.

It is also felt that this research will contribute to the body of knowledge in the field of anger management. The 'Over to You' intervention encourages the participants to recognise the value of reflective rather than impulsive actions. It also aims to develop skills to support the use of assertive strategies for resolving conflicts.

One of the session aims of the 'Over to You' intervention is to work with the participants to identify upsetting feelings in response to a trigger. Then to consider alternative ways of thinking that will reduce the likelihood of feeling upset. This will help enable the participants to develop the skills described by Feindler and Ecton (1986).

The 'Over to You' intervention incorporates step-by-step action planning in the development of personal targets. These targets encourage the participants to analyse and reflect upon behaviour in its component parts promoting small step changes in behaviour. This process also allows the participants to monitor and evaluate their own change processes.

The 'Over to You' intervention incorporates sessions aimed at promoting self-regulation, self-awareness, empathy, motivation and social skills (Burton, 2006). For that reason, measuring the impact of the course in terms of the intervention's effect on a pupil's emotional literacy would seem to be relevant.

The 'Over to You' intervention incorporates sessions aimed at developing self-control and anger management by encouraging learners to read social situations accurately and respond appropriately. Bodine and Crawford (1999) saw understanding one's emotions as a prerequisite to this. Faupel (2003) also stated that emotional literacy is central in one's ability to self-regulate. Developing self-regulation and self-awareness is implicit throughout the 'Over to You' intervention.

This research delivers a unique contribution to the evidence base required for the effective delivery of educational psychology, in particular evidence around effective group interventions promoting behaviour change and improving emotional literacy. This research will contribute evidence to the particularly small pool of research conducted within the Secondary phase.

Considering the conclusions drawn from Shucksmith et al.'s (2007) independent systematic review of targeted interventions, the intervention used in this research incorporates a multi-component approach that has been shown to be

extremely effective. This research also aimed to utilise school staff, an area that was seen to be lacking in the review, by working alongside a Teaching Assistant. The Teaching Assistant was trained in the delivery of the intervention enabling future implementation.

Shucksmith et al. (2007) and Humphrey et al. (2008) raised concerns regarding the practical feasibility and sustainability of many of the interventions reviewed and questions about effectiveness over efficacy are raised.

*Trials of programmes deliver resources at a level that could not be sustained under normal circumstances, and so a significant challenge in the years ahead is the movement... [to] where the implementation of programmes in real life circumstances is undertaken.*

(Shucksmith et al., 2007, p.45)

This research endeavours to fill this gap, using an experimental design to investigate the efficacy of the 'Over to You' intervention. Enabling and facilitating school staff to deliver the intervention independently will promote the delivery of evidence-based interventions in real world settings.

Taking the literature and reviewed interventions into account, this research endeavours to offer a unique contribution to the field of educational psychology by considering the following research aims and questions.

## **2.12 Research Aims and Questions**

### **Research Aims**

The aim of this research was to evaluate the impact of the 'Over to You' intervention on emotional literacy and behaviour. The research targeted year 8 pupils who had been identified as having behavioural needs

### **Research Questions**

The research aimed to address the following questions:

- Does participating in the 'Over to You' influence participants' Emotional Literacy?
- Does the 'Over to You' programme influence behaviour?
- Does the 'Over to You' programme influence teacher perception of participants' Emotional Literacy?
- Does the 'Over to You' programme influence teacher perception of behaviour?
- After a six-month follow-up, how many of the participants have been subject to school exclusion?

The following chapter considers the methodological investigations required and describes the methodology employed to conduct this research.

## **Methodology**

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This chapter will begin with the examination of broad methodological issues. It will then lead to a focused description of the specific approaches and instruments used in this research.

### **3.1 Epistemological Paradigms**

When implementing a research project, it is necessary for the researcher to consider their epistemological standpoint. Mertens states that a researcher's "theoretical orientation has implications for every decision in the research process including the choice of method" (Mertens, 1998, p.3).

Mertens (1998) identified three major paradigms: positivism/post-positivism, constructivist, and emancipatory (advocacy/participatory). Creswell (2003) considered the same three paradigms, but also described pragmatism. Advocacy/participatory and pragmatism paradigms are outlined in Table 3.1, but will not be discussed further here. The work of Kemmis and Wilkinson (1998) and that of Morgan (2007) offer further reading in this area. Table 3.1 describes the major elements of each paradigm; post-positivism and constructivism are then described in further detail.

#### **3.1.1 Positivism and Post-positivism**

Positivism or the 'standard view' of science is described by Robson (2002) as making the following assumptions. Only facts or objective knowledge can be derived from observation or direct experience, any theoretical entities are rejected. Hypotheses are then tested against these facts. Positivism is largely centred on quantitative data, collected from work adhering to a set of rules and procedures. These data are then used to develop universal causal laws that are developed through the discovery of empirical regularities where two or more things can be described sequentially.

**Table 3.1** *Epistemological paradigms as described by Creswell (2003)*

<b>Post-positivism</b>	<b>Constructivism</b>
<ul style="list-style-type: none"> <li>• Determination</li> <li>• Reductionism</li> <li>• Empirical observation and measurement</li> <li>• Theory verification</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding</li> <li>• Multiple participant meanings</li> <li>• Social and historical construction</li> <li>• Theory generation</li> </ul>
<b>Advocacy/Participatory</b>	<b>Pragmatism</b>
<ul style="list-style-type: none"> <li>• Political</li> <li>• Empowerment issue-orientated</li> <li>• Collaborative</li> <li>• Change-orientated</li> </ul>	<ul style="list-style-type: none"> <li>• Consequences of actions</li> <li>• Problem-centred</li> <li>• Pluralistic</li> <li>• Real-world practice orientated</li> </ul>

Positivism endeavours to find a constant relationship between two variables. Within the natural world, experiments can be conducted in a laboratory, which provides control over the conditions. In social science, however, it has been argued that within a real world social context these relationships or empirical regularities are virtually non-existent and that psychology and social sciences have not yet appeared to have produced any laws that can be seen as truly 'scientific' (Koch, 1959). Bhaskar (1986) argued that what observers actually observe is not determined solely by the characteristics of what is being observed, but the characteristics and the perspective of those observing must also be considered.

The post-positive paradigm recognises these criticisms and attempts to incorporate them within its standpoint. Reichardt and Rallis (1994) describe how post-positivists accept that what is observed can be influenced by theories and hypotheses, and by the background knowledge and values of those observing. This does not, however, dismiss objectivity; this is approached by recognising the effects that these biases may have upon an outcome. Considering research limitations, post-positivists, similarly to positivists, argue that one reality does exist, but that this reality can be known only probabilistically and imperfectly. The shift in paradigm away from both positivism and post-positivism resulted in

a focus upon critical realist viewpoints including constructivism, which is described below.

### **3.1.2 Constructivism**

Those who hold a constructivist worldview struggle with the concept of an objective reality. This paradigm describes the researcher as someone who is endeavouring to understand the multiple social constructions of meaning and knowledge. In contrast to the post-positivist viewpoint, constructivist approaches tend to generate theories and seek meaning, whilst post-positivist approaches tend to determine and validate them (Robson, 2002). Crotty (1998) identified three key assumptions associated with constructivism. First is the idea that people construct meanings as they engage with the world they are interpreting. Second, people make sense of this engagement based on their historical and social perspectives. The final key assumption is that the basic generation of meaning is always social, arising in and out of interaction with people.

Constructivist or naturalistic (Lincoln and Guba, 1985) approaches have been linked by Tesch (1990) to research strategies that adopt a qualitative approach. However, whilst they are usually connected, this is not inevitable. The research methods often employed by constructivists are interviews and observation, allowing for the construction of multiple realities. Due to the nature of the multiple realities, it is difficult to establish research questions in advance; the concept of multiple realities would also seem to discredit the approach from holding any scientific credibility. For example, the generalisability of findings (Parker, 1999).

A constructivist researcher may use open-ended questions, allowing participants to share their views. They may also seek further understanding by visiting the context and gathering information personally (Crotty, 1998). Researchers operating within this paradigm also recognise that their own backgrounds may have an impact upon their interpretation. Because of this, they would position themselves in the research to acknowledge the impact their own personal, cultural and historical experiences may have upon their interpretation (Creswell, 2003). Establishing a framework that can be used by

both post-positivists and constructivists was an important point in the development of the realist paradigm.

### **3.1.3 Realism and Critical Realism**

The realistic view of science is described by House (1991), who states that the purpose or task of science is to generate theories to explain the real world that can be tested by rational criteria. Within realism is the belief that there are no undisputed facts and that knowledge is a social and historical product. Within research, the explanations are focused on how the mechanism produces events, and these events are to be explained even when they cannot be predicted using causal laws (Robson, 2002). Investigation is focused upon the mechanisms rather than the events. Conducting research within the real world is layered and complex; these layers incorporate individual, group and societal levels that make up social reality (Mertens, 1998).

Maxwell and Delaney (1999) state that realism takes on board some of the constructivist positions, thus making clear the value-laden and political nature of research. Realism and positivism differ in a fundamental viewpoint; positivists see observation as unquestioned foundations, however for realists: "Theoretical entities are not hypothetical, but real; observations are not the rock bottom of science, but are tenuous and always subject to reinterpretation" (Manicas and Secord, 1983, p.406).

Realism can integrate subjectivist and objectivist approaches in social theory. Bhaskar (1989) describes critical realism as a realism that criticises the social practices that it studies, providing a rationale for a critical social science.

### **3.2 My Viewpoint**

As a researcher utilising experimental design enabling the rejection or acceptance of hypotheses, it was necessary to utilise empirical tradition as described by post-positivists. However, as a researcher I think it is important to explore the meanings constructed from the personal, cultural and historical experiences of both the researcher and the participants involved in the research.

This researcher feels that whilst a post-positivism viewpoint can describe the research methodology employed, the realist paradigm allows for the complexities and layers of social reality to be considered. The realist paradigm suggests compatibility between post-positivism and constructivism, allowing for the broadest interpretation whilst still incorporating scientific rigour. Therefore, this researcher placed her epistemology as being post-positivist in the research design. The research as a whole, incorporating the discussion of the research, can be seen as having a realist viewpoint.

### **3.3 The Development of a Research Strategy**

The strategies and tactics that are selected when carrying out a research project are dependent on the type of research question that is being asked (Manstead and Semin, 1988). The design of the research strategy should consider a number of key areas. These have been described by Robson (2002) and are summarised below:

- The *purpose* of the research, that is, what the research is trying to achieve.
- The *theoretical background* that will inform the research, how the area that is being investigated can link to conceptual frameworks and how the findings can be understood in this context.
- The *research questions*, what needs to be known to answer the initial questions that link to the purpose of the study.
- The *methods* and techniques that are to be utilised in conducting the research, the collation and analysis of data.
- The *sampling strategy*, who will provide the data, and how they will be selected.

Research design strategies can be described as fixed, flexible and multiple design strategies; these will be discussed in the following section.

### **3.4 Fixed, Flexible and Multiple Designs**

A fixed design strategy is one where the design of the research is specified before the onset of data collection. The design is fixed and remains constant. The data that are collected will be quantitative, usually in the form of numbers.

A flexible design strategy may evolve during the process of the research, the data that are collected will usually be qualitative, that is, in the form of words. A multiple design will contain elements of both qualitative and quantitative data, usually having a fixed element and then a flexible element afterwards. A 'case study design', although sometimes fixed, can be an example of a flexible design strategy; it investigates whether a treatment should be investigated formally. A case study design is the study of a case in its context with the aim of developing detailed, intensive knowledge about either a single case or a small number of related cases. Data will be collected when carrying out a case study by a number of methods, such as observation, interview and documentary analysis.

The study that has been carried out in this research can be described as a fixed design, as the strategy was fixed before the onset of the research and the data collected are quantitative.

#### **3.4.1 Aspects of Fixed Designs**

A great number of experimental design methods are used by psychologists working as scientist practitioners. As described above, there are fixed design research strategies, which include randomised controlled design and single case experimental design, and there are flexible design research strategies, which include case studies. Within a fixed design strategy, there can be a number of labels that describe how the research is conducted: true experimental, single case experimental, quasi-experimental, and non-experimental fixed designs. Each method is described briefly below. As a true experimental design was used in this research, this area will be described and critiqued in more detail.

## **Single case experimental design**

The 'single case experimental design' (SCED) investigates whether a particular intervention is effective for a particular case. SCED originated from the work carried out by Skinner (1938, 1974) and has been developed over the years. Barlow et al. (2008) stated that repeatedly measuring the same individual over a period of time is essential; these repeated measures should typically occur before, during and after an intervention.

## **Quasi-experimental design**

A quasi-experimental design can be described as "a research design involving an experimental approach where random assignment to treatment and comparison groups has not been used" (Campbell and Stanley, 1963).

After participant selection, the experiment will proceed in a way similar to any other experiment, with a variable being compared between different groups, or over a period of time. One of the main advantages of quasi-experimental design is that it can be used in the social sciences where randomisation of experimental and control groups proves to be difficult. However, these results may not stand up to rigorous statistical scrutiny because the researcher will also need to control other factors that may have affected the results (Judd et al., 1991).

## **Non-experimental fixed designs**

Non-experimental designs are used in situations where variables are not modifiable by the researcher or should not be modified for ethical reasons, or it is not feasible to modify the variables. This type of design is not particularly adaptable for exploratory work and is commonly used for descriptive purposes (Robson, 2002).

## **True experimental design**

'Randomised controlled design' investigates whether a treatment is generally effective. It is a variant of true experimentation that uses a control group. Participants in randomised controlled design trials are randomly assigned to an experimental group and are then exposed to a particular intervention. The control group is not exposed to anything. This type of experimental design has been described as 'true experimental design' and the 'gold standard' of experimental design (Robson, 2002).

One of the most difficult aspects of implementing a true experimental design is that of random allocation (Diaper, 1990). This can be done in the truest sense or it can be done using a matched pairs design. A matched pairs design is when the participants are matched on a variable that is known to be related to the dependant variable (Robson, 2002).

It was a 'randomised controlled design' that was used in this research; this will be critiqued in the following section considering the role of randomised controlled designs or randomised controlled trials (RCTs) within evidence-based practice supporting developments in educational psychology.

### **3.5 Evidence-based Practice**

Table 3.2 shows the traditional hierarchy of evidence-based practice that is prevalent in medicine and clinical psychology (Roth and Fonagy, 1996).

This research is embedded with number three of the hierarchy: "Randomised controlled trials". The evidence that was collected from this research will contribute to future research higher up the hierarchy.

**Table 3.2** *The traditional hierarchy of evidence (from Scott et al., 2001)*

1. Several systemic reviews of randomised controlled trials.
2. Systemic review of randomised controlled trials.
3. Randomised controlled trials.
4. Quasi-experimental trials.
5. Case control and cohort studies.
6. Expert consensus opinion.
7. Individual opinion.

### **3.6 Critique of Randomised Controlled Trials (RCTs)**

*RCTs provide the only valid – albeit limited – source of evidence for the efficacy of various forms of psychological treatment.*

(Roth and Fonagy, 1996)

Researchers have questioned this statement, claiming that establishing intervention efficacy is not the same as establishing effectiveness in practice (Harrington, 2001). Roth and Fonagy (1996) describe how the features that contribute to high internal validity can undermine the high external validity required by effectiveness studies. This can be seen when studies have highly defined exclusion criteria, resulting in homogenous participant groups. This may result in some groups being unrepresented.

Another concern that has been raised is regarding how the strict adherence to the hierarchy of evidence may devalue recently developed interventions that lack an evidence base (Frederickson, 2002). Similarly, areas of research that are more qualitative in nature may be undervalued. Hughes (2000) also argues that evidence showing efficacy is not sufficient and research must also consider how it works. That said, for psychologists, understanding the mechanisms responsible for effecting change is important in the development and application of interventions in practice. The next section will consider the implications the hierarchy of evidence has on research in education.

### 3.6.1 Randomised Controlled Trials in Education

Sebba (1999) considered the range of evidence that could be of value in educational contexts. She concluded that RCTs provided the best evidence of efficacy; however, she also described how other less strictly controlled but still systematic research could also contribute to the field. In addition, it was recognised that making generalisations from less well-controlled studies may not be appropriate. However, this research could be used as a tool to identify areas that need to be addressed in the future.

As educational psychologists working as scientist practitioners, it is necessary to demonstrate the following competencies for using research in evidence-based practice:

- Formulate an answerable question from a clinical or a service issue.
- Search using bibliographical databases (such as PsychInfo, ERIC), and find short cuts to good quality evidence.
- Be confident in critically appraising research findings.
- Interpret and apply results for use in a particular clinical situation, or in developing service provision.
- Evaluate one's own clinical practice.

(Ramchandani et al., 2001, p.60)

This research uses a randomised controlled design; it is based within the hierarchy of evidence and adheres to the competencies described above. This would indicate that this piece of research is well grounded within the context of evidence-based practice and the findings generated make a distinctive contribution to the field of educational psychology. In order to ensure that the findings can be utilised by researchers and practitioners alike, a number of factors must also be considered. These factors are validity, generalisability, and treatment validity, which will be discussed in the following section.

### 3.7 Validity and Generalisability

When carrying out research, it is important to establish trustworthiness, which means ensuring that your audience views the findings of the research as a credible addition to the evidence base. In order to provide this information, the concepts of validity and generalisability are crucial. Validity is an area that considers whether the findings are really about what the researcher claims. Generalisability is the concept discussing whether the findings can be applied elsewhere, outside the strict confines of the experimental situation (Robson, 2002).

#### Validity

Looking at validity from a critical realist perspective, involves referring to the accuracy of the result. The researcher would need to consider whether the relationships described in the findings could be attributable to the effect of something else. The concept of validity explores reliability, which is the consistency or stability with which something is measured. A measure needs to be reliable for findings to be valid; however, reliability alone does not ensure validity. Robson (2002) described a number of causes of unreliability, namely, participant error, participant bias, observer or experimenter error, and observer or experimenter bias.

*Participant error*, for example, can be seen when a participant's performance can fluctuate on a random basis. Factors such as tiredness, the season, and so on can have an impact upon this. *Participant bias* is seen as more problematic from a validity point of view (Robson, 2002); for example, a participant may want to please the researcher and either try particularly hard or answer what they think they should.

*Observer or experimenter error* is another source of unreliability; the researcher may be tired and random errors could be made. *Observer or experimenter bias* can pose a threat to validity, and this can cause problems with interpretation. This area has been well-researched and methodologies can use procedures that can offset this factor. Inter-observer agreement can be used to ascertain a

level of validity in this area. Two independent observers using observation schedules or matrices can obtain the same results when measuring the same behaviour; this can demonstrate validity.

As stated earlier, ensuring reliability does not necessarily ensure validity. Construct validity and internal validity should also be considered. Construct validity refers to the measure used to gather data: Does it measure what you think it measures? This will be considered in the description of the measures used in this research, that is, the Emotional Literacy Checklist (Faupel, 2003) and the Strengths and Difficulties Questionnaire (Goodman, 1997). Internal validity is concerned with identifying causation and is described in the following section.

### **Internal validity**

Internal validity refers to the demonstration of a causal relationship between treatment and outcome: Does the treatment (in this case, taking part in the 'Over to You' intervention) actually cause the outcome (any changes in questionnaire responses)? The term 'internal validity' was coined by Campbell and Stanley (1963), who also described a number of 'threats' to internal validity:

- *History* – other things that may have changed in a participant's environment, that are not part of the research.
- *Testing* - when using pre and post tests, changes may occur as a result of practice and experience.
- *Instrumentation* – changes in some part of the measures between pre and post tests.
- *Regression* – participants chosen because of atypical scores may show a 'regression to the mean' at post-test.
- *Mortality* – participants dropping out of the research study.
- *Maturation* – changes, development and growth unrelated to the treatment.
- *Selection* – differences between the groups before the onset of the research.

- *Ambiguity about causal direction* – does A cause B, or B cause A?

(Robson, 2002, p.105)

When designing research, steps can be taken to avoid or deal with these threats. However, while each can be looked at individually, the use of randomisation can offset these factors (Fisher, 1935). Ruling out these threats can show internal validity, demonstrating that the treatment can plausibly cause the outcome. If the research is interested in whether the treatment would be effective in other settings or with another client group, external validity or generalisability must be explored.

### **Generalisability**

As described in Robson (2002), Campbell and Stanley (1963) considered generalisability and used the term 'external validity' to describe it. They state that internal and external validity are usually inversely related, that is, the stricter and more controlled the experiment is in order to improve internal validity, the more difficult it becomes to generalise the findings. LeCompte and Goetz (1982) devised a classification of the threats to external validity. They are as follows:

- *Selection* – are the findings specific to the group that has been studied?
- *Setting* – are the findings dependent on or specific to the particular context in which the study took place?
- *History* – unique and/or specific historical experiences may impact upon or determine the findings.
- *Construct effects* – the particular constructs studied may be specific to the particular group studied.

Generalisability can be promoted through repeated experiments with different target groups or different settings to assess the generalisability of the findings. The critical realist perspective would state that replication would clarify and confirm the structures and mechanisms identified in the original research. However, Tsang and Kwan (1999) state that failure to replicate does not

conclusively falsify original findings, as a different set of contingencies were implemented. Considering the hierarchy of evidence-based practice described earlier, research that demonstrates good internal and external validity would contribute positively to the evidence base.

Another factor to consider when developing a research design is the integrity or fidelity of the treatment. In this case, the treatment is the 'Over to You' intervention.

### **3.7.1 Treatment Integrity**

Evaluating the extent to which the treatment is implemented as intended is referred to as treatment integrity. This can be illustrated by considering the work of Feldman et al. (1983), who evaluated three treatments used in a study. The treatments used were group social work, behaviour modification, and minimal treatment controls. Direct observations of selected sessions were used to provide a synopsis of treatment integrity. The observations showed that for a substantial portion of time, the treatments were not appropriately administered. Based on the data collected regarding treatment integrity, it is difficult to draw conclusions about the impact of different treatments. The integrity of the treatment is relevant in any outcome study, and this is independent to any specific pattern of results that are found (Waltz et al., 1993).

There are actions a researcher can take to address treatment integrity, such as ensuring that the criteria, procedure, and tasks that define the treatment are defined as well as possible, this could be in the form of written manuals or guidelines (Wilson, 1996). Ensuring that adequate training and opportunity to practise is given to the implementer of the intervention can promote integrity, as can ongoing case supervision during the treatment.

Kazdin (2003) described how treatment integrity is not an all-or-nothing matter, and stated that it is useful to identify an acceptable range of departures, for example, the number of sessions a person must attend.

Treatment integrity, along with the other research design considerations pertinent to this research, are outlined below. A more in-depth critique of the methodological implications can be found within the discussion.

### **3.7.2 Research Design Considerations**

The researcher considered the methodological implications described within this chapter and incorporated the following within the design of this research to endeavour to offset these issues.

Participant bias could be avoided due to the nature of the measures (Kazdin, 2003); the participants were not aware of the scoring system to the questionnaires and they were told that there were no right or wrong answers.

Regarding experimenter bias, it would have been useful if the sessions could be have been independently observed to avoid this and to promote treatment integrity. In this research, however, time constraints linked to staff availability made this difficult. Ongoing discussion between the implementers, that is, the researcher and Teaching Assistant, re-enforced the importance of adherence to the lesson schedule and timings. As the researcher ran the course, the lesson plan and timings were strictly adhered to; this promoted treatment integrity, as it ensured the same content, pace and structure of the intervention was delivered to each of the three groups.

After consideration of the overall content of the intervention, and allowing for the real world nature of the research, the researcher decided that an acceptable range of departure with regards to attendance would be for participants to attend five out of six of the sessions.

In this research, randomly allocating the participants was an attempt to offset any threats to internal validity. This was further enhanced by ensuring that the instrumentation was not altered in anyway. Additionally, mortality rates may have been reduced by the voluntary nature of participation.

### **3.8 Final Research Design**

The design that was used in this research was a *pre-test, post-test randomised controlled trial*. Pupils were randomly allocated to the experimental group (that is, the group that received the 'Over to You' intervention), and to a control group of pupils who did not receive the intervention at that time. As the pupils who were allocated to the control group were identified as having an intervention need, they received delayed treatment after the experiment was over, which was to be delivered by the Teaching Assistant involved in intervention delivery.

### **3.9 Pilot Study**

The tools and the intervention were piloted in a three-session condensed intervention carried out in the Spring Term 2009. The intervention group consisted of four pupils. The pupils were identified by one of the schools in which the main research would be carried out. The pilot consisted of sessions one, three, and five from the 'Over To You' intervention.

#### **Purpose of pilot study**

The purpose of the pilot study was to identify any areas that may have needed to be altered before the commencement of the research study. It aimed to consider lesson length and session content. Throughout the piloting sessions, consideration was given to the inclusion criteria. As it was important for the pupils involved to be willing to take part in the intervention, it was reasonable to consider that those presenting the most severe and challenging behaviours might have been unwilling to take part. Pupils were canvassed at this time to ascertain willingness to take part in a group work programme such as the 'Over to You' intervention.

#### **Outcomes of pilot study**

The outcomes of the pilot study indicated that there were no presenting issues with the research design. The pre and post test measures were completed by

the pupils who took part and no issues were raised or noticed regarding the usability of the tools. One pupil who had some difficulties with literacy had the questionnaires read out to him.

The sample sessions of the course were delivered by the researcher and a Learning Support Assistant. The sessions were well timed and the content and activities were completed by all of the pupils taking part. After the pilot study, it was decided that children with Statements of Special Educational Needs relating to learning would not be included in the study. This was due to the level of literacy that was required to complete both the course content and the questionnaires used as a measure. The pilot study was an abridged version of the course so not piloting the course in its entirety can be seen as a limitation; this was due to time restrictions and the availability of space and staff within the school.

### **3.10 Research Aims**

The aim of this research was to evaluate the impact of the 'Over to You' intervention on emotional literacy and behaviour. The research targeted Year 8 pupils who had been identified as having behavioural needs.

#### **3.10.1 Research Questions and Hypotheses**

The research aimed to address the following questions:

1. Does participating in the 'Over to You' influence participants' Emotional Literacy?
2. Does the 'Over to You' programme influence behaviour?
3. Does the 'Over to You' programme influence teacher perception of participants' Emotional Literacy?
4. Does the 'Over to You' programme influence teacher perception of behaviour?

5. After a six-month follow-up, how many of the participants have been subject to school exclusion?

### **Experimental Hypotheses**

1. There will be a statistically significant difference between the Emotional Literacy of participants in the control group and the Emotional Literacy of participants in the experimental group after the completion of the 'Over to You' intervention.
2. There will be a statistically significant difference between the behaviour of participants in the control group and the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention.
3. There will be a statistically significant difference between teacher perception of participants' Emotional Literacy in the control group and teacher perception of participants' Emotional Literacy in the experimental group after the completion of the 'Over to You' intervention.
4. There will be a statistically significant difference between teacher perception of the behaviour of participants in the control group and teacher perception of the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention.
5. After a six-month follow up, more participants in the control group will have been subject to school exclusion than in the experimental group.

### **Null Hypotheses**

1. There will be no statistically significant difference between the Emotional Literacy of participants in the control group and the Emotional Literacy of participants in the experimental group after the completion of the 'Over to You' intervention.

2. There will be no statistically significant difference between the behaviour of participants in the control group and the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention.
3. There will be no statistically significant difference between teacher perception of participants' Emotional Literacy in the control group and teacher perception of participants' Emotional Literacy in the experimental group after the completion of the 'Over to You' intervention.
4. There will be no statistically significant difference between teacher perception of the behaviour of participants in the control group and teacher perception of the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention.
5. After a six-month follow up, there will be no difference between participants in the control group who have been subject to school exclusion and those in the experimental group.

### **3.11 Conducting the Research – Implementation of Randomised Controlled Trial**

This part of the methodology chapter will describe the specific implementation of the research design used. It will describe all of the design aspects and tools required for implementation.

#### **3.11.1 Context of Research**

The researcher is a Trainee Educational Psychologist in the East of England. The researcher is working within a Local Authority that aims to develop an evidence base of targeted interventions aimed at promoting behavioural change. The research was conducted in two high schools in the East of England. The 'Over to You' intervention was delivered in a classroom allocated specifically for the purpose. The intervention was delivered to Year 8 pupils identified as having behavioural needs.

### **3.11.2 Stakeholders**

The key stakeholders in this research were the Local Authority's Children's Services, and the schools within which the research was completed.

The research will assist the Local Authority, as they wish to deliver evidence-based behaviour support interventions, and the outcome of this research will guide their future planning.

The schools gained evidence to support their intervention planning. The schools also gained a member of staff who is trained in the delivery of the intervention. This staff member was the Teaching Assistant who delivered the course with the researcher.

### **3.11.3 Setting**

The research took place in two High Schools in the East of England. They were both inner city high schools, of neighbouring catchment areas, in areas of low socio-economic status.

Three schools were approached by the researcher and meetings were arranged to discuss the suitability of the research being conducted in their setting. One of the schools was unwilling to ask staff members to complete the questionnaires required so it was deemed not suitable for the research to take place there. The other two schools welcomed the opportunity for the intervention to be run in their setting and were able to provide the support that would be required to facilitate the running of the intervention. The first school was able to provide support for one group conducted in the Summer Term 2009. The second school was able to provide support for two groups conducted in Autumn Term 2009.

### **3.11.4 Inclusion Criteria**

The schools screened the Year 8 pupils using the Strengths and Difficulties Questionnaires (please refer to section 3.15.3). The inclusion criteria used in this research was:

- Year 8 pupils, male and female.
- Pupils who scored Borderline and High for the Behavioural Symptoms on the Strengths and Difficulties Questionnaires (SDQ).

As the research was carried out in secondary school, after discussion with school and authority stakeholders, Year 8 pupils were chosen as participants, as there is a lack of intervention provision for this year group.

The SDQ is a measure that is used to screen for intervention. It is also used in epidemiological and prevention research (Hill and Hughes, 2007). The SDQ was already being used as a whole-school screening measure in the schools participating in this research. It seemed appropriate, after discussion with stakeholders, to use this measure as both the screening tool and the measure by which behaviour was monitored pre and post intervention.

### **3.11.5 Exclusion Criteria**

The exclusion criterion for this research was:

- Pupils with Statements of Special Educational Needs relating to Learning.

This was deemed appropriate, as age appropriate levels of literacy were required to complete the contents of the sessions and the questionnaires used as measures. Identifying a selective group may impact upon the generalisability of this research, but was deemed appropriate due to the content of the intervention.

### **3.11.6 Participants**

The researcher conducted part of an assembly in each school to explain the 'Over to You' intervention to those pupils who met the inclusion criteria. Those who were willing to take part in the course were randomly allocated to control and experimental groups. The random allocation was conducted using the rudimentary system of names printed on pieces of paper and chosen at random.

Of those pupils identified as suitable and willing to take part in the course, in both schools, more were identified than were in the control and experimental group. From the first school, eight pupils were allocated to the experimental group and eight to the control group. From the second school, 16 pupils were allocated to the experimental group and 16 pupils were allocated the control group. The additional pupils not allocated to groups but identified by the SDQ and willing to take part were advised that they would have the opportunity to join future groups. This would be if the school chose to continue the course after the delayed intervention was given to the control group. If the school did not continue the course, then those pupils would receive school-based interventions as deemed appropriate by the staff teams there. This will be considered further in relation to the ethical implications relative to this research.

Table 3.3 shows the basic information regarding the participants' gender; ethnicity and other relevant information.

**Table 3.3** *Participant information*

<b>Type of participant</b>	<b>Year</b>	<b>Gender</b>	<b>Ethnicity</b>	<b>Primary Language</b>	<b>Special and Additional Needs</b>
Pupil = 48	Year 8 = 48	Male = 29 Female = 19	White British = 47 Afro/Caribbean = 1	English = 48	None = 24 SA+ = 8 SA = 13 Medical needs = 3

None of the pupils identified as suitable and willing to take part in the course had a Statement of Special Educational Needs for Learning or any other primary need. This made the exclusion criterion redundant for the purposes of this research.

### 3.12 Intervention

The 'Over to You' course is a targeted intervention program. The target of this research was pupils whose scores were indicative of behavioural needs on the SDQ.

The intervention utilises a predominantly cognitive-behavioural approach, drawing from the theoretical underpinnings described in the literature review.

#### 3.12.1 Intervention Allocation

Before commencing group allocation, it is necessary to consider group size. Hall (2006) described optimal group size as 8 to 12 persons; they can know each other well enough to maximize their talents. In contrast, Asch (1951) found that conformity does not increase in groups larger than five, so this is considered the optimal group size. Taking this into account along with a consideration of attrition, it was decided that the experimental group would consist of eight participants.

The experimental and control groups were as follows:

**Table 3.4** *The distribution of participants between control and experimental groups.*

<b>SCHOOL 1:</b>	
Experimental Group A (n=8)	Control Group A (n=8)
<b>SCHOOL 2:</b>	
Experimental Group B (n=8)	Control Group B/C (n=16)
Experimental Group C (n=8)	
<b>TOTAL:</b>	
Experimental Group (n = 24)	Control Group (n = 24)

### **3.13 Procedure**

The 'Over to You' intervention consists of six one-hour sessions. The sessions were delivered by the researcher with the support of a Teaching Assistant provided by the school. The Teaching Assistant would then deliver the delayed intervention to the control group.

Group A received the intervention in the Summer Term 2009. Groups B and C received the intervention in the Autumn Term 2009.

A brief outline of the programme is given below:

The aims of the course are for participants to:

- reflect on personal strengths and difficulties;
- set and work towards their own personal targets;
- increase awareness of how their thinking may affect their feelings and behaviour;
- recognise the impact of their communication style on others;
- practice using assertive strategies for resolving conflicts.

The course starts at the level of encouraging motivation for change. It incorporates many opportunities for pupils to reflect on their own attitudes, feelings and patterns of behaviour, the link between these becoming more explicit as the course progresses. It also encourages greater awareness of other people's feelings and the impact of emotions in social interaction. Alternative behavioural responses to common conflict situations become the focus of later sessions, with the aim of empowering greater behavioural choice.

Each of the six sessions consisted of an introduction, main session, and a plenary. The session aims are described below:

**Session 1: The way we are**

To increase self-awareness and identify personal targets for development.

**Session 2: Decision-making**

To consider the value of reflective rather than impulsive decision making.

**Session 3: Seeing it another way**

To appreciate that we can choose how we see situations and that our thoughts affect our feelings and behaviour.

**Session 4: Understanding how others feel**

To recognise other people's feelings and the impact we have on them by the way we communicate.

**Session 5: Resolving conflicts**

To practise assertive strategies for resolving conflicts.

**Session 6: How are we doing?**

To reflect on how we are with our peer group and think about more ways of resolving conflicts.

A timetabled lesson plan was created enhancing the original information given by the 'Over to You' author. Lesson plans can be found in *Appendix 3.1*.

**3.13.1 Implementer**

The author implemented the intervention. I am a Trainee Educational Psychologist, female, and with previous experience of running intervention courses for children and young people with emotional and behavioural difficulties.

Each school provided a Teaching Assistant to work in a supportive role within the group. In School 1, the Teaching Assistant was male and was known to all of the pupils who took part. He had worked in that role in the school for three years and was specifically involved in behaviour support in the 'Inclusion

Centre' at the school. The Teaching Assistant in School 2 was female and was known to all of the pupils who took part. She had worked in the school for five years and her role was also predominantly behaviour support in the 'School Achievement Centre'.

### **3.13.2 Apparatus**

The intervention was delivered in a classroom identified by the school setting. Standard classroom apparatus were used, that is, pens, pencils, board markers, and A3 paper. This was in addition to the specific resources described below:

- *'Over to You' workbook*: from Burton (2006)
- *Me Cards*: from McConnon (1990)
- *Visual Illusions*: from McConnon (1989)
- *Magic Eye*: NE Thing Enterprises (1993)
- *Feelings Diary*: from Gillian Shotton (2002)
- *Look before you leap*: Childsworld/Childsplay (1994)
- *Face it cards*: Childsworld/Childsplay (1998)
- *The conflict resolution game*: Childsworld/Childsplay (1995)

### **3.14 Ethical Considerations**

The ethical principles considered were those dictated by *The British Psychological Society: Code of Ethics: March 2006* (BPS, 2006). Whilst all of the sections of the Code of Conduct had to be adhered to, it was felt that the most relevant to this particular research were the following:

#### **Ethical Principle: Respect**

##### 1.2 (p.10) Standards of Privacy and Confidentiality

The participants were advised that the data collected from the measures would be numbered and the data would be kept in a secure place. This adhered to the guidelines requiring psychologists to

*keep appropriate records and restrict the scope of the disclosure to that which is consistent with professional purposes. (BPS, 2006).*

### 1.3 (p.12) Standard of Informed Consent

The researcher spoke to the Year 8 pupils in assembly, outlining the course and the activities within it. This adhered to the guidelines requiring psychologists to:

*Ensure that clients, particularly children and vulnerable adults are given ample opportunity to understand the nature, purpose, and anticipated consequences of any professional services or research participation.*

(BPS 2006)

The pupils who met the inclusion criteria were asked if they would like to take part; for those that responded, letters were sent to the parents of both the experimental and control group. The letter outlined the course and the measures that would be taken and asked the parents to contact the researcher if they did not want their children to take part. The letters can be found in *Appendix 3.2*. Whilst it must be acknowledged that parental consent was only passive, this was the method employed by the school to gain such consent. In future research, consent could be further established by telephoning the parents or asking them to return a response slip. However, the method employed in this research adequately adhered to the following guideline:

*Seek to obtain the informed consent of all clients to whom professional services or research participation are offered. (BPS, 2006).*

### 1.4 (p,13) Standards of Self-Determination

In the initial session of the intervention, the participants were advised of their right to withdraw. Participation in the research was also on a voluntary basis.

### **Ethical Principle: Competence**

*Psychologists value the continuing development and maintenance of high standards of competence in their professional work, and the importance of preserving their ability to function optimally within the recognised limits of their knowledge, skill, training, education, and experience. (BPS, 2006, p.14).*

It was necessary to acknowledge the limits of the knowledge, skills, training and experience of the researcher and the Teaching Assistant delivering the intervention. This ensured a level of professional competence was established and maintained.

### **Ethical Principle: Responsibility**

*Psychologists value their responsibilities to clients, to the general public, and to the profession and science of Psychology, including the avoidance of harm and the prevention of misuse or abuse of their contributions to society. (BPS, 2006, p.17)*

The researcher ensured that the participants were willing to take part in each of the sessions. The contents of the sessions were reviewed by the school before implementation; this ensured that the content was deemed appropriate for Year 8 pupils by the relevant professionals. The data gathered from this research were used to establish intervention effectiveness and/or efficacy. The results were recorded within this research and anonymous summaries disclosed to the schools and participants.

### **Ethical Principle: Integrity**

*Psychologists value honesty, accuracy, clarity, and fairness in their interactions with all persons, and seek to promote integrity in all facets of their scientific and professional endeavour. (BPS, 2006, p.20).*

After the intervention, the pupils were given the opportunity to meet with the researcher and overall descriptions of the findings were given. Data corresponding to individuals were not disclosed.

The researcher ensured that ethical principles and guidelines were discussed and implemented throughout the planning, implementation and analysis of this research.

### **3.15 Instruments**

Using questionnaires and checklists can be seen to offer a valid and economical method of obtaining information on children and young people's behaviour across settings (Dillman, 2000). As this research is quantitative in design, using questionnaires and checklist as the instruments to collect data seemed the most appropriate method.

#### **3.15.1 Screening Measure**

The instrument that was used to screen the pupils in order to ascertain the inclusion criteria was the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997). Both schools involved in the research use the SDQ self-report completed by the pupils as a whole school measure of mental wellbeing. This is a school-wide policy with consent gained from an opt-out option. The schools made the data available to the researcher in order to establish the sample for the study; the pre measures were taken at the beginning of term, two weeks before the commencement of the intervention.

#### **3.15.2 Pre-test and Post-test Measures**

The tools that were used to measure the impact of the intervention were:

- Strengths and Difficulties Questionnaire
- NfERNelson: Emotional Literacy Checklists

Pupils and teachers completed the SDQ and the Emotional Literacy checklist. Copies of the measures used can be found in *Appendix 3.3* and *Appendix 3.4*.

The pupils that completed the measures were the participants in the study; both the experimental and control groups completed the measures pre and post-test.

The teachers that completed the measures were the participants' form tutors, as they spent the most consistent amount of time with the participants. The same teachers completed the pre and post-test measures. A training session was held with the teachers who were to complete the measures to reduce the chance of differences in interpretation.

### **3.15.3 Description of Instruments**

#### ***Strengths and Difficulties Questionnaire (Goodman, 1997)***

The SDQ is a brief behavioural screening questionnaire about 3-16 year olds. It exists in several versions to meet the needs of researchers, clinicians and educationalists. The SDQ asks about 25 attributes, some positive and others negative. These 25 items are divided between 5 scales:

- Emotional symptoms (5 items).
- Conduct problems (5 items).
- Hyperactivity / inattention (5 items).
- Peer relationship problems (5 items).
- Pro-social behaviour (5 items).

The same 25 items are included in questionnaires for completion by the parents or teachers of 4-16 year olds.

Questionnaires for self-completion by adolescents ask about the same 25 traits, though the wording is slightly different. This self-report version is suitable for young people aged around 11-16, depending on their level of understanding and literacy.

## **Rationale for using the SDQ**

The SDQ was originally created by Goodman (1997); it is a modification of the Rutter Parent Questionnaire including additional questions on children's strengths (Rutter, 1967). The questionnaire was modified, as it was recognised that respondents want to identify child's strengths as well as weaknesses (Goodman, 1994).

The factor analyses and frequency distributions were expanded from the original scale (Goodman, 1994). Hill and Hughes (2007) examined the validity of the SDQ and concluded:

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 programs in improving mental health and decreasing symptoms of emotional and behavioural problems.

(Hill and Hughes, 2007; p.12)

Further information relating to the SDQ can be found at <http://www.sdqinfo.com> and <http://www.youthinmind.com>.

### ***NfERNelson: Emotional Literacy Assessment and Intervention – Ages 11 to 16: Southampton Psychology Service (Faupel, 2003)***

Steiner (1997) first used the term 'emotional literacy'; it can be defined as the ability of people to recognise, understand, handle and appropriately express their own emotions and to recognise, understand and respond appropriately to the expressed emotion of others (Faupel, 2003).

The purpose of this tool is to discover where a pupil's strengths and weaknesses are in the area of emotional literacy, in order to provide a better understanding of these competences, and, where necessary, to highlight areas

for intervention. Three standardised checklists enable the user to assess emotional literacy according to the perceptions of:

- adults in school (teachers, learning support assistants etc.);
- parents and carers at home;
- the young people themselves.

(Faupel, 2003)

The checklists cover five dimensions of emotional literacy:

- self-awareness;
- Self-regulation (managing one's own emotions);
- motivation;
- empathy;
- social skills.

#### Standardisation data

##### *Student Checklist (Ages 11 to 16)*

The sample that completed the Student Checklist comprised 967 students from 26 schools, of whom 49% were male.

##### *Teacher Checklist*

The Teacher Checklist was completed for 449 students in total, from 34 schools, of whom 51% were male.

#### Reliability and Validity of Standardised Data

Reliability was assessed using Cronbach's Alpha. Scores of around 0.70, for the majority of the scales within each checklist were assumed to be indicative of adequate reliability in this analysis.

Validity was assessed in two ways:

- by examining the patterns of 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 the principal components factor analysis.

### **Rationale for using Emotional Literacy Checklist**

The Emotional Literacy Checklist is completed by teachers and is also a self-report scale. Self-report scales usually possess adequate normative and psychometric properties and have been shown to be significant predictors of student classroom and regulatory behaviours (Perry and Winne, 2006; Diperna et al., 2002). In addition Borgers et al. (2004) reported that four response options are optimal; this is true for the Emotional Literacy Checklist. The Emotional Literacy Checklist is a relatively new tool with little research literature evaluating it. However, it is widely used in the UK; in particular, is it commonly used as a measure evaluating the effectiveness of the Social, Emotional, Aspects of Learning (SEAL) (Humphrey, 2008).

### **3.16 Linking the Intervention and Measures**

Table 3.5 links each session and the measures to which it is expected to relate.

The areas outlined in the table are the keys areas. However, the intervention covers aspects of additional sub-scales due to the underlying themes within the intervention

**Table 3.5** The links between the intervention and measure subscales.

Lesson outline	Areas covered linked to measure	
	<i>Emotional Literacy Checklist (EL)</i>	<i>Strengths and Difficulties Questionnaire (SDQ)</i>
The way we are: To increase self-awareness and identify personal targets for development.	Self-awareness  Motivation	Emotional Symptoms Behaviour Problems
Decision-making: To consider the value of reflective rather than impulsive decision making.	Self regulation	Hyperactivity Behaviour Problems
Seeing it another way: To appreciate that we can choose how we see situations and that our thoughts affect our feelings and behaviour.	Empathy	Peer Relationship Problems Pro-social Behaviour
Understanding how others feel: To recognise other people's feelings and the impact we have on them by the way we communicate.	Empathy  Social Skills	Emotional Symptoms Pro-social Behaviour
Resolving conflicts: To practise assertive strategies for resolving conflicts.	Self-awareness  Self regulation	Behaviour Problems
How are we doing? To reflect on how we are with our peer group and think about more ways of resolving conflicts.	Self-awareness  Social Skills	Peer Relationship Problems Behaviour Problems

### **3.17 Summary**

The realist paradigm suggests compatibility between aspects of approaches allowing for the broadest interpretation whilst still incorporating scientific rigour. As a researcher, the epistemological paradigm described as realism would best indicate my viewpoint; utilising experimental design allowed me to reject or accept hypotheses. It is necessary to utilise the empirical tradition as described by post-positivists.

Using a randomised controlled trial, the aim of this research was to evaluate the impact of the 'Over to You' intervention on emotional literacy and behaviour. The research targeted year 8 pupils who had been identified as having behavioural needs. The quantitative design model collected pre and post intervention data using the Emotional Literacy Checklist and the SDQ. Adhering to the ethical guidelines as stipulated by the British Psychological Society, the research offers a distinctive contribution to the evidence base around targeted interventions to prevent exclusion. The following chapter describes and analyses the data that were collected.

## Results

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This chapter will describe the data analysis of the results that were collected.

The chapter will be organised in the following way:

- Summary of dependent variables and measures used.
- Assumptions for parametric testing.
- Descriptive analysis of the data, graphs will be used to illustrate the mean total scores collated.
- Statistical analysis that was used to analyse the data; the hypothesis that each is testing; and the statistical significance of the results found.
- Summary of results.

The results will be categorised according to research hypotheses and headed according to whether the results were collected from students or teachers and the measure that was used (i.e. Emotional Literacy Checklist; Strengths and Difficulties Questionnaire).

### 4.1 Summary of Dependent Variables

**Table 4.1** A summary table showing the Dependent Variables

Dependent Variable	Dependent Variable Measure
<b>Emotional Literacy</b>	Emotional Literacy Checklist
<b>Behaviour</b> (also total difficulties and pro-social behaviour)	Strengths and Difficulties Questionnaire

The table above shows the dependent variable measures that were used in the study to evaluate the outcomes. The statistical analysis that was used to analyse the outcomes of the results was a 2\*2 mixed Analysis of Variance (ANOVA). The results of the ANOVA indicated variables that showed significant change. These variables were further investigated using Independent t-tests and Paired t-tests. Results that showed statistically significant differences between groups at pre-test were further analysed using an Analysis of Covariance (ANCOVA).

An ANOVA is a parametric test. In order to use this type of statistical analysis it is necessary to ensure that the data collected meets a range of assumptions.

## 4.2 Assumptions for Parametric Testing

### *Sample size*

**Table 4.2** A table showing the number of questionnaires received pre and post test.

Measure	Condition	Pre-test	Post-test	Attrition
<b>Emotional Literacy (Student)</b>	Experimental	24	20	4
	Control	24	23	1
<b>Emotional Literacy (Teacher)</b>	Experimental	24	20	4
	Control	24	23	1
<b>SDQ (Student)</b>	Experimental	24	20	4
	Control	24	23	1
<b>SDQ (Teacher)</b>	Experimental	24	20	4
	Control	24	23	1

The attrition rates were due to the non-return of completed questionnaires. Roberts and Russo (1999) state that a sample size of less than 8 per cell may reduce the power of the test. As Table 4.2 indicates, the data collected in this study shows the sample size was appropriate for carrying out parametric tests.

## 4.3 Assumptions of Normality

In order to check for the assumptions of normality, the Shapiro-Wilk test was used (Humphries et al., 2008). The test indicated that not all data sets met the assumption of normality, however Roberts and Russo (1999) state that “even major deviations from the assumptions are unlikely to reduce the power of the test.” To further analyse this aspect, box plots were used to ascertain the

number of outliers and only a small number of outliers were found (Dancy and Reidy, 2007).

Using a randomised control design in itself significantly reduces the likelihood of any initial differences between participants in the experimental and control conditions.

#### **4.4 Grouping Data Together**

In addition to ensuring that the assumptions for parametric testing were met, it was also necessary to consider the validity of grouping the data together. In this research there were three experimental groups (one from School 1 and two from School 2) and two control groups (one from School 1 and one from School 2). In order to ascertain whether the data meets the assumption of homogeneity between the groups, Box's Test of Equality of Covariance Matrices was used (Brace et al., 2009). This test was used on the data collected from the teachers and students from each of the groups and is shown in Appendix 4.1.

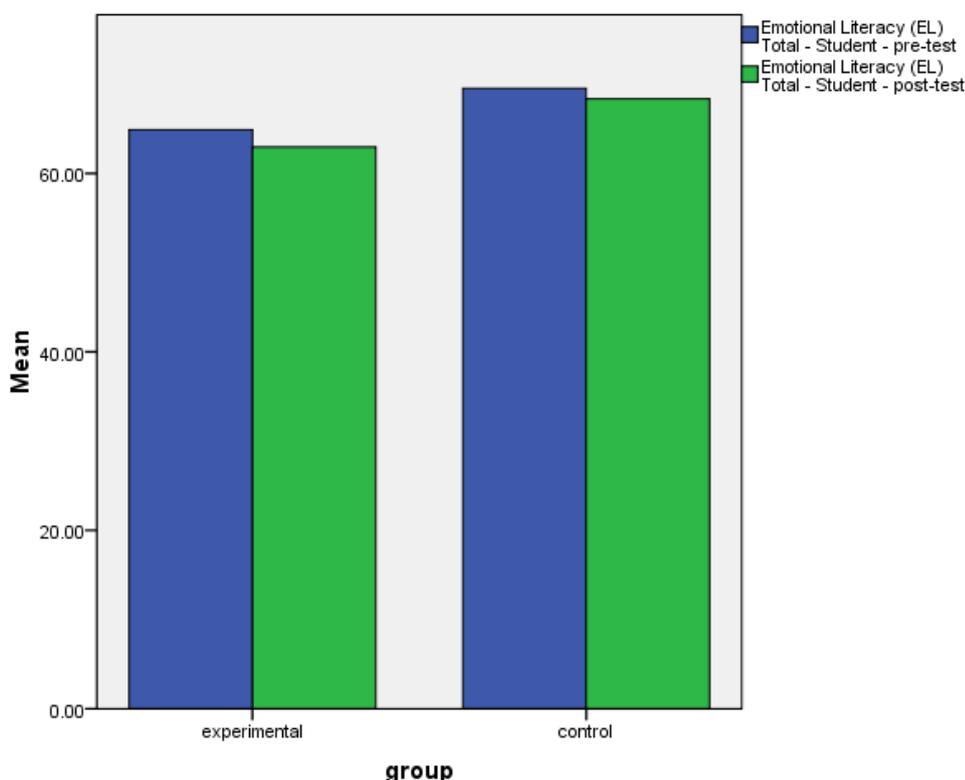
The tests showed no significant differences ( $p < .05$ ) between the three experimental groups at pre test. This enabled the researcher to treat the three groups as one experimental group and will be referred to as such throughout the rest of this research.

The tests showed no significant differences ( $p < .05$ ) between the two control groups at pre test. This enabled the researcher to treat the two groups as one control group and will be referred to as such throughout the rest of this research.

## 4.5 Descriptive Analysis

The mean scores of the data collated are shown in the graphs below. Graphs 4.1 and 4.2 describe the mean scores collated from the students. Graphs 4.3 and 4.4 describe the mean scores collated from the teachers. The descriptive analysis of the data is described below each graph.

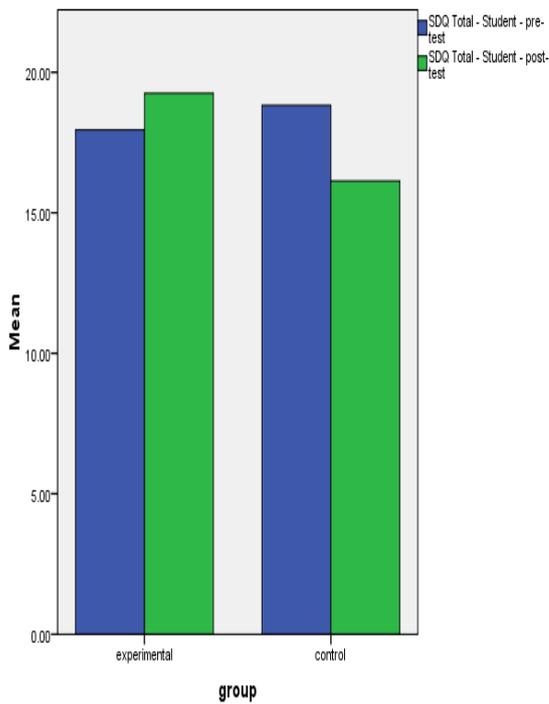
**Graph 4.1** A graph to show the total mean scores of the results collated from the student completion of the Emotional Literacy Checklist.



The graph displays the mean total scores collated from the students in the experimental and control groups before (pre) and after (post) the 'Over to You' intervention. The graph shows that for the Emotional Literacy Checklists completed by students the total mean scores decreased for both groups at the post-test measure. A decrease in emotional literacy scores indicates that their emotional literacy is at a lower level.

The graphs display the mean scores collated from the student completion of the Strengths and Difficulties Questionnaire. The graphs show the experimental and control groups before (pre) and after (post) the 'Over to You' intervention.

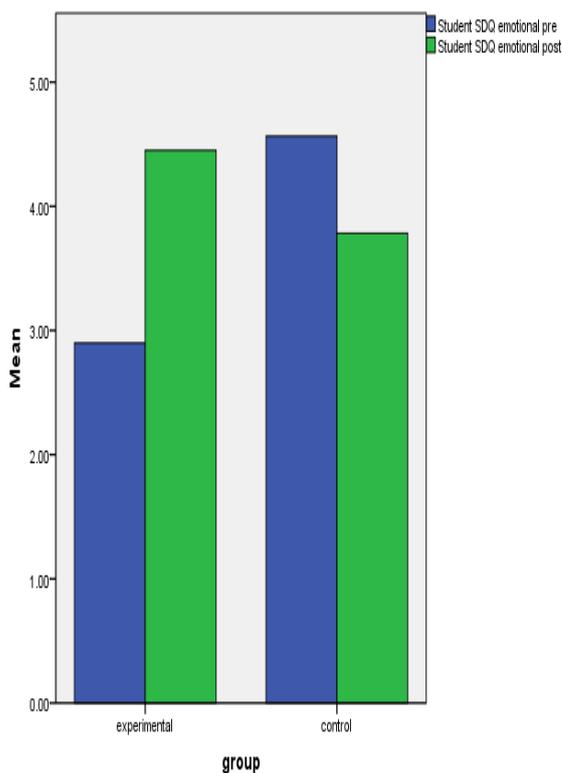
**Graph 4.2**



**Graph 4.2** A graph to show the Total Difficulties mean scores of the results collated from the student completion of the Strengths and Difficulties Questionnaire.

Graph 4.2 shows that for the SDQ completed by students, the Total Difficulties mean scores increased in the experimental group and decreased in the control group at the post-test measure. An increase in the mean score shows more Total Difficulties.

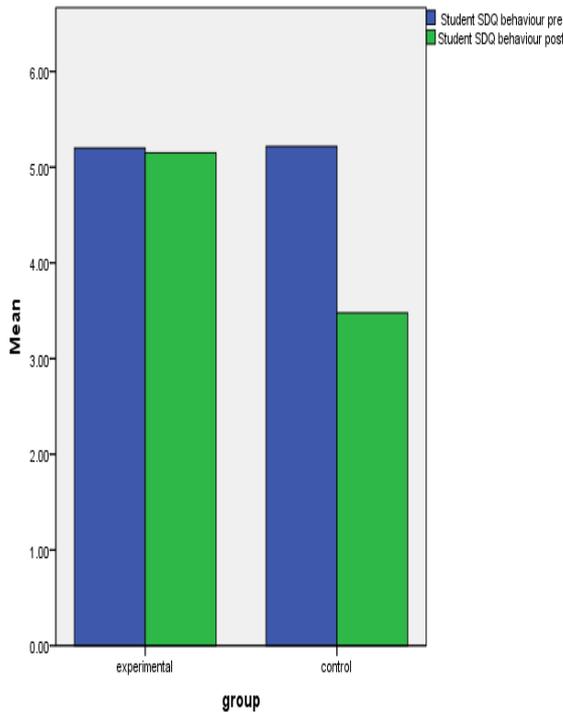
**Graph 4.2.1**



**Graph 4.2.1** A graph to show the Emotional Symptoms mean scores of the results collated from the student completion of the Strengths and Difficulties Questionnaire.

Graph 4.2.1 shows that for the SDQ completed by students, the Emotional Symptoms mean scores increased in the experimental group and decreased in the control group at the post-test measure. An increase in the mean score shows more Emotional Symptoms.

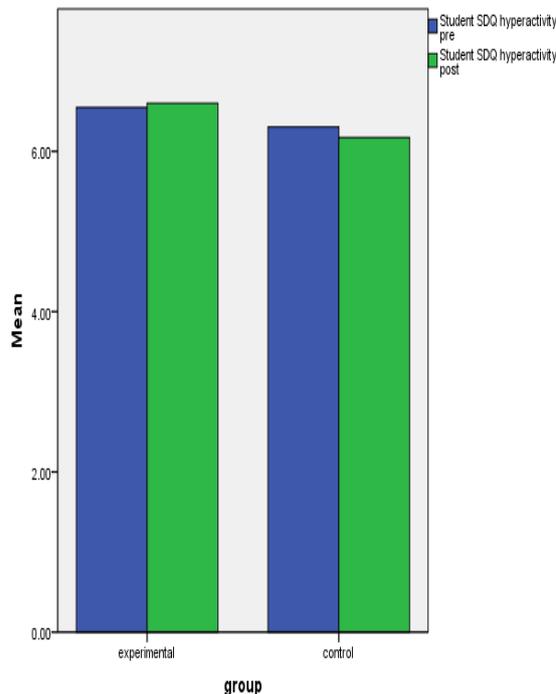
**Graph 4.2.3**



**Graph 4.2.3** A graph to show the Behaviour Problems mean scores of the results collated from the student completion of the Strengths and Difficulties Questionnaire.

Graph 4.2.3 shows that for the SDQ completed by students, the Behaviour Problems mean scores decreased in the experimental group and decreased in the control group at the post-test measure. An increase in the mean score shows more Behaviour Problems.

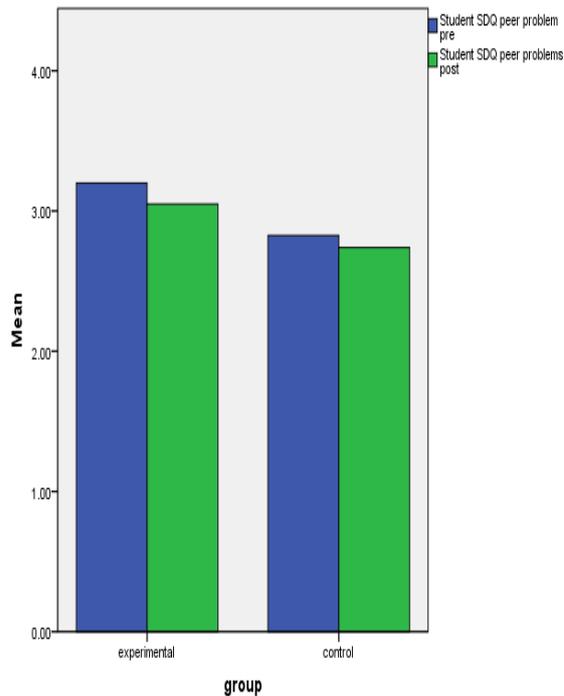
**Graph 4.2.4**



**Graph 4.2.4** A graph to show the Hyperactivity mean scores of the results collated from the student completion of the Strengths and Difficulties Questionnaire.

Graph 4.2.4 shows that for the SDQ completed by students, the Hyperactivity mean scores increased in the experimental group and decreased in the control group at the post-test measure. An increase in the mean score shows more Hyperactivity.

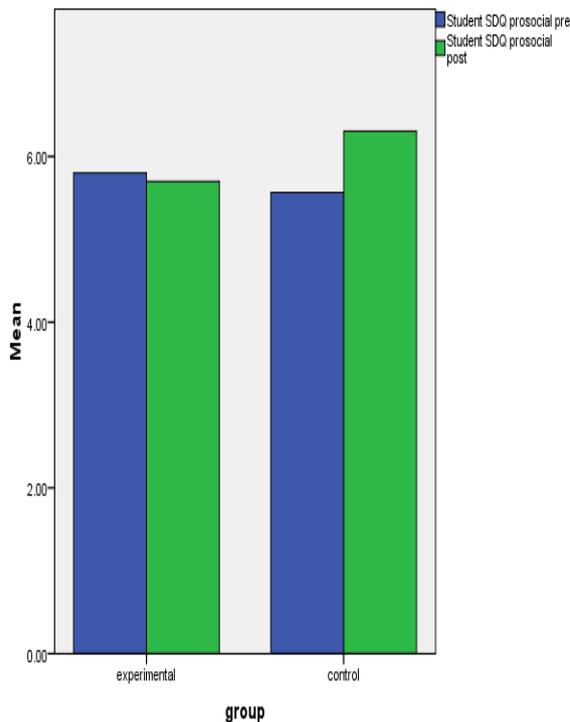
**Graph 4.2.5**



**Graph 4.2.5** A graph to show the Peer Relationship Problem mean scores of the results collated from the student completion of the Strengths and Difficulties Questionnaire.

Graph 4.2.5 shows that for the SDQ completed by students, the Peer Relationship Problem mean scores decreased in the experimental group and decreased in the control group at the post-test measure. An increase in the mean score shows more Peer Relationship Problems.

**Graph 4.2.6**

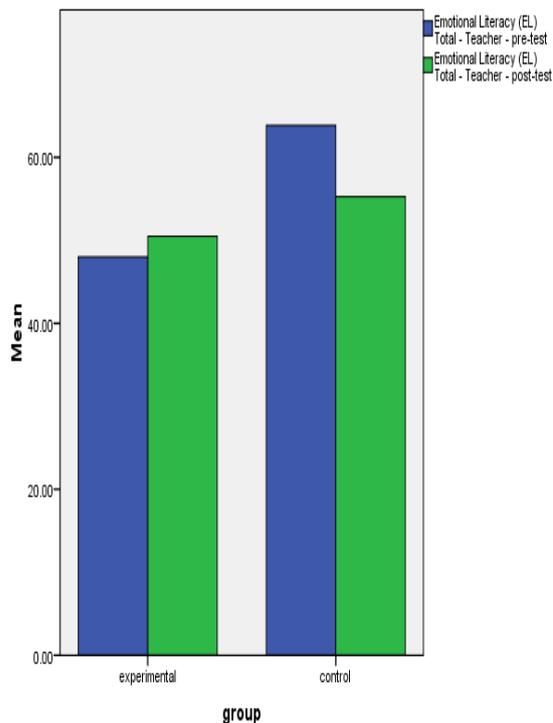


**Graph 4.2.6** A graph to show the Pro-Social Behaviour mean scores of the results collated from the student completion of the Strengths and Difficulties Questionnaire.

Graph 4.2.6 shows that for the SDQ completed by students, the Pro-Social Behaviour mean scores decreased in the experimental group and increased in the control group at the post-test measure. A decrease in the mean score indicates a deterioration of Pro-social Behaviour.

The graphs display the mean scores collated from the teacher completion of the Emotional Literacy Checklist. The graphs show the experimental and control groups before (pre) and after (post) the 'Over to You' intervention.

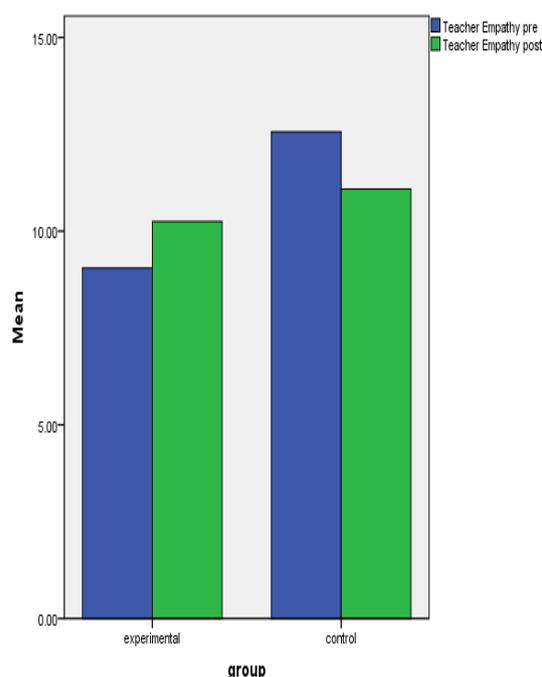
**Graph 4.3**



**Graph 4.3** A graph to show the total mean scores of the results collated from the teacher completion of the Emotional Literacy Checklist.

Graph 4.3 shows that for the EL Checklists completed by teachers, the total mean scores increased for the experimental group and decreased for the control group at the post-test measure. A decrease in Emotional Literacy scores indicates that Emotional Literacy is at a lower level.

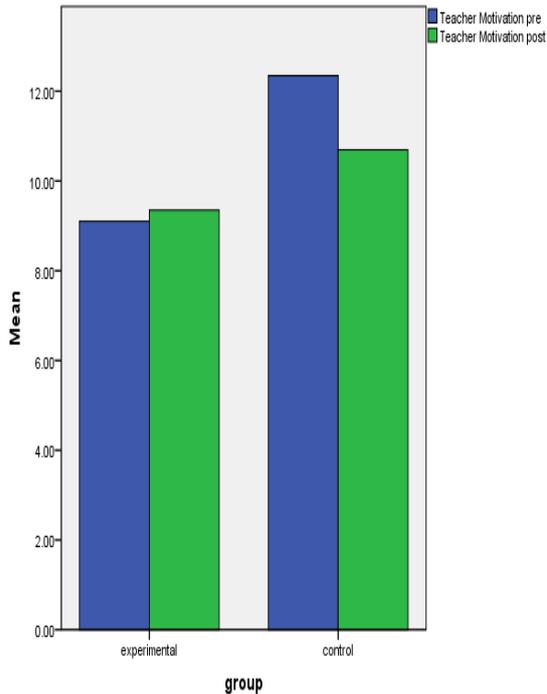
**Graph 4.3.1**



**Graph 4.3.1** A graph to show the Empathy mean scores of the results collated from the teacher completion of the Emotional Literacy Checklist.

Graph 4.3.1 shows that for the EL Checklists completed by teachers, the Empathy mean scores increased for the experimental group and decreased for the control group at the post-test measure. A decrease in Empathy scores indicates that Empathy is at a lower level.

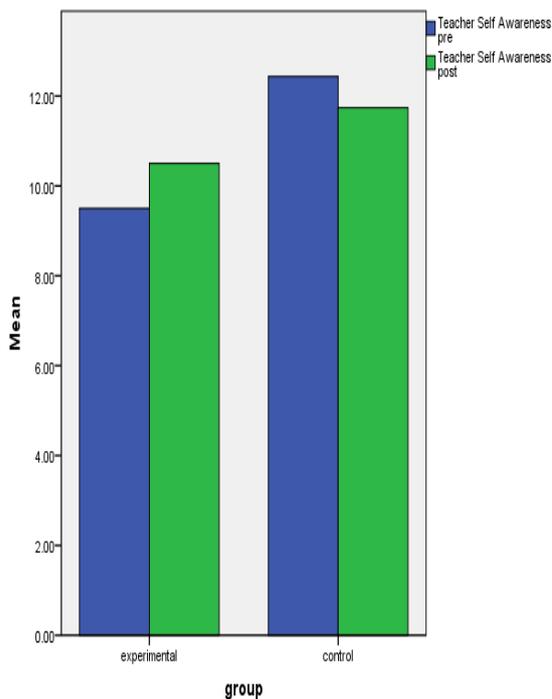
**Graph 4.3.2**



**Graph 4.3.2** A graph to show the Motivation mean scores of the results collated from the teacher completion of the Emotional Literacy Checklist.

Graph 4.3.2 shows that for the EL Checklists completed by teachers, the Motivation mean scores increased for the experimental group and decreased for the control group at the post-test measure. A decrease in Motivation scores indicates that Motivation is at a lower level.

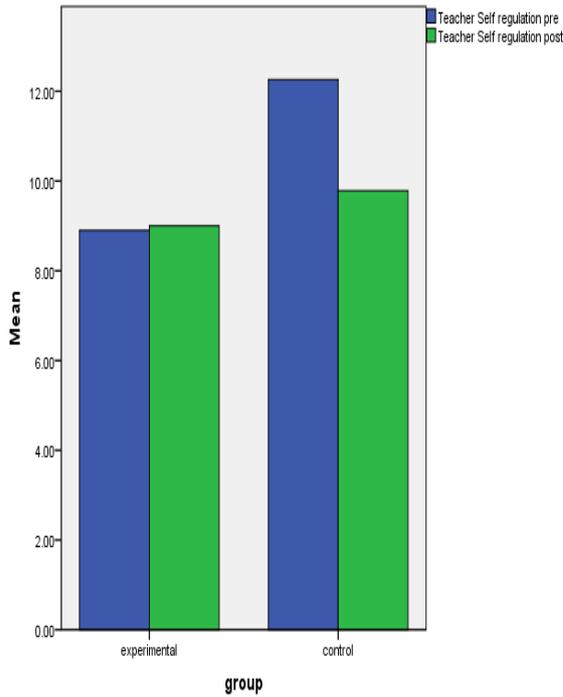
**Graph 4.3.3**



**Graph 4.3.3** A graph to show the Self Awareness mean scores of the results collated from the teacher completion of the Emotional Literacy Checklist.

Graph 4.3.3 shows that for the EL Checklists completed by teachers, the Self Awareness mean scores increased for the experimental group and decreased for the control group at the post-test measure. A decrease in Self Awareness scores indicates that Self Awareness is at a lower level.

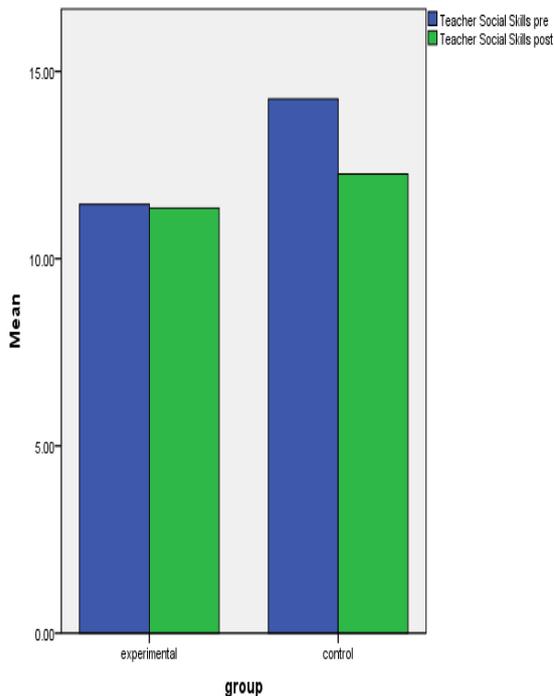
**Graph 4.3.4**



**Graph 4.3.4** A graph to show the Self Regulation mean scores of the results collated from the teacher completion of the Emotional Literacy Checklist.

Graph 4.3.4 shows that for the EL Checklists completed by teachers, the Self Regulation mean scores increased for the experimental group and decreased for the control group at the post-test measure. A decrease in Self Regulation scores indicates that Self Regulation is at a lower level.

**Graph 4.3.5**

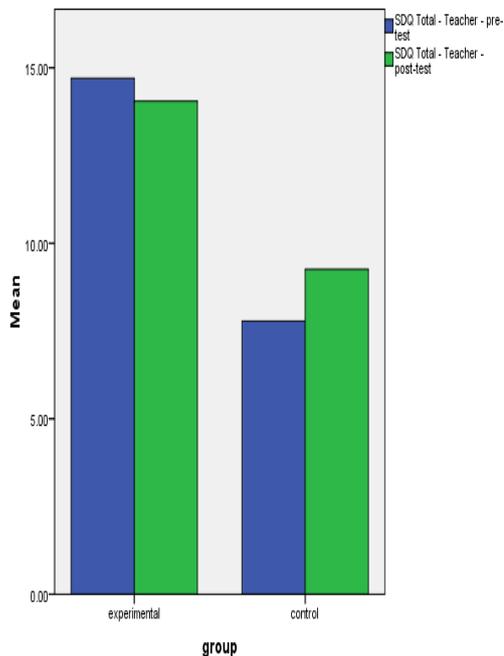


**Graph 4.3.5** A graph to show the Social Skills mean scores of the results collated from the teacher completion of the Emotional Literacy Checklist.

Graph 4.3.5 shows that for the EL Checklists completed by teachers, the Social Skills mean scores decreased for the experimental group and decreased for the control group at the post-test measure. A decrease in Social Skills scores indicates that Social Skills are at a lower level.

The graphs display the mean scores collated from the teacher completion of the Strengths and Difficulties Questionnaire. The graphs show the experimental and control groups before (pre) and after (post) the 'Over to You' intervention.

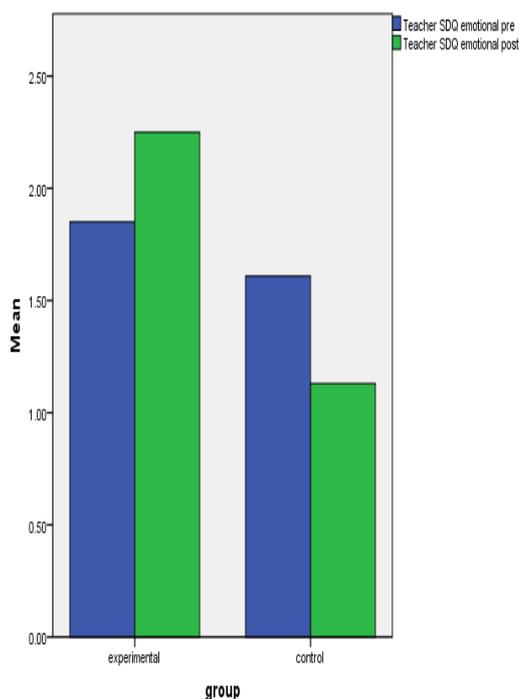
**Graph 4.4**



**Graph 4.4** A graph to show the Total Difficulties mean scores of the results collated from the teacher completion of the Strengths and Difficulties Questionnaire.

Graph 4.4 shows that for the SDQ completed by teachers, the Total Difficulties mean scores decreased in the experimental group and increased in the control group at the post-test measure. An increase in the mean score shows more Total Difficulties

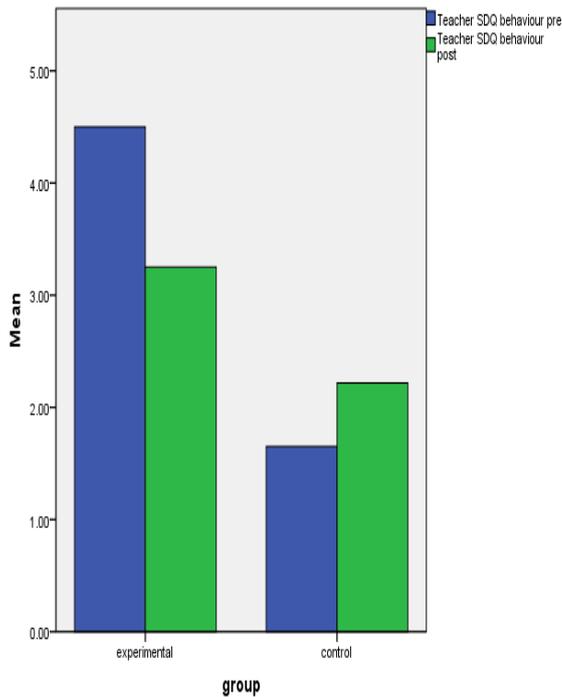
**Graph 4.4.1**



**Graph 4.4.1** A graph to show the Emotional Symptoms mean scores of the results collated from the teacher completion of the Strengths and Difficulties Questionnaire.

Graph 4.4.1 shows that for the SDQ completed by teachers, the Emotional Symptoms mean scores increased in the experimental group and decreased in the control group at the post-test measure. An increase in the mean score shows more Emotional Symptoms.

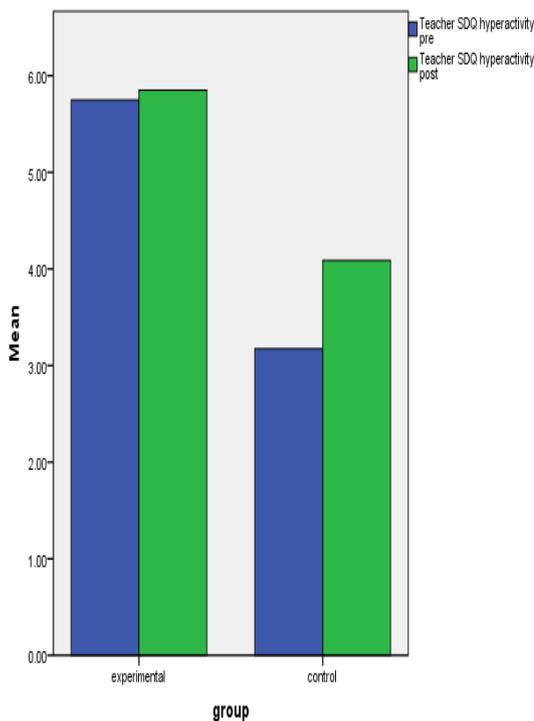
**Graph 4.4.2**



**Graph 4.4.2** A graph to show the Behaviour Problems mean scores of the results collated from the teacher completion of the Strengths and Difficulties Questionnaire.

Graph 4.4.2 shows that for the SDQ completed by teachers, the Behaviour Problems mean scores decreased in the experimental group and increased in the control group at the post-test measure. An increase in the mean score shows more Behaviour Problems.

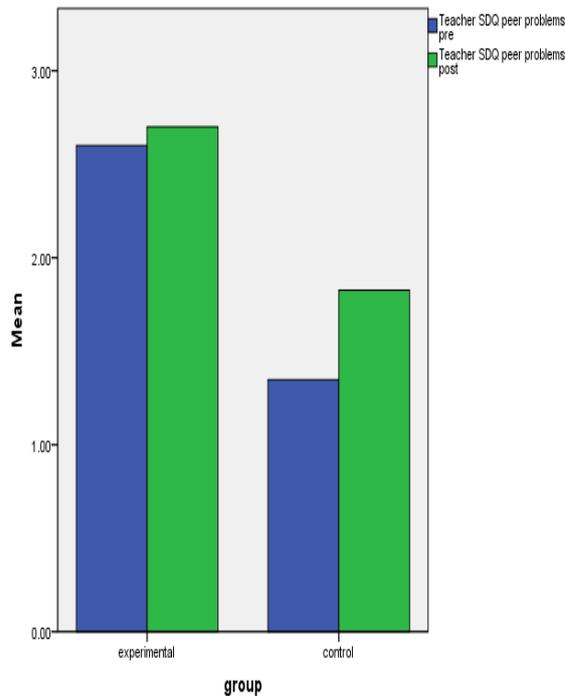
**Graph 4.4.3**



**Graph 4.4.3** A graph to show the Hyperactivity mean scores of the results collated from the teacher completion of the Strengths and Difficulties Questionnaire.

Graph 4.4.3 shows that for the SDQ completed by teachers, the Hyperactivity mean scores increased in the experimental group and increased in the control group at the post-test measure. An increase in the mean score shows more Hyperactivity.

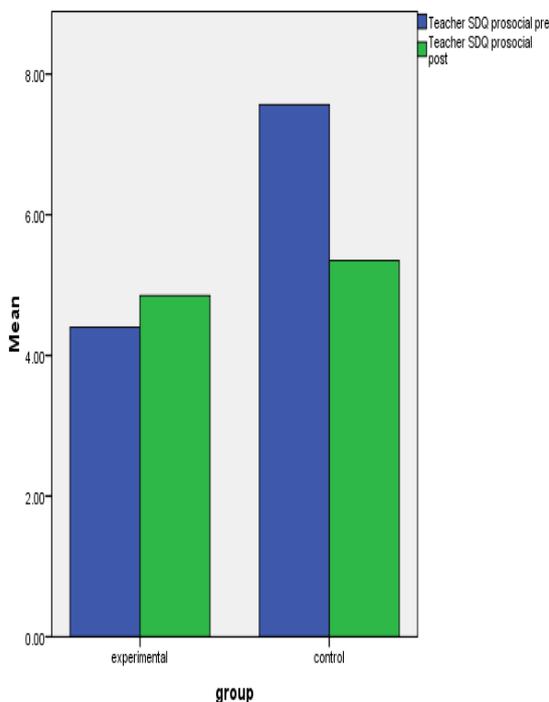
**Graph 4.4.4**



**Graph 4.4.4** A graph to show the Peer Relationship Problem mean scores of the results collated from the teacher completion of the Strengths and Difficulties Questionnaire.

Graph 4.4.4 shows that for the SDQ completed by teachers, the Peer Relationship Problem mean scores increased in the experimental group and increased in the control group at the post-test measure. An increase in the mean score shows more Peer Relationship Problems.

**Graph 4.4.5**



**Graph 4.4.5** A graph to show the Pro-Social Behaviour mean scores of the results collated from the teacher completion of the Strengths and Difficulties Questionnaire.

Graph 4.4.5 shows that for the SDQ completed by teachers, the Pro-Social Behaviour mean scores increased in the experimental group and decreased in the control group at the post-test measure. A decrease in the mean score indicates a deterioration of Pro-social Behaviour.

The data collated will be analysed to assess the statistical significance of the results found.

## Statistical Analysis

### 4.6 ANOVAs conducted on student data

#### Student – Emotional Literacy

The data collected from student completion of the Emotional Literacy (EL) Checklist was analysed using a 2\*2 mixed ANOVA design. The first factor was the within-subjects factor of time, with two levels, the Pre-test measure and the Post-test measure. The second factor was the between-subjects factor of group, the Experimental Group that received the ‘Over to You’ intervention and the Control Group who didn’t receive the intervention at this time.

The hypothesis tested was:

- There will be a statistically significant difference between the Emotional Literacy of participants in the control group, and the Emotional Literacy of participants in the experimental group after the completion of the ‘Over to You’ intervention.

The results are shown in Table 4.3, results in bold indicate significant scores ( $p < .05$ ).

**Table 4.3** A table to show the results found from 2\*2 mixed ANOVA used on the data collated from the student completion of the Emotional Literacy Checklist.

Variable	Effect	df	F	Sig
<b>Emotional Literacy (EL) Total</b>	<b>Time</b>	<b>1</b>	<b>4.107</b>	<b>.049</b>
	Time*Group	1	.253	.617

The results indicate the following:

For the variable Emotional Literacy (EL) Total, the main effect of time was significant:  $F(1,41) = 4.107, p = .049$ .

The group by time interaction was not significant  $F(1,41) = 0.253, p = .617$ .

## **Summary**

In summary, statistically significant results were found for the variable Emotional Literacy (EL) Total ( $p=.049$ ). This variable will be analysed further in section 4.9

## **Student – Strength and Difficulties Questionnaire**

The data collected from student completion of the Strengths and Difficulties Questionnaire (SDQ) was analysed using a 2\*2 mixed ANOVA design. The first factor was the within-subjects factor of time, with two levels, the Pre-test measure and the Post-test measure. The second factor was the between-subjects factor of group, the Experimental Group that received the 'Over to You' intervention and the Control Group who didn't receive the intervention at this time.

The hypothesis tested was:

- There will be a statistically significant difference between the behaviour of participants in the control group, and the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention.

The results are shown in Table 4.4, results in bold indicate significant scores ( $p<.05$ ) and ( $p<.01$ ).

**Table 4.4** A table to show the results found from 2\*2 mixed ANOVA used on the data collated from the student completion of the Strengths and Difficulties Questionnaire.

Variable	Effect	df	F	Sig
<b>SDQ Total</b>	Time	1	.775	.384
	<b>Time*Group</b>	<b>1</b>	<b>6.348</b>	<b>.016</b>
<b>Emotional Symptoms</b>	Time	1	1.149	.290
	<b>Time*Group</b>	<b>1</b>	<b>10.613</b>	<b>.002</b>
<i>Behaviour Problems</i>	<b>Time</b>	<b>1</b>	<b>8.489</b>	<b>.006</b>
	<b>Time*Group</b>	<b>1</b>	<b>7.567</b>	<b>.009</b>
Hyperactivity	Time	1	.012	.914
	Time*Group	1	.060	.808
Peer Relationship Problems	Time	1	.183	.671
	Time*Group	1	.013	.910
Pro-social Behaviour	Time	1	.877	.35411
	Time*Group	1	1.512	.226

The results indicate the following:

For the variable SDQ Total, the main effect of time was not significant:  $F(1,41) = 0.775$ ,  $p = .384$ .

The group by time interaction was significant  $F(1,41) = 6.348$ ,  $p = .016$ .

For the variable Emotional Symptoms (SDQ), the main effect of time was not significant:  $F(1,41) = 1.149$ ,  $p = .290$ .

The group by time interaction was significant  $F(1,41) = 10.613$ ,  $p = .002$ .

For the variable Behaviour Problems (SDQ), the main effect of time was significant:  $F(1,41) = 8.489$ ,  $p = .006$ .

The group by time interaction was significant  $F(1,41) = 7.567$ ,  $p = .009$ .

For the variable Hyperactivity (SDQ), the main effect of time was not significant:  $F(1,41) = 0.012, p = .914$ .

The group by time interaction was not significant  $F(1,41) = 0.060, p = .808$ .

For the variable Peer Relationship Problems (SDQ), the main effect of time was not significant:  $F(1,41) = 0.183, p = .671$ .

The group by time interaction was not significant  $F(1,41) = 0.013, p = .910$ .

For the variable Pro-social Behaviour (SDQ), the main effect of time was not significant:  $F(1,41) = 0.877, p = .354$ .

The group by time interaction was not significant  $F(1,41) = 1.512, p = .226$ .

## **Summary**

In summary, no statistically significant results were found for the variables Hyperactivity; Peer Relationship Problems, and Pro-social Behaviour. Statistically significant results were found for the variables SDQ Total ( $p=.016$ ); Emotional Symptoms ( $p=.002$ ); and Behaviour Problems ( $p=.006$  and  $p=.009$ ). These variables will be analysed further in section 4.10.

## **4.7 ANOVAs conducted on teacher data**

### **Teacher – Emotional Literacy**

The data collected from teacher completion of the Emotional Literacy (EL) Checklist was analysed using a 2\*2 mixed ANOVA design. The first factor was the within-subjects factor of time, with two levels, the Pre-test measure and the Post-test measure. The second factor was the between-subjects factor of group, the Experimental Group that received the 'Over to You' intervention and the Control Group who didn't receive the intervention at this time.

The hypothesis tested was:

- There will be a statistically significant difference between teacher perception of participants' Emotional Literacy in the control group, and teacher

perception of participants' Emotional Literacy in the experimental group after the completion of the 'Over to You' intervention.

The results are shown in Table 4.5, results in bold indicate significant scores ( $p < .05$ ) and ( $p < .01$ )

**Table 4.5** A table to show the results found from 2\*2 mixed ANOVA used on the data collated from the teacher completion of the Emotional Literacy Checklist.

Variable	Effect	df	F	Sig
<b>Emotional Literacy (EL) Total</b>	Time	1	3.314	.076
	<b>Time*Group</b>	<b>1</b>	<b>10.96</b>	<b>.002</b>
<b>Empathy (EL)</b>	Time	1	.087	.770
	<b>Time*Group</b>	<b>1</b>	<b>8.048</b>	<b>.007</b>
<b>Motivation (EL)</b>	Time	1	2.312	.136
	<b>Time*Group</b>	<b>1</b>	<b>4.255</b>	<b>.046</b>
Self Awareness (EL)	Time	1	.120	.731
	Time*Group	1	3.721	.061
<b>Self Regulation (EL)</b>	<b>Time</b>	<b>1</b>	<b>7.764</b>	<b>.008</b>
	<b>Time*Group</b>	<b>1</b>	<b>9.124</b>	<b>.004</b>
<b>Social Skills (EL)</b>	<b>Time</b>	<b>1</b>	<b>6.325</b>	<b>.016</b>
	<b>Time*Group</b>	<b>1</b>	<b>5.178</b>	<b>.028</b>

The results indicate the following:

For the variable Emotional Literacy (EL) Total, the main effect of time was not significant:  $F(1,41) = 3.314$ ,  $p = .076$ .

The group by time interaction was significant  $F(1,41) = 10.96$ ,  $p = .002$ .

For the variable Empathy (EL), the main effect of time was not significant:  $F(1,41) = 0.087$ ,  $p = .770$ .

The group by time interaction was significant  $F(1,41) = 8.048, p = .007$ .

For the variable Motivation (EL), the main effect of time was not significant:  $F(1,41) = 2.312, p = .136$ .

The group by time interaction was significant  $F(1,41) = 4.255, p = .046$ .

For the variable Self Awareness (EL), the main effect of time was not significant:  $F(1,41) = 0.120, p = .731$ .

The group by time interaction was not significant  $F(1,41) = 3.721, p = .061$ .

For the variable Self Regulation (EL), the main effect of time was significant:  $F(1,41) = 7.764, p = .008$ .

The group by time interaction was significant  $F(1,41) = 9.124, p = .004$ .

For the variable Social Skills (EL), the main effect of time was significant:  $F(1,41) = 6.325, p = .016$ .

The group by time interaction was significant  $F(1,41) = 5.178, p = .028$ .

## **Summary**

In summary, no statistically significant results were found for the variable Self Awareness (EL). Statistically significant results were found for the variables Emotional Literacy (EL) Total ( $p=.002$ ); Empathy (EL) ( $p=.007$ ); Motivation (EL) ( $p=.046$ ); Self Regulation (EL) ( $p=.008$  and  $p=.004$ ); and Social Skills (EL) ( $p=.016$  and  $p=.028$ ). These variables will be analysed further in section 4.11.

## **Teacher – Strength and Difficulties Questionnaire**

The data collected from teacher completion of the Strengths and Difficulties Questionnaire (SDQ) was analysed using a 2\*2 mixed ANOVA design. The first factor was the within-subjects factor of time, with two levels, the Pre-test measure and the Post-test measure. The second factor was the between-subjects factor of group, the Experimental Group that received the 'Over to You'

intervention and the Control Group who didn't receive the intervention at this time.

The hypothesis tested was:

- There will be a statistically significant difference between teacher perception of the behaviour of participants in the control group, and the teacher perception of the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention.

The results are shown in Table 4.6, results in bold indicate significant scores ( $p < .05$ ) and  $p < .01$ ).

The results indicate the following:

For the variable SDQ Total, the main effect of time was not significant:  $F(1,41) = 0.142$ ,  $p = .708$ .

The group by time interaction was not significant  $F(1,41) = 0.938$ ,  $p = .339$ .

For the variable Emotional Symptoms (SDQ), the main effect of time was not significant:  $F(1,41) = 0.008$ ,  $p = .929$ .

The group by time interaction was not significant  $F(1,41) = 1.024$ ,  $p = .318$ .

For the variable Behaviour Problems (SDQ), the main effect of time was not significant:  $F(1,41) = 0.818$ ,  $p = .371$ .

The group by time interaction was significant  $F(1,41) = 5.749$ ,  $p = .021$ .

For the variable Hyperactivity (SDQ), the main effect of time was not significant:  $F(1,41) = 1.463$ ,  $p = .233$ .

The group by time interaction was not significant  $F(1,41) = 0.942$ ,  $p = .337$ .

For the variable Peer Relationship Problems (SDQ), the main effect of time was not significant:  $F(1,41) = 0.536$ ,  $p = .468$ .

The group by time interaction was not significant  $F(1,41) = 0.229$ ,  $p = .634$ .

**Table 4.6** A table to show the results found from 2\*2 mixed ANOVA used on the data collated from the teacher completion of the Strengths and Difficulties Questionnaire.

Variable	Effect	df	F	Sig
SDQ Total	Time	1	.142	.708
	Time*Group	1	.938	.339
Emotional Symptoms (SDQ)	Time	1	.008	.929
	Time*Group	1	1.024	.318
<i>Behaviour Problems (SDQ)</i>	Time	1	.818	.371
	<b>Time*Group</b>	<b>1</b>	<b>5.749</b>	<b>.021</b>
Hyperactivity (SDQ)	Time	1	1.463	.233
	Time*Group	1	.942	.337
Peer Relationship Problems (SDQ)	Time	1	.536	.468
	Time*Group	1	.229	.634
<b>Pro-social Behaviour (SDQ)</b>	Time	1	3.818	.058
	<b>Time*Group</b>	<b>1</b>	<b>8.696</b>	<b>.005</b>

For the variable Pro-social Behaviour (SDQ), the main effect of time was not significant:  $F(1,41) = 3.818, p = .058$ .

The group by time interaction was significant  $F(1,41) = 8.696, p = .005$ .

### Summary

In summary, no statistically significant results were found for the variables SDQ Total; Emotional Symptoms; Hyperactivity; and Peer Relationship Problems. Statistically significant results were found for the variables Behaviour Problems ( $p=.005$ ) and Pro-social Behaviour ( $p=.005$ ). These variables will be analysed further in section 4.12.

#### 4.8 Distribution of data

When completing the Independent t-tests each variable was examined using Levene's Test for Equality of Variance. If Levene's  $p > .05$ , then there is an equality of variance. If Levene's  $p < .05$ , then there is not equality of variance.

Although not essential, in order to promote statistical rigour those variables not showing an equality of variance will be analysed using the non-parametric equivalent to the Independent  $t$ -test which is the Mann-Whitney U test.

Levene's Test for Equality of Variance indicated that the all of the student data showed an equality of variance. From the teacher data the following variables should be analysed using the Mann-Whitney U test.

**Table 4.7** *A table to show the distribution of teacher data as indicated by the Levene's Test for Equality of Variance.*

Parametric tests	Mann-Whitney U test
Pro-social Behaviour (SDQ)	Behaviour Problems (SDQ) (between pre and post-test)
Motivation (EL)	Emotional Literacy (EL) Total (between pre-test)
Social Skills (EL)	Empathy (EL) (between pre-test)
	Self Regulation (EL) (between pre-test)

The following section will describe the t-tests and Mann-Whitney U-tests (where appropriate) that were conducted to investigate the statistically significant variables identified by the ANOVAs. These tests will look at the between group and within group relationships. They will be described making explicit links to the hypotheses investigated.

## 4.9 Hypothesis 1

### Hypothesis 1:

- There will be a statistically significant difference between the Emotional Literacy of participants in the control group, and the Emotional Literacy of participants in the experimental group after the completion of the 'Over to You' intervention.

### Student – Emotional Literacy Checklist – Between Groups

The variables that showed statistically significant results in the Mixed ANOVA were further analysed using the independent *t*-test. This test was used to compare the scores of the participants in the Experimental and Control Groups (Between groups). An independent *t*-test was used to analyse scores collated from pre-test measures then post-test measures.

The results are shown in Table 4.8 and Table 4.9, results in bold indicate significant scores ( $p < .05$ ).

The results are further explained in Appendix 4.2.

**Table 4.8** *A table to show the results found from the independent t-test used on the pre-test data collated from the student completion of the Emotional Literacy Checklist*

Variable	Sample	Pre Test Mean +(sd)	T	Df	Sig 2-tailed
Emotional Literacy (EL) Total	Experimental	64.90 (7.85)	-1.888	41	.066
	Control	69.52 (8.14)			

## Summary

In summary, no statistically significant results were found for the variable Emotional Literacy (EL) total when analysing the between-group pre-test measure.

**Table 4.9** A table to show the results found from the independent *t*-test used on the post-test data collated from the student completion of the Emotional Literacy Checklist

Variable	Sample	Post Test Mean+(sd)	T	Df	Sig 2-tailed
<b>Emotional Literacy (EL) Total</b>	<b>Experimental</b>	<b>62.95 (8.17)</b>	<b>-2.260</b>	<b>41</b>	<b>.029</b>
	<b>Control</b>	<b>68.35 (7.49)</b>			

## Summary

In summary, significant results were found for the variable Emotional Literacy (EL) Total ( $p=.029$ ) when analysing the between-group post-test measure.

### **Student – Emotional Literacy Checklist – Within Groups**

The variables that showed significant results in the Mixed ANOVA were further analysed using the paired *t*-test. This test was used to compare the scores of the participants in the pre-test and post-test measures (within group). A paired *t*-test was used to analyse scores collated from the Experimental Group then the Control Group.

The results are shown in Table 4.10 and 4.11, results in bold indicate significant scores ( $p<.05$ ).

The results are further explained in Appendix 4.2.

**Table 4.10** A table to show the results found from the paired *t*-test used on the experimental group data collated from the student completion of the Emotional Literacy Checklist

Variable	Pre-Test Mean +(sd)	Post-Test Mean+(sd)	T	Df	Sig 2-tailed
Emotional Literacy (EL) Total	64.90 (7.85)	62.95 (8.17)	1.669	19	.112

### Summary

In summary, no significant results were found for the variable Emotional Literacy (EL) Total when analysing the within-group (experimental) measure.

**Table 4.11** A table to show the results found from the paired *t*-test used on the control group data collated from the student completion of the Emotional Literacy Checklist

Variable	Pre-Test Mean +(sd)	Post-Test Mean+(sd)	T	Df	Sig 2-tailed
Emotional Literacy (EL) Total	69.52 (8.14)	68.35 (7.49)	1.154	22	.261

### Summary

In summary, no statistically significant results were found for the variable Emotional Literacy (EL) Total when analysing the within-group (control) measure.

## 4.9 Hypothesis 2

### Hypothesis 2:

- There will be a statistically significant difference between the behaviour of participants in the control group, and the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention.

### Student – Strength and Difficulties Questionnaire – Between Groups

The variables that showed statistically significant results in the Mixed ANOVA were further analysed using the independent *t*-test. This test was used to compare the scores of the participants in the Experimental and Control Groups. An independent *t*-test was used to analyse scores collated from pre-test measures then post-test measures.

The results are shown in Table 4.12 and 4.13, results in bold indicate significant scores ( $p < .05$ ) and/or ( $p < .01$ ).

The results are further explained in Appendix 4.3.

### **Summary**

In summary, no statistically significant results were found for the variables SDQ Total and Behaviour Problems (SDQ). Statistically significant results were found for the variable Emotional Symptoms (SDQ) ( $p = .006$ ) when analysing the between-group pre-test measure.

**Table 4.12** *A table to show the results found from the independent *t*-test used on the pre-test data collated from the student completion of the Strengths and Difficulties Questionnaire.*

Variable	Sample	Pre Test Mea +(sd)	T	Df	Sig 2- tailed
SDQ Total	Experimental	17.95 (4.30)	-.788	41	.435
	Control	18.83 (2.95)			
<b>Emotional Symptoms (SDQ)</b>	<b>Experimental</b>	<b>2.90 (1.68)</b>	<b>-2.912</b>	<b>41</b>	<b>.006</b>
	<b>Control</b>	<b>4.57 (2.02)</b>			
<i>Behaviour Problems (SDQ)</i>	Experimental	5.20 (1.11)	-.049	41	.961
	Control	5.22 (1.20)			

**Table 4.13** A table to show the results found from the independent t-test used on the post-test data collated from the student completion of the Strengths and Difficulties Questionnaire

Variable	Sample	Pre Test Mean+(sd)	T	Df	Sig 2- tailed
SDQ Total	Experimental	19.25 (5.01)	1.942	41	.059
	Control	16.13 (5.45)			
Emotional Symptoms (SDQ)	Experimental	4.45 (2.28)	.986	41	.330
	Control	3.78 (2.15)			
<i>Behaviour Problems (SDQ)</i>	<b>Experimental</b>	<b>5.15 (1.87)</b>	<b>3.091</b>	<b>41</b>	<b>.004</b>
	<b>Control</b>	<b>3.48 (1.67)</b>			

## **Summary**

In summary, no statistically significant results were found for the variables SDQ Total and Emotional Symptoms (SDQ). Statistically significant results were found for the variable Behaviour Problems (SDQ) ( $p=.004$ ) when analysing the between-group post-test measure.

### **Student – Strength and Difficulties Questionnaire – Within Groups**

The variables that showed significant results in the Mixed ANOVA were further analysed using the paired  $t$ -test. This test was used to compare the scores of the participants in the pre-test and post-test measures (within group). A paired  $t$ -test was used to analyse scores collated from the Experimental Group then the Control Group.

The results are shown in Table 4.14 and 4.15, results in bold indicate significant scores ( $p<.05$ ) and/or ( $p<.01$ ). The results are further explained in Appendix 4.3.

#### **Summary (Table 4.14)**

In summary, no statistically significant results were found for the variables SDQ Total and Behaviour Problems (SDQ). A statistically significant result was found for the variable Emotional Symptoms (SDQ) ( $p=.008$ ) when analysing the within-group (experimental) measure.

#### **Summary (Table 4.15)**

In summary, no statistically significant results were found for the variable Emotional Symptoms (SDQ). A statistically significant result was found for the variables SDQ Total ( $p=.020$ ) and Behaviour Problems (SDQ) ( $p=.001$ ) when analysing the within-group (control) measure.

**Table 4.14** A table to show the results found from the paired t-test used on the experimental group data collated from the student completion of the Strengths and Difficulties questionnaire

Variable	Pre-Test Mean +(sd)	Post-Test Mean+(sd)	T	Df	Sig 2- tailed
SDQ Total	17.95 (4.29)	19.25 (5.01)	-1.109	19	.281
<b>Emotional Symptoms (SDQ)</b>	<b>2.90 (1.68)</b>	<b>4.45 (2.28)</b>	<b>-2.978</b>	<b>19</b>	<b>.008</b>
<b>Behaviour Problems (SDQ)</b>	5.20 (1.10)	5.15 (1.87)	.119	19	.906

**Table 4.15** A table to show the results found from the paired t-test used on the control group data collated from the student completion of the Strengths and Difficulties Questionnaire.

Variable	Pre-Test Mean +(sd)	Post-Test Mean+(sd)	T	Df	Sig 2- tailed
<b>SDQ Total</b>	<b>18.82 (2.95)</b>	<b>16.13 (5.45)</b>	<b>2.516</b>	<b>22</b>	<b>.020</b>
Emotional Symptoms (SDQ)	4.56 (2.02)	3.78 (2.15)	1.594	22	.125
<b>Behaviour Problems (SDQ)</b>	<b>5.22 (1.20)</b>	<b>3.47 (1.66)</b>	<b>3.943</b>	<b>22</b>	<b>.001</b>

### 4.11 Hypothesis 3

#### **Hypothesis 3**

- **There will be a statistically significant difference between teacher perception of participants' Emotional Literacy in the control group, and teacher perception of participants' Emotional Literacy in the experimental group after the completion of the 'Over to You' intervention.**

#### **Teacher – Emotional Literacy Checklist – Between Groups**

The variables that showed significant results in the Mixed ANOVA were further analysed using either the independent *t*-test or the Mann Whitney U test. These tests were used to compare the scores of the participants in the Experimental and Control Groups (Between groups). The tests were used to analyse scores collated from pre-test measures then post-test measures.

The results are shown in Table 4.16; 4.17; and 4.18, results in bold indicate significant scores ( $p < .05$ ) and/or ( $p < .01$ ). The results are further explained in Appendix 4.4.

#### **Summary (Table 4.16 and 4.17)**

In summary, statistically significant results were found for the variables Emotional Literacy (EL) Total ( $p = .0005$ ), Empathy (EL) ( $p = .0005$ ), Motivation (EL) ( $p = .0005$ ), Self Regulation (EL) ( $p = .001$ ), and Social Skills (EL) ( $p = .0005$ ), when analysing the between-group pre-test measure.

**Table 4.16** A table to show the results found from the independent t-test used on the pre-test data collated from the teacher completion of the Emotional Literacy Checklist.

Variable	Sample	Pre Test Mean+(sd)	T	Df	Sig 2-tailed
<b>Motivation (EL)</b>	<b>Experimental</b>	<b>9.10 (2.40)</b>	<b>-3.895</b>	<b>41</b>	<b>.0005</b>
	<b>Control</b>	<b>12.35 (2.98)</b>			
<b>Social Skills (EL)</b>	<b>Experimental</b>	<b>11.45 (2.58)</b>	<b>-3.939</b>	<b>41</b>	<b>.0005</b>
	<b>Control</b>	<b>14.26 (2.09)</b>			

**Table 4.17** A table to show the results found from the Mann Whitney U test used on the pre-test data collated from the teacher completion of the Emotional Literacy Checklist.

Variable	Sample	N	Mann Whitney U	Sig 2-tailed
<i>Emotional Literacy (EL) Total</i>	<b>Experimental</b>	<b>20</b>	<b>71.500</b>	<b>.0005</b>
	<b>Control</b>	<b>23</b>		
<i>Empathy (EL)</i>	<b>Experimental</b>	<b>20</b>	<b>76.00</b>	<b>.0005</b>
	<b>Control</b>	<b>23</b>		
<i>Self Regulation (EL)</i>	<b>Experimental</b>	<b>20</b>	<b>98.50</b>	<b>.001</b>
	<b>Control</b>	<b>23</b>		

**Table 4.18** A table to show the results found from the independent t-test used on the post-test data collated from the teacher completion of the Emotional Literacy Checklist.

Variable	Sample	Post Test Mean +(sd)	T	Df	Sig 2-tailed
Emotional Literacy (EL) Total	Experimental	50.50 (10.59)	-1.720	41	.093
	Control	55.26 (7.48)			
Empathy (EL)	Experimental	10.25 (2.59)	-1.241	41	.222
	Control	11.08 (1.81)			
<b>Motivation (EL)</b>	Experimental	9.35 (2.48)	-1.966	41	.056
	Control	10.70 (2.00)			
<b>Self Regulation (EL)</b>	Experimental	9.00 (2.90)	-1.029	41	.310
	Control	9.78 (2.07)			
<b>Social Skills (SS)</b>	Experimental	11.35 (2.78)	-1.155	41	.255
	Control	12.26 (2.40)			

### Summary

In summary, no statistically significant results were found for the variables Emotional Literacy (EL) Total, Empathy (EL), Motivation (EL), Self Regulation (EL), and Social Skills (EL) when analysing the between-group post-test measure.

## **Teacher – Emotional Literacy – Within Groups**

The variables that showed statistically significant results in the Mixed ANOVA were further analysed using the paired *t*-test. This test was used to compare the scores of the participants in the pre-test and post-test measures (within group). A paired *t*-test was used to analyse scores collated from the Experimental Group then the Control Group.

The results are shown in Table 4.19 and 4.20, results in bold indicate significant scores ( $p < .05$ ). The results are further explained in Appendix 4.4.

**Table 4.19** *A table to show the results found from the paired t-test used on the experimental group data collated from the teacher completion of the Emotional Literacy Checklist.*

Variable	Pre-Test Mean +(sd)	Post-Test Mean+(sd)	T	Df	Sig 2-tailed
Emotional Literacy (EL) total	48.00 (7.47)	50.50 (19.59)	-1.122	19	.276
Empathy (EL)	9.05 (1.88)	10.25 (2.59)	-1.890	19	.074
Motivation (EL)	9.10 (2.40)	9.35 (2.48)	-.372	19	.714
Self Regulation (EL)	8.90 (1.89)	9.00 (2.90)	-.155	19	.878
Social Skills (EL)	11.45 (2.59)	11.35 (2.78)	.152	19	.881

### **Summary**

In summary, no statistically significant results were found for the variables Emotional Literacy (EL) Total, Empathy (EL), Motivation (EL), Self Regulation

(EL), and Social Skills (EL) when analysing the within-group (experimental) measure.

**Table 4.20** A table to show the results found from the paired t-test used on the control group data collated from the teacher completion of the Emotional Literacy Checklist

Variable	Pre-Test Mean +(sd)	Post-Test Mean+(sd)	T	Df	Sig 2-tailed
<b>Emotional Literacy (EL) total</b>	<b>63.87 (11.79)</b>	<b>55.26 (7.48)</b>	<b>3.504</b>	<b>22</b>	<b>.002</b>
<b>Empathy (EL)</b>	<b>12.56 (2.79)</b>	<b>11.09 (1.81)</b>	<b>2.157</b>	<b>22</b>	<b>.042</b>
<b>Motivation (EL)</b>	<b>12.35 (2.98)</b>	<b>10.70 (2.01)</b>	<b>2.620</b>	<b>22</b>	<b>.016</b>
<b>Self Regulation (EL)</b>	<b>12.26 (3.32)</b>	<b>9.78 (2.07)</b>	<b>4.383</b>	<b>22</b>	<b>.0005</b>
<b>Social Skills (EL)</b>	<b>14.26 (2.09)</b>	<b>12.26 (2.40)</b>	<b>3.775</b>	<b>22</b>	<b>.001</b>

### Summary

In summary, statistically significant results were found for the variables Emotional Literacy (EL) Total ( $p=.002$ ), Empathy (EL) ( $p=.042$ ), Motivation (EL) ( $p=.016$ ), Self Regulation (EL) ( $p=.005$ ), and Social Skills (EL) ( $p=.001$ ) when analysing the within-group (control) measure.

### Further analysis

As the between group test indicates a statistically significant difference between the experimental and control group pre-test, it is necessary to carry out an ANCOVA to determine whether the group had an effect.

**Table 4.21** A table to show the results found from the ANCOVA used on the data collected from the teacher completion of the Emotional Literacy Checklist

Variable	Df	F	Sig	Partial Eta Squared
<b>Emotional Literacy(EL)total</b>	1	.002	.969	.000
<b>Empathy (EL)</b>	1	.334	.567	.008
<b>Motivation (EL)</b>	1	.620	.436	.015
<b>Self Regulation (EL)</b>	1	.449	.511	.011
<b>Social Skills (EL)</b>	1	.111	.741	.003

The results indicate the following:

Emotional Literacy (EL) total:  $F(1,40)=.002$ ,  $p=.969$ , partial  $\eta^2=.000$ .

Empathy (EL):  $F(1,40)=.334$ ,  $p=.567$ , partial  $\eta^2=.008$

Motivation (EL):  $F(1,40)=.620$ ,  $p=.436$ , partial  $\eta^2=.015$

Self Regulation (EL):  $F(1,40)=.449$ ,  $p=.511$ , partial  $\eta^2=.011$

Social Skills (EL):  $F(1,40)=.111$ ,  $p=.741$ , partial  $\eta^2=.003$

### Summary

After adjusting for pre-test scores, there was no statistically significant effect of the between-subjects factor group.

#### 4.12 Hypothesis 4

##### Hypothesis 4

- There will be a statistically significant difference between teacher perception of the behaviour of participants in the control group, and the teacher perception of the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention.

##### Teacher – Strength and Difficulties Questionnaire – Between Groups

The variables that showed statistically significant results in the Mixed ANOVA were further analysed using either the independent *t*-test or the Mann Whitney U test. These tests were used to compare the scores of the participants in the Experimental and Control Groups (Between groups). The tests were used to analyse scores collated from pre-test measures then post-test measures.

The results are shown in Table 4.22; 4.23; 4.24 and 4.25, results in bold indicate significant scores ( $p < .05$ ). The results are further explained in Appendix 4.5.

**Table 4.22** A table to show the results found from the independent *t*-test used on the pre-test data collated from the teacher completion of the Strengths and Difficulties Questionnaire

Variable	Sample	Pre Test Mean+(sd)	T	Df	Sig 2-tailed
Pro-social Behaviour (SDQ)	Experimental	4.40 (2.46)	-4.139	41	.0005
	Control	7.56 (2.54)			

**Table 4.23** A table to show the results found from the Mann Whitney U test used on the pre-test data collated from the teacher completion of the Strengths and Difficulties Questionnaire

Variable	Sample	N	Mann Whitney U	Sig 2-tailed
<b>Behaviour Problems (SDQ)</b>	<b>Experimental</b>	<b>20</b>	<b>107.500</b>	<b>.002</b>
	<b>Control</b>	<b>23</b>		

### Summary

In summary, statistically significant results were found for the variables Pro-social Behaviour (SDQ) ( $p=.0005$ ) and Behaviour Problems (SDQ) ( $p=.002$ ) when analysing the between-group pre-test measure.

**Table 4.24** A table to show the results found from the independent t-test used on the post-test data collated from the teacher completion of the Strengths and Difficulties Questionnaire

Variable	Sample	Post Test Mean+(sd)	T	Df	Sig 2-tailed
Pro-social	Experimental	4.85 (2.08)	-.901	41	.373
	Control	5.35 (1.53)			

**Table 4.25** A table to show the results found from the Mann Whitney U test used on the post-test data collated from the teacher completion of the Strengths and Difficulties Questionnaire.

Variable	Sample	N	Mann Whitney U	Sig 2-tailed
Behaviour problems(SDQ)	Experimental	20	151.500	.052
	Control	23		

### Summary

In summary, no statistically significant results were found for the variables Pro-social Behaviour (SDQ) and Behaviour Problems (SDQ) when analysing the between-group post-test measure.

### **Teacher – Strength and Difficulties Questionnaire – Within Groups**

The variables that showed significant results in the Mixed ANOVA were further analysed using the paired *t*-test. This test was used to compare the scores of the participants in the pre-test and post-test measures (within group). A paired *t*-test was used to analyse scores collated from the Experimental group then the Control group.

The results are shown in Table 4.26 and 4.27, results in bold indicate significant scores ( $p < .05$ ). The results are further explained in Appendix 4.5.

### **Summary (Table 4.26)**

In summary, no statistically significant results were found for the variables Behaviour Problems (SDQ) and Pro-social Behaviour (SDQ) when analysing the within-group (experimental) measure.

**Table 4.26** A table to show the results found from the paired t-test used on the experimental group data collated from the teacher completion of the Strengths and Difficulties Questionnaire

Variable	Pre-Test Mean +(sd)	Post-Test Mean+(sd)	T	Df	Sig 2- tailed
<b>Behaviour Problems (SDQ)</b>	4.50 (3.20)	3.25 (2.05)	1.707	19	.104
Pro-social Behaviour (SDQ)	6.09 (2.94)	5.11 (1.80)	1.990	42	.053

**Table 4.27** A table to show the results found from the paired t-test used on the control group data collated from the teacher completion of the Strengths and Difficulties Questionnaire

Variable	Pre-Test Mean +(sd)	Post-Test Mean+(sd)	T	Df	Sig 2- tailed
<b>Behaviour</b>	1.65 (1.77)	2.22 (1.35)	-1.842	22	.079
<b>Pro-social</b>	<b>7.56 (2.53)</b>	<b>5.35 (1.52)</b>	<b>3.582</b>	<b>22</b>	<b>.002</b>

### Summary

In summary, no statistically significant results were found for the variables Behaviour Problems (SDQ). A statistically significant result was found for the variable Pro-social Behaviour (SDQ) ( $p=.002$ ) when analysing the within-group (control) measure.

### **Further analysis**

As the between group test indicates a statistically significant difference between the experimental and control group pre-test. It is necessary to carry out an ANCOVA, to determine whether the group had an effect.

**Table 4.28** *A table to show the results found from the ANCOVA used on the data collected from the teacher completion of the Strengths and Difficulties Questionnaire*

Variable	Df	F	Sig	Partial Eta Squared
<b>Pro-social behaviour (SDQ)</b>	1	.210	.649	.005

The results indicate the following:

Pro-social Behaviour (SDQ):  $F(1,40)=.210$ ,  $p=.649$ , partial  $\eta^2=.005$ .

### **Summary**

After adjusting for pre-test scores, there was no statistically significant effect of the between-subjects factor group.

#### 4.13 Hypothesis 5

**Hypothesis 5:**

**After a 6 month follow up, more participants in the control group will have been subject to school exclusion than the experimental group.**

The results pertaining to this hypothesis are reported in a purely descriptive manner. Due to the nature of the results it was not necessary to conduct further analysis as it is obvious that no statistically significant difference between the experimental and control group could be obtained. The findings were obtained after a 6 month follow-up and are as follows:

**Table 4.29** *A table showing the number of participants were been subject to a school exclusion after a 6 month follow-up.*

Group	Participants (N)	Fixed-Term Exclusion (FTX)	Permanent Exclusion (PX)
Experimental	20	1 = 2 FTX / 3 = 1 FTX	1 PX
Control	23	1 = 2 FTX / 3 = 1 FTX	1 PX

#### Summary

The results show that after 6-month follow-up participants in the experimental and control group had be subject to the same number of school exclusions. Both groups had one participant permanently excluded, one participant subject to two fixed-term exclusions and 3 other participants subject to one fixed term exclusion. The result for each group is identical.

#### 4.14 Summary of Results

##### Hypothesis 1

- There will be a statistically significant difference between the Emotional Literacy of participants in the control group, and the Emotional Literacy of participants in the experimental group after the completion of the 'Over to You' intervention.

**Table 4.30** A summary table showing the significance of the results found from the student completion of the Emotional Literacy Checklist.

	Variables showing significant results	
Between Groups	Pre-test	Post-test
	No significant results	Emotional Literacy (EL) Total ( $p=.029$ )
Within Groups	Experimental	Control
	No significant results	No significant results

##### Findings:

The student responses to the Emotional Literacy Checklist would indicate that the scores did not show any statistically significant difference between the experimental and control group.

The results indicate that the *Experimental Hypothesis* should be rejected and the *Null Hypothesis* accepted:

- **There will be no statistically significant difference between the Emotional Literacy of participants in the control group, and the Emotional Literacy of participants in the experimental group after the completion of the 'Over to You' intervention.**

### Hypothesis 2:

- There will be a statistically significant difference between the behaviour of participants in the control group, and the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention

**Table 4.31** A summary table showing the significance of the results found from the student completion of the Strengths and Difficulties Questionnaire.

	Variables showing significant results	
Between Groups	Pre-test	Post-test
	No significant results	No significant results
Within Groups	Experimental	Control
	No significant results	No significant results

### Findings:

The student responses to the Strengths and Difficulties questionnaire would indicate that their scores did not show any significant difference between the experimental and control group.

The results indicate that the *Experimental Hypothesis* should be rejected and the *Null Hypothesis* accepted:

- **There will be no statistically significant difference between the behaviour of participants in the control group, and the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention.**

**Hypothesis 3:**

- There will be a statistically significant difference between teacher perception of participants' Emotional Literacy in the control group, and teacher perception of participants' Emotional Literacy in the experimental group after the completion of the 'Over to You' intervention.

**Table 4.32** A summary table showing the significance of the results found from the teacher completion of the Emotional Literacy Checklist.

	Variables showing significant results	
	Pre-test	Post-test
<b>Between Groups</b>	Emotional Literacy (EL) Total; Empathy (EL); Motivation (EL); Self Regulation (EL); Social Skills (EL)	No significant results
<b>Within Groups</b>	Experimental	Control
	No significant results	Emotional Literacy (EL); Total; Empathy (EL); Motivation (EL); Self Regulation (EL); Social Skills (EL)
<b>Further Analysis to determine effect of group.</b>	Experimental	Control
	Not analysed	No significant results

## Findings:

The teacher responses to the Emotional Literacy Checklist would indicate that their perceptions of students' total Emotional Literacy and their perception of students' Empathy; Motivation; Self Regulation; and Social Skills did not show any significant difference for the experimental group.

The results indicate that for the students in the control group. The teacher perception of students' total Emotional Literacy and teacher perception of students' Empathy; Motivation; Self Regulation; and Social Skills showed a significant reduction in their scores. However as the between group scores were significantly different before the intervention, further analysis indicated that the reductions in scores could not be significantly attributed to the effect of being in the control or experimental group.

The results indicate that the *Experimental Hypothesis* should be rejected and the *Null Hypothesis* accepted:

- **There will be no statistically significant difference between teacher perception of participants' Emotional Literacy in the control group, and teacher perception of participants' Emotional Literacy in the experimental group after the completion of the 'Over to You' intervention.**

#### Hypothesis 4:

- There will be a statistically significant difference between teacher perception of the behaviour of participants in the control group, and the teacher perception of the behaviour of participants in the experimental group after the completion of the 'Over to You' intervention.

**Table 4.33** A summary table showing the significance of the results found from the teacher completion of the Strengths and Difficulties Questionnaire

	Variables showing significant results	
Between Groups	Pre-test	Post-test
	Pro-social Behaviour (SDQ) (p=.0005); Behaviour Problems (SDQ) (p=.002)	No significant results
Within Groups	Experimental	Control
	No significant results	Pro-social Behaviour (SDQ) (p=.002)
Further Analysis to determine effect of group.	Experimental	Control
	Not analysed	No significant results

#### Findings:

The teacher responses to the Strength and Difficulties questionnaire would indicate that their perceptions of students did not show any significant difference for the experimental group.

The results indicate that teacher perception of students' Pro-social Behaviour showed that those students in the control group showed a significant reduction in their scores. However as the between group scores were significantly different before the intervention further analysis indicated that the reductions in

scores could not be significantly attributed to the effect of being in the control or experimental group.

The results indicate that the *Experimental Hypothesis* should be rejected and the *Null Hypothesis* accepted:

- **There will be no statistically significant difference between teacher perception of the behaviour of participants in the control group, and the teacher perception of the behaviour of participants in the experimental group after the completion of the ‘Over to You’ intervention.**

#### **Hypothesis 5:**

- After a 6 month follow up, more participants in the control group will have been subject to school exclusion than the experimental group.

#### **Findings:**

The results show that after 6-month follow-up participants in the experimental and control group had been subject to the same number of school exclusions. Both groups had one participant permanently excluded, one participant subject to two fixed-term exclusions and 3 other participants subject to one fixed term exclusion. The results for each group are identical.

The results indicate that the *Experimental Hypothesis* should be rejected and the *Null Hypothesis* accepted

- **After a 6 month follow up, there will be no difference between participants in the control group who have been subject to school exclusion than the experimental group.**

#### **4.15 Concluding summary**

The results indicate that at the end of the six week intervention the participants who took part in the 'Over to You' intervention indicated no statistically significant differences in their scores on the measures used when compared to the scores of the control group. The findings also demonstrated that after a 6-month follow up identical numbers of participants had been subject to school exclusion in the experimental and control groups.

The analysis of the teacher perceptions of the participants in the experimental group showed no statistically significant difference pre and post-test when measuring emotional literacy and behaviour. However the results indicated a statistically significant reduction in the scores of teacher perception of the participants' emotional literacy within the control group who did not receive the intervention. A reduction in scores indicates that those in the control group have a lower level of emotional literacy after the six week period, whilst the experimental group have remained constant. However the statistical analysis could not show that the reduction in scores could be significantly attributed to the effect of being in the control or experimental group

The results also indicated that whilst the experimental group remained constant the control group scored significantly lower on the teacher perception of Pro-social Behaviour, a reduction in this score indicates a deterioration. Again, the statistical analysis could not show that the deterioration could be significantly attributed to the effect of being in the control or experimental group

The statistical analysis of the data collected in this research has provided some support for Hypothesis 3. However, the researcher could not accept the hypothesis at this time due to the initial differences in scores. It is necessary to apply caution to ensure that inferences are not made from results that lack statistical support. The results should be viewed in conjunction with other psychological research and literature. The following chapter will consider the results within the wider context.

## Discussion

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This chapter discusses the findings of the present research, the 'Over to You' intervention, its links to the literature, and how this research contributes to knowledge and research. Methodological implications will also be considered.

The implications of the research will be discussed in terms of the policy makers, schools and educational psychologists. The implications and opportunities for future research will also be considered.

The chapter is divided into the following sections:

- Discussion of research questions.
- How this research contributes to knowledge and research:
  - the 'Over to You' intervention;
  - the present research and its place in the evidence base;
- Methodological implications.
- Discussion of instruments used.
- Data analysis and interpretation.
- Implications of this research for:
  - future research
  - Local Authorities (LAs) and schools
  - Educational Psychologists.

### 5.1 Research Questions

This section considers the research questions and the extent to which the findings provide answers to the research questions posed.

The aim of this research was to evaluate the impact of the 'Over to You' intervention on emotional literacy and behaviour. The research targeted Year 8 pupils who had been identified as having behavioural needs.

The key questions addressed were:

### **Research Question 1:**

#### **Does participating in the 'Over to You' intervention influence participants' Emotional Literacy?**

The research was conducted with the purpose of establishing whether taking part in the 'Over to You' intervention had an impact on the participants' emotional literacy, measured by the Emotional Literacy Checklist (Faupel, 2003). After analysing the results, the researcher was unable to establish a statistically significant difference between the pre/post test measures. The researcher was also unable to establish any statistically significant difference between the experimental and control group scores.

This suggests the 'Over to You' intervention did not have any significant impact on participants' emotional literacy.

### **Research Question 2:**

#### **Does participating in the 'Over to You' intervention influence participants' behaviour?**

The research was conducted with the purpose of establishing whether taking part in the 'Over to You' intervention had an impact on the participants' behaviour, as measured by the SDQ (Goodman, 1997). After analysing the results, the researcher was unable to establish a statistically significant difference between the pre/post test measures. The researcher was also unable to establish any statistically significant difference between the experimental and control group scores.

This suggests the 'Over to You' intervention did not have any significant impact on participants' behaviour.

The term 'behaviour' is a broad term to use and future research questions may look at specific areas of behaviour, for example, pro-social behaviour, which is

measured independently within the SDQ. This will be discussed later in this chapter.

### **Research Question 3:**

#### **Does the 'Over to You' intervention influence teacher perception of participants' Emotional Literacy?**

The research was conducted with the purpose of establishing whether taking part in the 'Over to You' intervention had an impact on teacher perception of the participants' emotional literacy, as measured by the Emotional Literacy Checklist (Faupel, 2003)

The results yielded in this section provided the researcher with an interesting scenario. The results showed that whilst no statistically significant change was found to the scores collected from the experimental group, the scores collected from the control group indicated a statistically significant reduction in emotional literacy. That is, the control groups' emotional literacy significantly decreased over the six-week period. These findings initially suggested that by taking part in the 'Over to You' intervention, participants were able to maintain a level of emotional literacy that was not maintained in the control group.

Further investigation of the findings revealed that the pre test scores of the control group were significantly higher than those of the experimental group. This was due to chance, as the participants were randomly allocated and the intervention was implemented at different times in different schools. Although assumptions for parametric testing were met, the results were analysed further using a non-parametric test due to an inequality of variance.

In order to establish whether the change in scores could be related to taking part or not taking part in the intervention, further analysis was conducted to allow for this pre-test difference. After the analysis, the findings were unable to establish that the reduction in scores was due to the effect of not being in the intervention group.

Whilst these results are interesting, the findings suggest that the 'Over to You' intervention did not have any significant impact on teacher perception of participants' emotional literacy.

As this research question relates to teacher perceptions, the results still raise many interesting points for discussion. The teachers indicated a significant reduction in the emotional literacy of the control group. Was this due to the control group not taking part in the group? Was this because of teacher expectations? This is very relevant to work in education. The teachers were aware of which pupils were receiving the intervention, so could this have influenced their completion of the measure? This will be discussed later in this chapter.

#### **Research Question 4:**

#### **Does the 'Over to You' intervention influence teacher perception of behaviour?**

The research was conducted with the purpose of establishing whether taking part in the 'Over to You' intervention had an impact on teacher perception of the participants' behaviour, measured by the SDQ (Goodman, 1997).

The results provided the researcher with a similar scenario to that described in Research Question 3. The results showed that whilst no statistically significant change was found to the scores relating to behavioural symptoms, the control group scores suggested a statistically significant reduction in pro-social behaviour scores. That is, the control group's pro-social behaviour significantly reduced over the six-week period.

As described above, further investigation of the findings revealed that the pre test scores of the control group were significantly higher than those of the experimental group. Further analysis was then conducted to allow for this pre-test difference. After the analysis, the findings were unable to establish that the reduction in scores was due to the effect of not being in the intervention group.

The findings suggest that the 'Over to You' intervention did not have any significant impact on teacher perception of participants' behaviour.

In addition to the questions already considered, these findings raise questions in relation to the methodology used in this research, in particular, the random allocation of participants, which in this case yielded significant differences between the control and experimental groups before the intervention commenced. This will be discussed later in this chapter.

### **Research Question 5**

**After a six-month follow-up, how many of the participants had been subject to school exclusion?**

The results show that after a six-month follow-up, participants in the experimental and control group had been subject to the same number of school exclusions. Both groups had one participant permanently excluded, one participant subject to two fixed-term exclusions, and three other participants subject to one fixed-term exclusion.

There are a number of methodological difficulties apparent when measuring impact in terms of school exclusion, such as difficulties demonstrating causality. The findings suggest that the 'Over to You' intervention did not have any impact on school exclusions.

### **5.2 How this Research Contributes to Knowledge and Research**

The 'Over to You' intervention will be discussed in light of the findings. The contents of the intervention will be considered alongside the body of evidence. The research in its totality will then be considered and its place within the evidence base of targeted group interventions in secondary schools.

### **5.2.1 The 'Over to You' Intervention**

This research evaluated the impact of an intervention that was broadly based on cognitive behavioural approaches. The impact on emotional literacy and behaviour was measured. The intervention incorporated the promotion of emotional literacy, social skills training, and anger management training, and utilised the principles of cognitive behavioural therapy.

Social skills training has been shown to be a valid approach to promoting social inclusion (Denham et al., 2006), and using the methods of social skills training (modelling, coaching, social-problem solving) collaboratively is recommended (Rutherford et al., 1996). The 'Over to You' intervention used in this research implemented these methods throughout the course. The findings of this research can be placed alongside the work of Zargoza et al. (1991), who suggested that despite the popularity of social skills training, only modest effects have been demonstrated when working with children with emotional and behavioural difficulties.

As discussed in the literature review and considered before implementation, it is important to reflect upon the complexities involved in learning social competencies and potentially how difficult it is for students to gain mastery (Elksnin and Elksnin, 1998).

Whilst completing the intervention, the participants engaged in tasks promoting co-operation; they were able to describe scenarios and problem solve, and successfully reflected upon how they relate to their peers. The findings of this research offer some support to one of the most consistent criticisms of social skills training, which is the issue of generalisability (Furnham and Argyle, 1981; Gresham and Elliott, 1993; Gresham et al., 2001). It would seem that the participants did not demonstrate the implementation of skills in other contexts.

The 'Over to You' intervention contained the typical aspects of an anger management training course. It gave the participants information on the cognitive and behavioural components of anger. It taught cognitive and behavioural techniques to manage anger, and it allowed the facilitation of the

skills that the participants had acquired through rehearsal and role-play (Feindler and Ecton, 1986).

Research has shown positive effects of anger management training (Deffenbacher et al., 1996; Gansle, 2005; Nugent et al., 1997); however, the key criticism focuses on the maintenance of any beneficial effects (Feindler and Ecton, 1986; Nugent et al., 1997). This research could support this criticism, as it would seem that the participants did not implement the tools taught. It must also be considered that these tools had little effect even if implemented. A further reflection on the apparent lack of behavioural change could highlight a lack of support to promote the use of the skills learned (Kellner and Bry, 1999).

As described in the literature review, this intervention utilised the principles of cognitive behavioural therapy (CBT) throughout its implementation. Working with the general principle that thinking precedes feeling, and feelings precede behaviour (Squires, 2001), the intervention presented tasks teaching the participants that changing thought can help change negative feelings, and that our thoughts affect our feelings and behaviour.

Research into CBT has supported its use in reducing anxiety and depression (Westling and Ost, 1999), improving coping strategies (Sherman, 1999), reducing traumatic stress (Cohen, 2003), and improving classroom behaviour as measured by teachers (Squires, 2001). Kavanagh et al. (2009) conducted a systematic review of secondary school-based cognitive behavioural interventions and found a reduction in the symptoms of depression and anxiety. However, they did not find any evidence that assessed the impact of CBT on behaviour. This researcher found only a small number of studies with limited results and small samples; these will be discussed in section 5.4.

As well as demonstrating elements of CBT, social skills, and anger management training that aim to promote behavioural change, this intervention also promoted the components of emotional literacy. The researcher feels that in this intervention emotional literacy was promoted through the cognitive behavioural approaches used. Self-awareness, self-regulation, empathy,

motivation, and social skills (Faupel, 2003) were demonstrated throughout the course. For example, participants considered the value of reflective rather than impulsive decision making, seeing things from others' points of view, and completing self-talk activities.

Researchers have demonstrated that understanding one's emotions is a prerequisite for developing self-control and anger management (Bodine and Crawford, 1999; Faupel, 2003), and there has been a great deal of research into the teaching of social, emotional, and behavioural skills (Parton and Manby, 2009). However, studies that measure outcomes are limited and display methodological difficulties (Humphrey et al., 2008; Qualtner et al., 2007; Zeidner et al., 2002). This research does not offer further support in this field other than a speculative consideration of teacher perceptions, which should be considered with caution.

Poulou (2005) stated that teachers believed that developing students' emotional literacy would promote more positive behaviour in schools. Burton (2006), Robinson et al. (2002), and Humphrey and Brook (2006) demonstrated a change in teacher perception. The findings in the present research show that teachers perceived a reduction in emotional literacy and pro-social behaviour in those who did not receive the intervention. However, this is an area that has been little explored and further research is necessary.

When reflecting upon this research, a number of further considerations must be explored. Fonagy et al. (2004) described within-child, within-home, and outside-home factors that should be considered when implementing interventions. These factors should be considered in the wider context and caused this researcher to reflect upon whether a significant effect was a realistic expectation. Adi et al. (2007) suggested parental support is an important factor in facilitating change. Having this support may have assisted the participants in the change process, that is, in moving from the action stage into the maintenance stage (Prochaska and DiClemente, 1994).

A further reflection upon the impact of the 'Over to You' intervention is that of timescale. The intervention ran over a six-week period so consideration must be given to whether or not this is a sufficient amount of time to demonstrate change.

## **Summary**

The 'Over to You' intervention is a multimodal intervention that incorporates the promotion of emotional literacy, social skills training, and anger management training, and utilises the principles of cognitive behavioural therapy. Sukhodolsky et al. (2004) reviewed interventions based on cognitive-behavioural interventions and found that multimodal treatments and skills training were more effective in improving social skills and reducing aggressive behaviours. However, the findings of this research do not demonstrate any further evidence to support the use of cognitive behavioural approaches to promote emotional literacy and behavioural change.

### **5.2.2 The Present Research and its Place in the Evidence Base**

After considering the 'Over to You' intervention and its place in the broader literature, it is necessary to focus now on this particular research and its place in the evidence base. The following section will give consideration to the systematic literature review and describes where this research should be placed within the evidence base of targeted group interventions in secondary schools.

The first consideration when discussing findings that have accepted the null hypotheses and not yielded statistically significant results is that of the 'file drawer problem' (Rosenthal, 1979). As mentioned previously, this suggests that studies that are most likely to be considered for publication, and that ultimately will be published within the field are those that demonstrate significant gains. So, this is an important point to consider when making comparisons to published literature.

However, due to the limited amount of research on targeted interventions in secondary schools that aim to improve behaviour and promote emotional

literacy, the 'file drawer problem' does not seem to be as prevalent as it may be in other areas of research. Four of the papers reviewed did not yield significant effects (Bagley and Pritchard, 1998; Panayiotopoulos et al., 2007), or were not tested for statistical significance (Dwivedi and Gupta, 2000; Hawken and Horner, 2003). It would be possible to interpret the findings from this research in this way; however, as a researcher, interpreting and speculating on results that are not statistically significant is a direction that is not seen as appropriate at this time. This then leads to questions about where this research can be placed within the body of knowledge within the field.

Although it must be acknowledged that the results may indicate that the intervention itself may not have been effective, it is also important to consider the methodological implications of this research. Using such a rigorous methodology and adhering to the criteria dictated by a randomised controlled trial, in addition to using statistical analysis, may have resulted in findings that are not statistically significant. The methodology, measures and data analysis used in the present research will be discussed later.

Reviewing the methodology of the studies, only the work of Panayiotopoulos and Kerfoot (2007) utilised a randomised control trial, and similarly reported no statistically significant results. The most popular methodology was the pre/post test opportunity sample; findings demonstrated improvements in self-control and teacher attitudes (Squires, 2001), self-esteem (Burton, 2006), and behaviour (DeAnda, 1999; Kellner and Bry, 1999), and a reduction in anger and aggression (Robinson et al., 2002). It must be emphasised that the present research employed a control comparison group within the design. The implications of not having a comparison group should be considered when interpreting research findings within the knowledge base.

The systematic literature review showed that Robinson et al. (2002) used a control group comparison, and demonstrated significant changes in anger and aggression from both pupil and teacher completed checklists. The sample used in Robinson et al.'s (2002) design used matched pairs; a matched pairs design

may have enhanced this research and is described in the discussion of the methodology in section 5.5.

The present research considered the number of participants that had been subject to school exclusion after a six-month follow-up. The findings were inconclusive and did not demonstrate a difference between the groups. Because of the number of factors that can affect school exclusion, it is a very difficult area to measure scientifically. Bagley and Pritchard (1998) described findings similar to those of the present research, as they were unable to identify statistically significant differences between exclusion rates. However, they investigated rates between schools rather than between groups. Burton (2006) identified no exclusions for the intervention sample after a seven-month follow-up; this was from a sample size of 5 compared to the 43 participants in this study. This researcher feels that for a larger sample size such as this, no school exclusions in the experimental group would have been an unrealistic expectation.

A key issue raised in the literature review is the lack of published research using emotional literacy as a measure of the impact of the intervention. Whilst the overall findings accepted the null hypotheses, teachers perceived the control group's emotional literacy to have decreased over the time frame. Humphrey et al. (2008) supported the use of the emotional literacy checklist as a measure and acknowledged a lack of research in this area.

The present research does not offer any supporting evidence collected by the measures. However, consideration of the overall research is important. Issues relating to methodology, measures and data analysis will be discussed in the following section.

### **5.3 Methodological Implications**

This section considers the methodological implications of this research. It discusses the strengths and limitations of the methodology used in relation to the areas described in the methodology chapter.

## **Experimental Design**

Using a pre-test, post-test randomised controlled design was decided upon after considering the key areas that are important when choosing a research strategy (Robson, 2002). The design met the purpose of the research, as it was intended to evaluate the impact of the 'Over to You' intervention. It enabled the researcher to gather the data required to answer the research questions posed. Using a pre-test, post-test randomised control design can be described as the 'gold standard' of experimental design (Robson, 2002). This research can be placed within the traditional hierarchy of evidence (Scott et al., 2001) and the data obtained from this research can contribute to the evidence base in the field.

When conducting real world research in an educational setting, the design employed by this research considered the balance between internal and external validity and the results generated must be considered in light of this.

It is also necessary to acknowledge the limitations of this design in terms of internal and external validity. The research employed strict controls imposed on the design to improve internal validity. When considering the external validity or generalisability of this research, inferences can be made only about the impact the intervention may have on others who would meet the inclusion criteria.

### **Internal validity**

Using randomisation can offset threats to internal validity (Campbell and Stanley, 1963); randomisation was used in this research. Although an older publication, the work of Campbell and Stanley (1963) is still relevant. They described a number of 'threats' to internal validity, and although random allocation was used to attempt to offset these threats, as a researcher, it is important to acknowledge these issues. The key threats that may have affected the findings in this research are history, testing, maturation, selection, and ambiguity about causal direction. These threats to internal validity shall be discussed in light of the findings of this research.

*History* – consideration must be given to other things that may have changed in a participant's environment that are not part of the research. One of the groups was run in July, at the end of the school year. Two of the groups began the intervention in September, at the beginning of the school year with new form classes and new teachers. The intervention ran over six weeks leading from Autumn into Winter. All of these factors and many other environmental and social factors both in school and elsewhere may have affected the outcomes.

*Testing* - when using pre and post tests, changes may occur as a result of practice and experience. The participants completed the post-test scores after only a short period of time had passed; the intervention ran for six weeks and the measures were taken at the beginning and the end. As well as practice effects, which may cause change, in this case, it is also important to consider a recency effect due to the short time period between measures.

*Maturation* – The participants were Year 8 pupils and were subject to changes, development and growth unrelated to the treatment. This may have affected the responses given.

*Selection* – The differences between the groups before the onset of the research is a key point relating to this research. Although the sample was randomly allocated, the results indicate that there was a significant difference between the responses collected from the control and experimental group before the implementation of the intervention. The difference found in this research was for the measures completed by the teachers. Although the student responses indicated that their pre-test scores were similar, the teacher scores were significantly different. This factor has resulted in the acceptance of a null hypothesis even though significant differences were found in the post-test measures.

How could the selection process have altered this result? If significant differences had been found in the pre-test scores for both the teacher and pupil responses, it would lead the researcher to believe that using a matched pairs design rather than a randomised controlled trial may have offset this issue and

produced significant results. However, the groups were run at two different times in two different schools so until the whole data sets were analysed this issue was not apparent to the researcher. For a researcher, using a matched pairs design may have been a useful tool; however, this can only be stated retrospectively due to the nature and timing of the data collection.

*Ambiguity about causal direction* – does A cause B, or B cause A? This question has proved to be particularly relevant to this research. Working within the evidence-based practice model, a researcher will make certain presumptions about the expected findings of the research. These expectations are clarified within the experimental hypothesis; for example, hypothesis 3 stated:

- There will be a significant difference between teacher perception of participants' Emotional Literacy in the control group, and teacher perception of participants' Emotional Literacy in the experimental group after the completion of the 'Over to You' intervention.

The researcher's expectation was that the experimental groups' emotional literacy would improve whilst that of the control groups would stay the same. The findings in this research showed that the control groups' emotional literacy scores significantly worsened over time.

What causal attributions can be made from this? Was it not taking part in the group that caused the reduction? Was it that the teachers viewed the control group as significantly higher to begin with, because they did not know the pupils well enough initially? Was it because the teachers expected the control group to be worse because they did not take part in the intervention? These are all interesting questions that would benefit from further investigation given time and a more qualitative focus of research.

All of these factors, although offset by randomisation, could have had an impact on the outcomes of this research. However, for a researcher using a randomised controlled trial, with the exception of the significantly different

scores at pre-test, these were all issues that had been considered and accounted for within the design of the research and discussed earlier in the methodology chapter.

### **Generalisability**

The external validity could be improved in future research by using a larger sample size over a number of different settings, with a broader inclusion criteria representing more groups. However, as described by Roth and Fonagy (1996), this would generate questions regarding internal validity. Consideration must be given to the fact that the intervention took place in two different schools; while this promoted the generalisability of the research, it provided discussion points relating to internal validity and treatment integrity.

### **Treatment integrity**

This research was conducted in two different settings; the schools were in adjoining catchment areas, with similar levels of socio-economic status and school numbers. The researcher delivered the intervention in both settings using the same apparatus, and was based in one classroom per school. However, it must be acknowledged that the different settings may have had some impact upon the treatment integrity of the intervention.

This research was conducted in a classroom, and the researcher ran the intervention along with the support from a Teaching Assistant. It is necessary to acknowledge the limitation this posed to treatment integrity. The intervention was replicated three times and the session plans and timings were strictly adhered to. However, the participants displayed differing behaviours within the sessions. Whilst all of the same sessions were delivered and work completed, the Teaching Assistants took on fluctuating roles dependent on behaviour management issues. The treatment integrity of this research would have been improved if an independent observer had observed a sample of the sessions using a coding system that could have been analysed to demonstrate

consistency. This was not done in this instance due to no independent observer being available.

### **Intervention implementation**

The actual implementation of the 'Over to You' intervention did not raise any issues other than those discussed and those highlighted in the pilot study. A minor point is that the sessions were timetabled at different times each week. Other than a couple of participants being late for the second session, this did not seem to present any issues. However, it must be acknowledged that this may have affected the participants.

The intervention was delivered in its entirety, and the worksheets and activities completed by all students. All of the participants attended at least five of the sessions, which met the acceptable range of departure.

### **5.4 Discussion of Instruments Used**

An important area for discussion is the measures used to collect the data for this research. The specific measures used here were the SDQ and the Emotional Literacy checklist. Information was gathered from both participants and teachers. Before discussing the specifics of these measures, it is important to look at the broader picture and consider the limitations of using surveys and questionnaires as the primary method of data collection.

Using a self-report scale has become one of the most common ways to investigate motivation and regulatory processes in students (Perry and Winne, 2006); the Emotional Literacy Checklist and the SDQ are examples of these tools. Self-report scales usually possess adequate normative and psychometric properties and have been shown to be significant predictors of student classroom and regulatory behaviours (Perry and Winne, 2006; Diperna et al., 2002). It was due to these factors that self-report scales were chosen as a measure for this research.

Due to the limited findings of this research, the researcher is led to question the usefulness of these measures used over what can be seen as a particularly short timeframe. The timeframe is the six-week period before and after the intervention took place. It also raises questions about how much value can be placed on measures that are not specific to the tasks completed and that are de-contextualised in nature. There is a developing body of evidence that shows that motivational and regulatory processes are inherently dynamic and variable across situational factors and tasks (Church et al., 2001; Hadwin et al., 2001).

In this research, no statistically significant change was observed when analysis of the data collected from the self-report scales was completed. It must be considered that this could be due to the intervention or its implementation. However, it could also be considered that, as the self-report measures were not specifically related to the intervention (asking questions relating to what had been learnt directly), this may have affected the responses gained. Cleary (2009) researched the trends and accuracy of self-efficacy beliefs during intervention. Clearly (2009) concluded that self-efficacy measures can reliably track changes in student beliefs during an intervention (Schmitz & Weise, 2006; Schunk & Swartz, 1993) when measuring motivational and regulatory processes, as in the case of this research. Further research is required to examine directly the effects of using rating scales.

If the research had incorporated a more qualitative aspect of data collection, it may have been useful to ascertain participants' views. Asking the participants whether they found the intervention helpful may have produced another layer of data to be explored. This is something that could also be considered in future research.

After considering the usefulness of using self-report measures, it is necessary to think about what process we go through to complete them. Krosnick et al. (1996) described the process of optimising (completing cognitive steps to answer a question) and 'satisficing' (giving superficial responses that appear reasonable or acceptable). Is it possible that the participants in this research used the 'satisficing' process, which resulted in similar responses pre and post

intervention? The 'satisficing' theory assumes that the less cognitively sophisticated the respondents are, the more sensitive they are to difficult or cognitively demanding questions; this results in a reduction in the reliability of their responses (Borgers et al., 2004). As the measures were taken from young adolescents, whose cognitive abilities and communicative and social skills are still developing, this may have influenced the responses they gave.

Moving on to the specifics of the measures, the researcher looked at the makeup of the SDQ and the Emotional Literacy checklist. The SDQ offers three responses: 'not true', 'somewhat true', 'certainly true'; and the Emotional Literacy Checklist offers four responses: 'very like me', 'quite like me', 'only a bit like me', 'not like me at all'. As mentioned previously, Borgers et al. (2004) considered four response options to be optimal; this is true for the Emotional Literacy Checklist.

However, the SDQ's 'somewhat true' response can be described as the neutral mid-point. It seems that offering a neutral mid-point may tempt those completing the measure to choose this category (Ayidiya & McClendon, 1990; Raajmakers et al., 2000); this can be used in the sense of being undecided (Raajmakers et al., 2000). The implications of using a measure with a neutral mid-point on young adolescents should be considered. Given the limitations of their communicative skills, social skills and cognitive abilities, as discussed earlier, it may be that they would choose the neutral mid-point when this is not the answer they would prefer to give (Borgers et al., 2004). All of these factors must be taken into account when discussing the limited findings of this research.

This section has concentrated on the self-report scales used in this research. Another consideration is the teacher perceptions and the responses that they gave. The data collected from the teachers did not rely on any objective measures, but described teacher perceptions. This was due to the nature of the measures used. Because of this, the results found can demonstrate only the teachers' perceptions of the participants' emotional literacy and behaviour.

When considering the results, it is important to note that the teachers' perceptions, may not necessarily show an accurate representation of the participants' actual emotional literacy and behaviour. Another consideration that must be taken into account is errors that can occur when completing questionnaires, including the halo effect. This is described by Anastasi and Urbina (1997) as "a tendency on the part of raters to be unduly influenced by a single favourable or unfavourable trait which colours their judgement of the individuals other traits."

As it was the participants' form teachers that completed the measures, there is a possibility that the measures may have been interpreted differently. This was controlled for by the training session with the teachers discussing the measures before their completion. Although this would aid the reliability of the data, it cannot control for all individual response patterns (Anastasi and Urbina, 1997). When interpreting the results, the limitations of the measures including their reliability, validity and any inferences drawn from them must be reflected upon.

The researcher could not find any published research evaluating the Emotional Literacy Checklist. There is an opportunity for future research analysing the validity and generalisability of this tool, given its popularity. The SDQ is a well supported measure (Fomboone et al., 2003; Thabet et al., 2000); however, a final consideration must be highlighted regarding its use in this research. The measure requests that the responses are given in relation to 'the last six months', as this research was conducted over a six-week period and the pre and post tests were only eight weeks apart. The responses that were given by teachers and students may not have fully represented the impact of the short-term intervention if respondents were looking at actions over a greater period of time.

## **5.5 Data Analysis and Interpretation**

This research employed a quantitative design method and results were analysed for statistical significance; this allows findings to be used within the ongoing promotion of evidenced-based practice (Scott et al., 2001). After researching, developing, and implementing the data collection, is the blanket

analysis of data giving the results the exploration they deserve? Do we need to look further than just assessing whether or not the results are statistically significant?

I am not the first researcher to ask this question. Hubbard and Ryan (2000) described how the dominant approach in psychological research is to report p values and use these to reject or not reject hypotheses. This is the approach used in this research; the p values gained were directly assessed for significance  $p < .05$  or  $p < .01$  and these values were used to reject the hypotheses if significance was not achieved. Wright (2002) points out that the p value is not a probability about the null hypothesis, but that it is the probability of observing data as extreme assuming that the null hypothesis is true. Using null hypothesis significance testing (NHST) may have only a limited value (Schmidt, 1996) and many researchers state that it can be over used and misused; please refer to Harlow et al. (1997), and Chow (1998) for further discussion.

Wright (2003) considered alternatives to NHST, and stated that the NHST should be used less and that there should be clarity regarding the limits of their value. Research findings can be further explored to report effect sizes, confidence intervals and power analyses (Wilkinson et al., 1999). Further investigations of the present research could examine the distribution of the data; although the findings met the assumptions for parametric testing, normal distributions are a rarity in psychology (Miccerri, 1989). Turkey (1996) reported how even minor deviations can affect the statistics. This aspect was considered in this research and further non-parametric tests were run.

Having considered these issues, and while acknowledging the further explorations of the data that could be done, the researcher still believes that appropriate and robust statistical analysis was conducted. The findings were reported as statistically significant rather than just significant throughout (Wilkinson et al., 1999), and the nature of the hypothesis being explored was made clear (Wright, 2003).

It is essential that findings are carefully considered. After running the t-tests in this research, a statistically significant result was found indicating that the control group had performed worse than the experimental group in terms of teacher perceptions of their emotional literacy. Without a pre-test measure, these results could have led the researcher to accept the experimental hypothesis and to claim that the impact of the group had been shown to be responsible for this difference. However, through use of a rigorous experimental design model, the pre-test scores indicated that further analysis was required to try and ascertain this.

Wright (2006) discussed the use of an analysis of covariance (ANCOVA) to partial out the pre-test scores in an attempt to demonstrate the effect of the intervention. The analysis in this case could not demonstrate the effect of group. However, the researcher feels that this is an excellent example of why pre/post test designs have a greater validity than other methods of data collection as, if these robust measures had not been not in place, the results could well have been misconstrued.

In contrast to the work of Wright (2006) and Vickers (2005), Gliner et al. (2003) argued that carrying out an analysis of pre-test scores is not necessary, as the participants are randomised. They said that analysing the pre-test scores in addition to post-test scores reduces the likelihood of statistically significant results. Gliner et al. (2003) acknowledged that using this method and not analysing pre-test scores results is a less powerful analysis. It was after considering all of these factors that the decision was made in this research to acknowledge fully the pre-test variation between groups and not make assumptions without careful consideration of these findings.

Future research of this kind could consider other methods of analysis that could be used to explore results further. For example, an interesting further analysis of the results in this research could be to look specifically at those participants who initially scored 'high' on the SDQ and compare and contrast the results to those that scored 'borderline'. This was not done in this research, as the

sample of these pupils was too small and the results could be interpreted only qualitatively.

## **5.6 Implications of this Research**

It is important to consider the implications of the present research; this section will consider such implications in relation to future research, local authorities, schools, and educational psychologists.

### **5.6.1 Implications for Future Research**

On reflection, and considering the lessons learned specifically from this research, if the research were to be replicated, it would be appropriate to consider some changes to its design and implementation. Given the differences in the pre-test scores collected from the teachers, it would be prudent to consider the use of a matched pairs design rather than a random allocation of sample.

A further reflection for future replication should consider the implications of re-testing over a short period of time. The findings could be enhanced by employing qualitative measures in addition to the quantitative measures used. Collecting data from semi-structured interviews from participants and teachers relating specifically to the intervention could be implemented. This could provide details of how participants view the intervention and the impact they feel it has had upon them.

The present research was conducted with groups of eight pupils receiving the intervention. Whilst it was acknowledged that the optimal group size is five, groups of eight were decided upon to allow for attrition. However, as all of the participants attended five or more of the sessions, smaller group sizes may have been more appropriate from the onset. The attrition rate of four in this research was due to non-return of measures.

In order to enhance the difficult area of measuring impact in terms of school exclusion, future replication may benefit from comparing exclusion rates from

previous years or other schools with similar populations. This in itself raises questions of validity, which have been historically hard to address.

Future research could investigate the impact of the intervention on other age groups, and due to the nature of the intervention and the focus of the sessions, it may be interesting to target pupils with low self-esteem. In view of the increased exclusion rate for boys (Parson, 1996), it may also be useful to consider the gender difference in responses.

Being an evidence-based practitioner, exploring future opportunities for research allows for systematic reflection and consideration of the input and outcomes achieved. Conducting such a piece of research will always raise implications for future replications. Another important task is to consider the implications for local authorities, schools, and educational psychologists. This will be described and discussed in the following section.

### **5.6.2 Implications for Local Authorities and Schools**

This research was conducted within the context of a county council in the East of England. The research adhered to the research governance framework as stipulated by the service. The outcomes of this research have led to informed intervention planning within the Local Authority (LA). The Locality Partnership Management Team, who have a focus on promoting behaviour and attendance, are compiling information for schools on targeted interventions promoting behaviour for learning and developing pupils' emotional literacy. The findings of this research will contribute to this. However, this research also highlights the difficulties in establishing an evidence base in the area and the number of factors that may impinge upon the collation of details supporting evidence-based practice.

The LA promotes research and development within the service and the findings of this research have been reported countywide. The key discussion points that have been highlighted are the collection of quantitative rather than qualitative measures, and the implications of implementing research design models in educational settings.

This research was relevant to local needs and service delivery priorities and allowed policy makers to consider the findings within their delivery planning. A key implication of school-based research in this authority is the funding provision for targeted interventions. Developing an evidence base of what works is easier said than done due to the factors described throughout this discussion.

The schools in which this research was conducted had the opportunity to become involved in the collation of data supporting evidence based practice. At a strategic level, the head teachers of the schools were keen to promote the fact that research was being conducted in their schools.

The Teaching Assistant working with the researcher became trained in the delivery of the 'Over to You' intervention. Although the findings did not show impact after six weeks, the popularity of the course was made evident to school staff by the participants. The schools are currently considering its future implementation.

### **5.6.3 Implications for Educational Psychologists**

It is important for EPs promoting targeted interventions in schools to ensure that these interventions are informed by the evidence base (Elliot, Diperna, & Shapiro, 2001), and to monitor the quality of the actual interventions delivered. This could be done through observation, discussion, and in-depth and critical training programmes, and by providing ongoing supervision for those delivering the interventions. Supervision may play a key-role for EPs as, due to the nature of work delegation, it is unlikely that they will have the opportunity to deliver the training themselves.

Before the onset of this intervention, the researcher benefited from an action planning stage with the schools involved. For EPs, utilising these discussions can result in the identification of the most effective and relevant work required; this can enhance the impact of targeted interventions (Dunsmuir et al., 2009).

With the growing emphasis upon emotional literacy in education (Sharp, 2000; Weare and Gray, 2003), EPs should support the understanding and validity of

the construct within the educational context. EPs also have a role in developing the evidence base of cognitive behavioural approaches within the school setting; this research provides a basis for this.

For EPs considering the Every Child Matters agenda (2004) and the developing outlook of Children's Services promoted by the Children's Act (DfES, 2004b), the evaluation of intervention outcomes is becoming increasingly important. It is not sufficient to suggest and implement interventions without considering the evidence base and the outcomes that have been measured from the intervention. EPs have a crucial role in this process (Farrell et al., 2006) and having Trainee Educational Psychologists who have designed, implemented and analysed targeted interventions may improve the quality of this. The role of the EP is evolving and, with a more consistent use both the pragmatic and the scientific approaches, is being increasingly seen as that of 'scientist practitioner':

*This reconciliation envisages EPs making relevant use of scientific principles and methods, such as hypothesis testing and validity checking, within the context of their practice with individuals and groups, in order to extend the generalisable knowledge base of the profession.*

(Fallon et al., 2010; p.3)

The present research embraces Fallon et al.'s (2010) statement. As a scientist practitioner, the researcher feels that embarking upon research within educational settings is a key role for EPs and should be actively encouraged and incorporated into local authority planning in the same way that this research was. The present research contributes findings to the evidence base in educational psychology, in particular cognitive behavioural group interventions aimed at promoting emotional literacy and behavioural change.

## Conclusion

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The present research investigated the impact of a targeted group intervention broadly based on cognitive behavioural approaches. The intervention incorporated aspects of social skills training and anger management training; and utilised the concepts of cognitive behavioural therapy.

The research aimed to increase the evidence base around the 'Over to You' intervention (Burton, 2006) and to provide information to schools and researchers on evidence-based behavioural interventions. The fundamental premise on which this research was based is that behaviour is seen to be more likely to change if it is addressed in the context of thoughts and feelings (Sharp and Herrick, 2004; Burton, 2004).

The literature review demonstrated that whilst there is an evidence base supporting cognitive behavioural interventions, there seems to be limited evidence considering their impact upon students' behaviour and emotional literacy. Of this evidence only a handful of studies have been carried out in secondary schools using experimental design methods.

The research took place in two high schools in the East of England, and the impact was measured in terms of students' emotional literacy and behaviour. This was done by collecting data before and after the intervention. The data was then compared to a control group who had not received the intervention. The participants were Year 8 pupils who had been identified as having behavioural needs.

The research addressed the question of whether participating in the 'Over to You' intervention would influence participants' emotional literacy and behaviour as perceived by the participants themselves and their form teachers. The results could not demonstrate any statistically significant changes in participants' emotional literacy and behaviour after completion of the six-week intervention. The research also addressed the issue of school exclusions, and asked whether or not there would be a difference between the experimental and

control groups in terms of the number of school exclusions after a six-month follow-up. The results showed that both groups had received the same number of school exclusions so no difference between the groups could be established.

Due to the results obtained, it must be acknowledged that the 'Over to You' intervention may not influence participants' emotional literacy and behaviour. The research was implemented in a real world setting so establishing efficacy (if possible) may have been an unrealistic expectation. Of the reviewed studies that demonstrate some level of intervention efficacy, implementation in the real world setting with larger sample numbers may not yield the same findings (Shucksmith et al., 2007).

On reflection and considering the lessons learned specifically from this research, if the research were to be replicated it would be appropriate to consider some changes to its design and implementation. Given the differences in the pre-test scores collected from the teachers it would be prudent to consider the use of a matched pairs design rather than a random allocation of sample, and a smaller group size should be considered.

A further reflection for future replication should consider the implications of re-testing over a short period of time. The findings could be enhanced by employing qualitative measures in addition to the quantitative measures used. Collecting data using semi-structured interviews from participants and teachers relating specifically to the intervention may be beneficial. This could provide details of how participants view the intervention and the impact they feel it has had upon them.

The researcher considers that the key implications of this research are two-fold. One position is that, given the pre/post-test randomised controlled trial was successfully implemented, to state that the intervention has no significant impact and it may not be a useful intervention to promote emotional literacy and behavioural change, would indicate a blinkered viewpoint. However, another position is to take a critical realist perspective and consider that using such a design method may not yield sufficient information to make that claim. Further investigation and research is required using a variety of methodologies to

establish efficacy and effectiveness. This would further enhance the evidence base, providing a broader perspective to policy makers, educational psychologists and schools.

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